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Storyboard

# **z/VM Guest management with CSL-WAVE**

## **Live Demonstration**

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# Storyboard

The demo runs in a Windows remote-desktop session. This desktop assists you to connect to the live system environment, start the live demo and run the different use cases.

The demo doesn't start from "scratch" - when it is started, there is already available a "managed" z/VM system - called TMCC16 - which has some Linux guests as "managed" objects - called ZLIN7#:

- ZLIN79 is enabled to be fully managed by CSL-WAVE.

The initial setup of a CSL-WAVE installation as well as the "discovery" of a managed z/VM environment is documented via detailed screen captures in the provided PDF document.

## How to access a managed z Linux guest (like ZLIN79):

- either via a putty SSH client or 3270 session
- from outside or inside the CSL-WAVE Generalized User Interface (GUI).
- CSL-WAVE GUI user id is WAVEADM with password CSLINT
- same user id/password can be used to access z/VM in 3270 session
- You can log-on to user id WAVEADM or log-on to the Linux guest with LOGONBY (for example LOGON ZLIN71 BY WAVEADM).
- The root password in both Linux guests is also cslint.

## How to create new Linux guests:

- Created from "scratch" - please use naming conventions for guest-names, host-names and ip-addresses as follows:
  - ZLIN7#, zlin7#.z0plex.com, 192.168.7.7# (where #=1,2,3,4,5,6,7)After the creation you can start the Bare-Metal-Installation with a predefined repository.
- Created via cloning - clones can be taken a prototype called ZLIN79
  - you only need to over-type the fields with the names and addresses before starting the cloning.

For all new guests please use the predefined disk pool LINUX. Clones out of a prototype will be auto-configured during first boot.

## Storyboard – 1

- **WAVE graphical user interface**
  - Workspace
  - Tabs
  - Context sensitiv interaction
  - User Manager
  - Project Manager
  - Managed Parameters
  - Site Management
  - BMI – repository management
- **Hardware Viewer**
  - Add CPC
  - Add Entity
  - Add z/VM
  - Discovery (auto detection for a “managed” z/VM) (available as screenshots)
  
  - Using z/VM user groups
    - Group: USER LOCAL
    - Switch views
    - Filters
    - Search guest
    - Create group
- **Guest Details** (Hardware Viewer)
  - Select guest zlin71
  - Show status (w or w/o agent)
  - Options
  - Guest Start/Stop

## Storyboard – 2

- **Guest Details** (Hardware Viewer)
  - Create new:
    - Create VM user
    - Install Linux
  - Clone
    - based on existing guest definition
    - based on prototype
  - (Add new filesystem to Linux guest)
  - Show status (w or w/o agent)
  - Options
  - Guest Start/Stop
- **Automation** (scripting)
  - Linux (Shell/Bash)
    - Execute Bash script
    - User Script Manager
  - z/VM (REXX)
    - Execute REXX scripts
    - Edit and maintain REXX scripts via z/VM WAVEWRKS server
- **Network**
  - System view
  - Show Network (run through all Tabs)
  - (Add new network to z/VM and Linux guest)
- **(Enterprise Viewer)**
  - (point to LGR demo – here we only have one managed system)

## Storyboard – 3

- **Dashboard Viewer** (run through all Tabs)
  - CPU utilization
    - Graphical View
    - Textual View
    - VM Utilization
  - Virtual to Real Ratio
- **Reporting**
  - Printing
- (Accounting)
- **General z/VM administration tasks**
  - Manage Page space
  - Manage Pool space
  - Manage DISK pools
  - Recycle service machines (SMAPI or WAVE workers)
  - Shutdown and re-IPL z/VM
  - disconnect/reconnect from management
  - Refresh data (user, network, disk...)
- (Backup / Restore of CSL repository database)
- Un-manage a z/VM system, a CPC

Let's start the demo ...

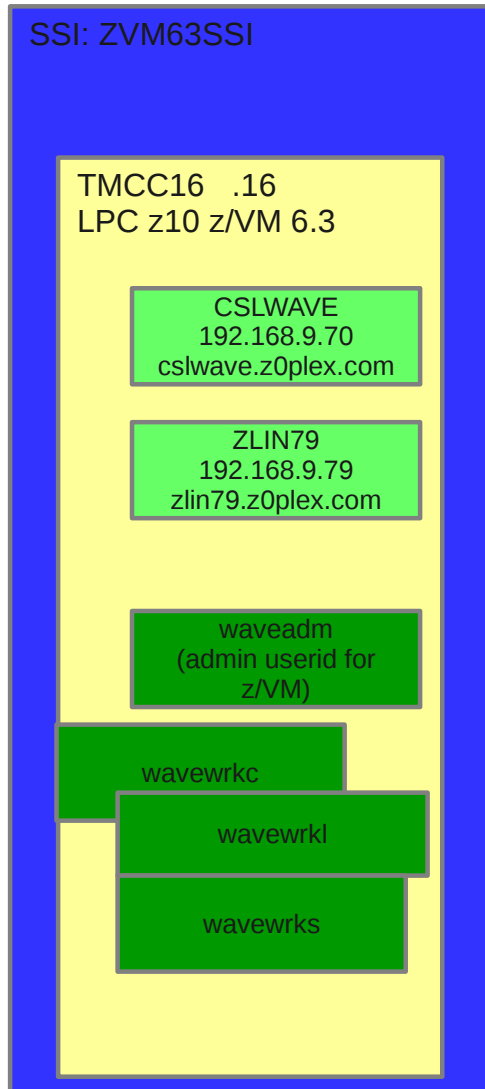
The following screenshots don't cover all the CSL-WAVE functionality but at least some ...

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## Demo Credentials

- WAVE and z/VM: waveadm / cslint
- Use “logon by” to reach the Linux guests

# Demo Infrastructure



CSL installed can discover and manage all

Managing/Provisioning of linux guests  
ZLIN71, ZLIN72, ZLIN73--- ZLIN79

Subnet 192.168.9.0/255.255.255.0  
Diskpool LINUX

Guestnames: ZLIN7# (#=1,2,3,...,9)  
IP addresses : 192.168.9.7# (#=1,2,3,...,9)  
Hostnames: zlin7#.z0plex.com (#=1,2,3,...,9)



# The WAVE Installation

```
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
login as: root
Using keyboard-interactive authentication.
Password:
Last login: Fri Aug 16 22:09:00 2013 from 192.168.9.88
cslwave:~ # cd /install
cslwave:/install # rpm -i CSL-WAVE-3.10-SLES11.s390x.rpm
ibm java detected.
Initializing DB...
Shutting down httpd2 (waiting for all children to terminate)      done
Shutting down service MySQL                                       done
starting MySQL...
Starting service MySQL                                           done
Creating and populating DB Tables...
Creating DB User user...
Setting password for user...
Aging information not changed.
Aging information changed.
Adding CSL-WAVE user to sudoers...
Setting up priveleges...
Installing and configuring default apache2 web server...
Establishing links for boot...
insserv: Service network is missed in the runlevels 4 6 to use service apache
insserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
insserv: Service network is missed in the runlevels 4 6 to use service apache
insserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
insserv: Service network is missed in the runlevels 4 6 to use service apache
insserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
insserv: Service network is missed in the runlevels 4 6 to use service apache
insserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
Changing IP parameter in jnlp file to 192.168.9.70...
Changing ownership of files...
Creating log directory...
Starting applications...
starting httpd2 (prefork)                                         done
```

## The WAVE Installation - (cont.)

```

CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
adding: WAVECLI/jcommon-1.0.12.jar (deflated 8%)
adding: WAVECLI/jdom.jar (deflated 5%)
adding: WAVECLI/log4j-1.2.16.jar (deflated 9%)
adding: WAVECLI/wavecli.bat (deflated 58%)
adding: WAVECLI/WAVECLI310.jar (deflated 11%)
adding: WAVECLI/oncrpc.jar (deflated 8%)
adding: WAVECLI/commons-pool-1.4.jar (deflated 10%)
adding: WAVECLI/jcommon-serializer-0.2.0.jar (deflated 12%)
adding: WAVECLI/WAVECommon310.jar (deflated 9%)
adding: WAVECLI/mysql-connector-java-5.1.10-bin.jar (deflated 4%)
adding: WAVECLI/commons-collections-3.2.jar (deflated 13%)
adding: WAVECLI/commons-dbcp-1.2.2.jar (deflated 7%)
adding: WAVECLI/jsch-0.1.42.jar (deflated 7%)
done. copy the WAVECLI.zip to your workstation and unzip, please update basic parameters in ./wavecli.scr to run C
SL-WAVE CLI
creating CGI executor
WAVECLI/WAVECLI310.jar
WAVECLI/WAVECommon310.jar
WAVECLI/commons-collections-3.2.jar
WAVECLI/commons-dbcp-1.2.2.jar
WAVECLI/commons-pool-1.4.jar
WAVECLI/jcommon-1.0.12.jar
WAVECLI/jcommon-serializer-0.2.0.jar
WAVECLI/jdom.jar
WAVECLI/jsch-0.1.42.jar
WAVECLI/log4j-1.2.16.jar
WAVECLI/mysql-connector-java-5.1.10-bin.jar
WAVECLI/oncrpc.jar
WAVECLI/wavecli.scr

*-----*
|  CSL-WAVE Installed successfully!  |
*-----*

cslwave:/install # █

```

Phase I of WAVE server installation is now completed – GUI can be started

## The WAVE Installation - (upgrade 3.10 to 3.20)

```

CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
16/08/2013 22:19:43 com.CSL.WAVE.upgrader.upgrade.Upgrader : Checking installed version...
16/08/2013 22:19:44 com.CSL.WAVE.upgrader.upgrade.Upgrader : Found CSL-WAVE 3.1.0 install.
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : Shutting down WAVEBackgroundServices.....done
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Searching for snapshot files in working directory...
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Could not find any CSL-WAVE snapshots. Try to specify manually
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : could not find Snapshot file at specified location.
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Upgrading CSL-WAVE...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Backing up CSL-WAVE DB into /usr/wave/WAVEDataBK/backupSQLDump.sql...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Simulating dump and checking byte count...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Simulation cleanup...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Checking free space in /usr/wave/WAVEDataBK/...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Free space check cleanup...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Comparing free space to size found in simulation...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Estimated knowledgebase size is 360103 bytes
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Free space on /usr/wave/WAVEDataBK/ is 653348864 bytes
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Performing Backup...
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Creating Snapshot file /install/wave320/CSL-WAVE-snapshot-16-08-2013-22-19-45.tar
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /bin/tar: Removing leading '/' from member names
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/backup-2013-08-16-22:18:33/
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/backup-2013-08-16-22:18:33/GUI/
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/backup-2013-08-16-22:18:33/GUI/TestAPI/
--More--

```

# The WAVE Installation - (upgrade 3.10 to 3.20 cont.)

```

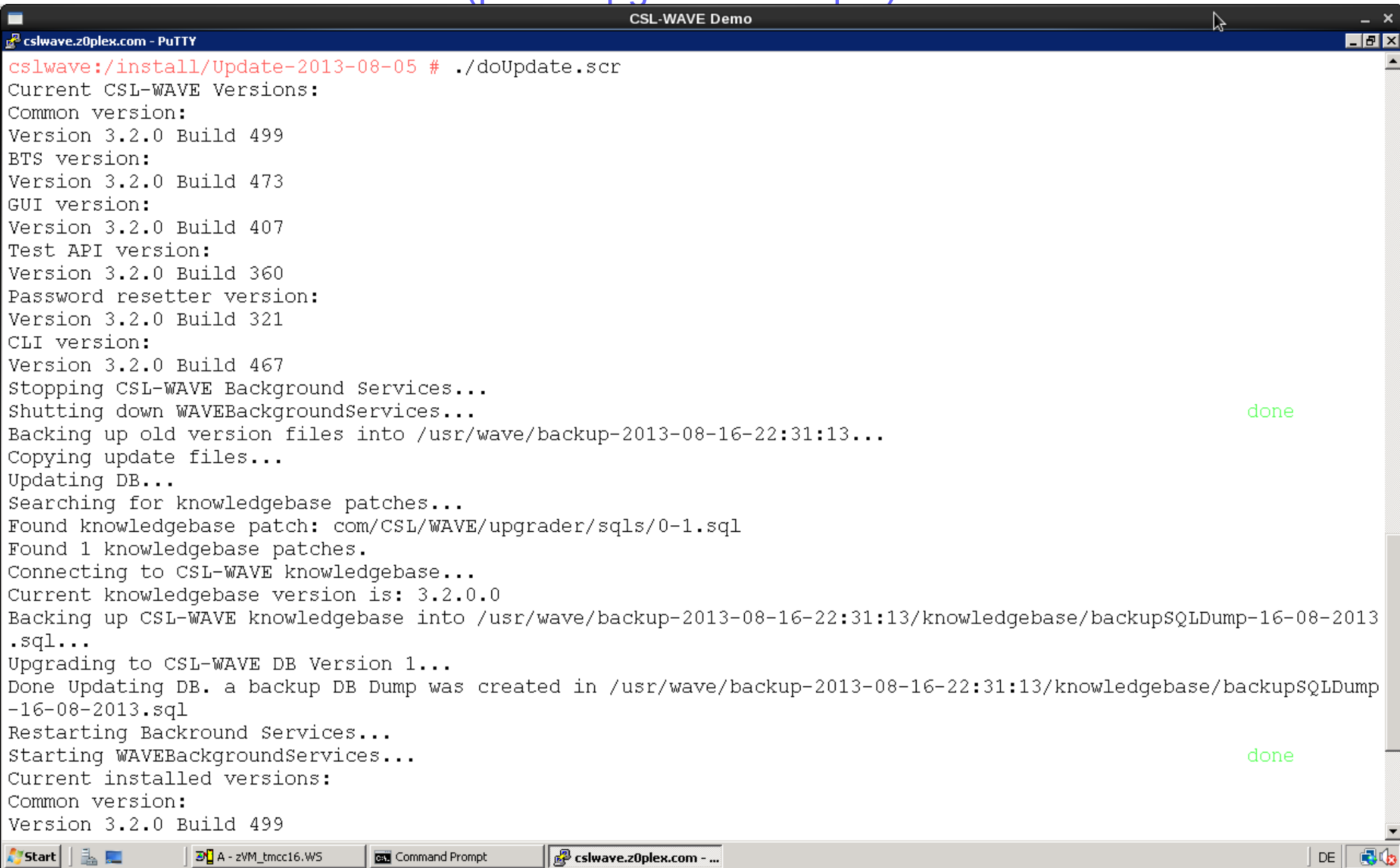
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
16/08/2013 22:20:54 SQL : Executing SQL: SELECT t1.Message_ID,t1.CALL_ID,t2.Message as 'Short_Message',t3.Message
as 'Detailed_Message' FROM WAVE_External_Call_Messages AS t1, WAVE_External_Resource_Messages_Short_US AS t2, WAV
E_External_Resource_Messages_Detailed_US AS t3 WHERE (Class_Name = ? )&& (CALL_ID = ? || CALL_ID = ? ) && t1.RC =
? && t1.RS = ? && (t1.Short_Message = t2.Message_Id) && (t1.Detailed_Message = t3.Message_Id);
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLUpgrade : Committing results...
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : DB URL is: 127.0.0.1, Using SSH tunneling: false
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : Attempting to connect to DB: jdbc:mysql://127.0.0.1/WA
VEOLD?useJvmCharsetConverters=true&autoReconnect=true&noDatetimeStringSync=true
16/08/2013 22:20:54 SQL : Executing SQL: SELECT WAVE_User_Name,WAVE_User_Password,WAVE_User_Type,WAVE_User_Status,
WAVE_User_Description,WAVE_User_Animation,WAVE_User_Create_User,WAVE_User_Create_TimeStamp,WAVE_User_Update_User,W
AVE_User_Update_TimeStamp,WAVE_User_Question,WAVE_User_Answer,WAVE_User_Locker,WAVE_User_Ian,WAVE_User_Is_Change_P
ass,WAVE_User_Last_Login FROM WAVE_User_Table;
16/08/2013 22:20:54 SQL : Executing SQL: SELECT t1.Message_ID,t1.CALL_ID,t2.Message as 'Short_Message',t3.Message
as 'Detailed_Message' FROM WAVE_External_Call_Messages AS t1, WAVE_External_Resource_Messages_Short_US AS t2, WAV
E_External_Resource_Messages_Detailed_US AS t3 WHERE (Class_Name = ? )&& (CALL_ID = ? || CALL_ID = ? ) && t1.RC =
? && t1.RS = ? && (t1.Short_Message = t2.Message_Id) && (t1.Detailed_Message = t3.Message_Id);
No Message could be found for class connectionToSQLOLD, call ID getAllWaveUsersDetails, RC 0, RS 0
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Restoring data...(3/4)
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : DB URL is: 127.0.0.1, Using SSH tunneling: false
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Restoring data...(4/4)
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : DB URL is: 127.0.0.1, Using SSH tunneling: false
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Restoring scripts...
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : usr/wave/scripts/
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Old knowledgebase data cleanup..
16/08/2013 22:20:54 SQL : Executing SQL: DROP DATABASE WAVEOLD
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Updating CSL-WAVE service machines...
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Updating CSL-WAVE service machines.
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Enter z/VM IP address ( enter "end" to exit ) :
end
16/08/2013 22:20:57 com.CSL.WAVE.upgrader.upgrade.Upgrader : Starting BTS...
16/08/2013 22:20:57 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : Starting WAVEBackgroundServices.....done
16/08/2013 22:20:57 com.CSL.WAVE.upgrader.upgrade.Upgrader : Upgrade Complete.
cslwave:/install/wave320 #

```

Existing "managed" z/VM system must be also be upgraded here

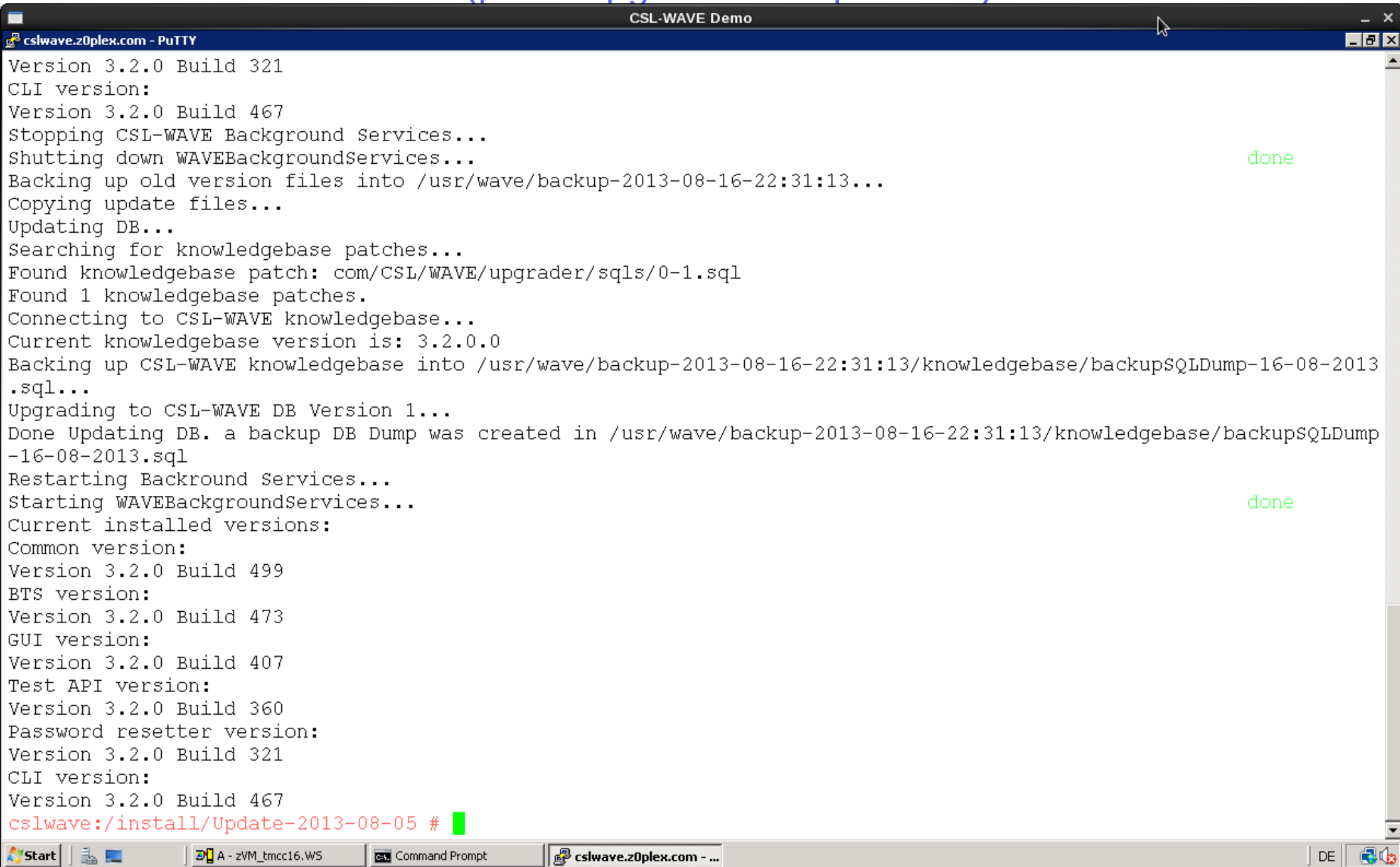


## The WAVE Installation - (patch upgrade example)



```
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
cslwave:/install/Update-2013-08-05 # ./doUpdate.scr
Current CSL-WAVE Versions:
Common version:
Version 3.2.0 Build 499
BTS version:
Version 3.2.0 Build 473
GUI version:
Version 3.2.0 Build 407
Test API version:
Version 3.2.0 Build 360
Password resetter version:
Version 3.2.0 Build 321
CLI version:
Version 3.2.0 Build 467
Stopping CSL-WAVE Background Services...
Shutting down WAVEBackgroundServices... done
Backing up old version files into /usr/wave/backup-2013-08-16-22:31:13...
Copying update files...
Updating DB...
Searching for knowledgebase patches...
Found knowledgebase patch: com/CSL/WAVE/upgrader/sqls/0-1.sql
Found 1 knowledgebase patches.
Connecting to CSL-WAVE knowledgebase...
Current knowledgebase version is: 3.2.0.0
Backing up CSL-WAVE knowledgebase into /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupSQLDump-16-08-2013.sql...
Upgrading to CSL-WAVE DB Version 1...
Done Updating DB. a backup DB Dump was created in /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupSQLDump-16-08-2013.sql
Restarting Background Services...
Starting WAVEBackgroundServices... done
Current installed versions:
Common version:
Version 3.2.0 Build 499
```

## The WAVE Installation - (patch upgrade example cont.)



```
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
Version 3.2.0 Build 321
CLI version:
Version 3.2.0 Build 467
Stopping CSL-WAVE Background Services...
Shutting down WAVEBackgroundServices... done
Backing up old version files into /usr/wave/backup-2013-08-16-22:31:13...
Copying update files...
Updating DB...
Searching for knowledgebase patches...
Found knowledgebase patch: com/CSL/WAVE/upgrader/sqls/0-1.sql
Found 1 knowledgebase patches.
Connecting to CSL-WAVE knowledgebase...
Current knowledgebase version is: 3.2.0.0
Backing up CSL-WAVE knowledgebase into /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupSQLDump-16-08-2013.sql...
Upgrading to CSL-WAVE DB Version 1...
Done Updating DB. a backup DB Dump was created in /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupSQLDump-16-08-2013.sql
Restarting Background Services...
Starting WAVEBackgroundServices... done
Current installed versions:
Common version:
Version 3.2.0 Build 499
BTS version:
Version 3.2.0 Build 473
GUI version:
Version 3.2.0 Build 407
Test API version:
Version 3.2.0 Build 360
Password resetter version:
Version 3.2.0 Build 321
CLI version:
Version 3.2.0 Build 467
cslwave:/install/Update-2013-08-05 #
```


# The WAVE GUI

CSL-WAVE Demo

Launch CSL-WAVE v3.2.0

cslwave.z0plex.com

Google



**By CSL International**

# CSL-WAVE

Welcome to the CSL-WAVE homepage on your site!  
Current CSL-WAVE version: 3.2.0

Launch CSL-WAVE v3.2.0

Launch z/VM API Testing Application

View CSL-WAVE User Guide

View CSL-WAVE Administration Guide

Start | A - zVM\_tmcc16.WS | Command Prompt | Launch CSL-WAVE v3.... | DE

# The WAVE GUI (TestAPI)

The screenshot shows a Firefox browser window with the address bar at `cslwave.z0plex.com`. The page title is "Launch CSL-WAVE v3.2.0". The main content area has a blue background with a white wave graphic and the text "CSL-WAVE". Below the graphic, there are four large teal buttons with white text: "Launch CSL-WAVE v3.2.0", "Launch z/VM API Testing Application", "View CSL-WAVE User Guide", and "View CSL-WAVE Administration Guide".

A dialog box titled "Opening TestAPI.jnlp" is overlaid on the page. It contains the following text:
 

- You have chosen to open:
- TestAPI.jnlp**
- which is a: JNLP File (1.4 KB)
- from: `http://cslwave.z0plex.com`
- What should Firefox do with this file?
- Open with: Java(TM) Web Start Launcher (default)
- Save File
- Do this automatically for files like this from now on.

 At the bottom of the dialog are "OK" and "Cancel" buttons.

The Windows taskbar at the bottom shows the Start button, several open applications (including "A - zVM\_tmcc16.WS", "Command Prompt", and "Launch CSL-WAVE v3..."), and the system tray with the date "DE" and time.



# The WAVE GUI (TestAPI)

The screenshot shows a Firefox browser window titled "CSL-WAVE Demo" at the URL "cslwave.z0plex.com". The main page features a blue background with a wave image and the text "WAVE". A dialog box titled "API Testing for CSL-WAVE Version 3.2.0" is open in the foreground. The dialog box contains the following fields and options:

- Input Parameters**
  - VM Parameters
    - z/VM IP Address: 192.168.9.16
- Use API** (selected)
  - API Parameters
    - VM Version: VM63
    - VM API Port: 44444
    - Directory Manager: DIRMAINT
    - API User Name: waveadm
    - API User Password: \*\*\*\*\*
- Use Service Machine** (not selected)
  - Service Machine Parameters
    - Service Machine Port: [empty]
    - Command: [empty]

At the bottom of the dialog box, there is a section "Returned From zVM" with a large empty text area, and a "Test" button next to an "Elapsed Time 00:00:00" display. A link "View CSL-WAVE Administration Guide" is visible at the bottom of the main page.

# The WAVE GUI (TestAPI)

The screenshot shows a web browser window titled "CSL-WAVE Demo" with the address bar containing "cslwave.z0plex.com". The main content area features a blue background with a wave image and the word "WAVE" in large white letters. A modal dialog box titled "API Testing for CSL-WAVE Version 3.2.0" is overlaid on the page. The dialog has the following sections:

- Input Parameters:**
  - VM Parameters: z/VM IP Address: 192.168.9.16
- Configuration:**
  - Use API
  - Use Service Machine
  - API Parameters:
    - VM Version: VM63
    - VM API Port: 44444
    - Directory Manager: DIRMAINT
    - API User Name: waveadm
    - API User Password: \*\*\*\*\*
  - Service Machine Parameters:
    - Service Machine Port: [empty]
    - Command: [empty]
- Returned From zVM:**

```
*DVHOPT LNKO LOG1 RCH1 SMS0 NPW1 LNGAMENG PWC20130814 CRC+<
*****
      API Connection Succeeded!
*****
Disconnecting from API server...
```
- Footer:** Elapsed Time: 00:00:02 [Test]

At the bottom of the dialog, there is a link: "View CSL-WAVE Administration Guide". The Windows taskbar at the bottom shows several open applications: Start, A - zVM\_tmcc16.WS, Command Prompt, Launch CSL-WAVE v3.2..., cslwave.z0plex.com - Pu..., and API Testing for CSL-W...

# The WAVE GUI

The screenshot shows a Firefox browser window titled "CSL-WAVE Demo" with the address bar at "cslwave.z0plex.com". A dialog box titled "Opening WAVE.jnlp" is displayed in the foreground. The dialog contains the following text:

You have chosen to open:

- WAVE.jnlp** which is a: JNLP File (2.0 KB) from: http://cslwave.z0plex.com

What should Firefox do with this file?

- Open with:** Java(TM) Web Start Launcher (default)
- Save File**
- Do this automatically for files like this from now on.

Buttons for "OK" and "Cancel" are at the bottom of the dialog. The background page features a blue background with a wave image and the text "By CS" and "AVE homepage on your site! Current CSL-WAVE version: 3.2.0". Below the dialog are four buttons: "Launch CSL-WAVE v3.2.0", "Launch z/VM API Testing Application", "View CSL-WAVE User Guide", and "View CSL-WAVE Administration Guide". The Windows taskbar at the bottom shows the Start button, taskbar icons for "A - zVM\_tmcc16.WS", "Command Prompt", "Launch CSL-WAVE v3...", and "cslwave.z0plex.com - Pu...", and the system tray with "DE" and network/volume icons.

# The WAVE GUI (Create initial Admin Account)

The screenshot displays a web browser window titled "CSL-WAVE Demo" with the address bar showing "cslwave.z0plex.com". The main content area features a blue background with a wave image and the text "CSL WAVE". A modal window titled "CSL-WAVE First Account" is open, displaying the "Welcome to CSL-WAVE v3.2.0" message and a form to create an administrator account. The form includes fields for User Name, Password, Verify Password, Security Question, and Answer. Below the form are two buttons: "View CSL-WAVE User Guide" and "View CSL-WAVE Administration Guide". The Windows taskbar at the bottom shows the Start button, several open applications, and the system tray with the date "DE".

# The WAVE GUI (Create initial Admin Account)

CSL-WAVE Demo

Launch CSL-WAVE v3.2.0

cslwave.z0plex.com

Google

## CSL WAVE

**CSL-WAVE First Account**

**Welcome to CSL-WAVE v3.2.0**

**Create CSL-WAVE Administrator Account**  
Please fill in the form to create a CSL-WAVE Administrator account.

User Name:

Password:

Verify Password:

Security Question:

Answer:

[View CSL-WAVE User Guide](#)

[View CSL-WAVE Administration Guide](#)

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3... | DE

# The WAVE GUI

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESRV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

No objects to present

Select A System from the Hardware View Panel

Property Viewer

No Object Selected

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

WAVESRV Time	User	System	Code	Type	Message
2013-08-16 22:35:00	waveadm	WAVE	WAVSEC001I	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Add New CPC)

CSL-WAVE 3.2.0 (WAVESRV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

No objects to present

Add New CPC

Select A System from the Hardware View Panel

Property Viewer

No Object Selected

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

WAVESRV Time	User	System	Code	Type	Message
2013-08-16 22:35:00	waveadm	WAVE	WAVSEC00 II	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-19 16:54:17	waveadm	WAVE	WAVPRM00 II	I	WAVE paramters were updated successfully by waveadm.
2013-08-19 16:56:09	waveadm	WAVE	WAVPRM00 II	I	WAVE paramters were updated successfully by waveadm.

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | CSL-WAVE 3.2.0 (WAY... | Launch CSL-WAVE v3.2.... | DE

# The WAVE GUI (Add New CPC)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESRV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

No objects to present

Property Viewer

No Object Selected

### Create New CPC

General Information

CPC Name: z10

Model/CPU Information

CPC Model: 2828 (BC12)

CPC CPUID: 2828 (BC12), 2827 (EC12), 2817 (z196), 2818 (z114)

Update: 2097 (Z10EC), 2098 (Z10BC), 2094 (Z9EC), 2096 (Z9BC)

Site Information

Description: z10 Demo

License:

Cancel Create

Hardware View Panel

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

WAVESRV Time	User	System	Code	Type	Message
2013-08-16 22:35:00	waveadm	WAVE	WAVSEC00 II	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-19 16:54:17	waveadm	WAVE	WAVPRM00 II	I	WAVE paramters were updated successfully by waveadm.
2013-08-19 16:56:09	waveadm	WAVE	WAVPRM00 II	I	WAVE paramters were updated successfully by waveadm.

BTS Online waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | CSL-WAVE 3.2.0 (WAY... | Launch CSL-WAVE v3.2.... | DE



# The WAVE GUI (Add New CPC)

The screenshot shows the CSL-WAVE 3.2.0 GUI interface. The title bar reads "CSL-WAVE Demo". The main menu includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The Hardware View panel on the left shows a z10 system icon with a red prohibition sign. A dialog box in the center displays the message "CPC z10 created successfully." with an OK button. A text overlay reads "Select A System from the Hardware View panel on the left". The bottom panel shows a log table with the following data:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

# The WAVE GUI (CPC Actions)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Display Details Update Details More Actions

- Lock CPC
- Unlock CPC
- Read IAN
- Update IAN
- Delete IAN
- Add New System
- Delete CPC

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CPC License expired or invalid

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAV... Launch CSL-WAVE v3.2....

# The WAVE GUI (Manage Parameters)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Site Management

- Toggle Single User Mode
- Backup CSL-WAVE Database
- Restore CSL-WAVE Database
- Manage CSL-WAVE Users
- Manage CSL-WAVE User Profiles
- Project Manager
- View Logged in Users
- View WRS Elements
- BTS Manager
- Send Message
- Broadcast Message to CSL-WAVE Users
- Recycle Service Machines
- Recycle API Server
- Manage Parameters**

Workunit Name Initiator Start At End At Duration Status Progress

Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%
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BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | CSL-WAVE 3.2.0 (WAY... | Launch CSL-WAVE v3.2.... | DE

# The WAVE GUI (Manage Parameters)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attenti

Workunit Name

Sync NFS Servers

CSL-WAVE Parameters

Threshold GUI BTS Functionality NFS Attention Required Definitions Security License

Storage Thresholds

Default Storage for z/VM User (MB) 1024

Maximum Storage for z/VM User (MB) 1024

Default z/VM User MAX Storage (MB) 1024

Maximum z/VM User MAX Storage (MB) 1024

Page/Spool Thresholds

Spool Utilization Warning Threshold 60

Spool Utilization Error Threshold 80

Page Utilization Warning Threshold 60

Page Utilization Error Threshold 80

CPU Thresholds

Default CPUs for z/VM User 1

Maximum CPUs for z/VM User 2

Disk Space Thresholds

Default disk Space for z/VM User (MB) 2048

Maximum disk Space for z/VM User (MB) 3072

Linux Thresholds

Linux FS Utilization Warning Threshold 70

Linux FS Utilization Error Threshold 90

Virtual to real Thresholds

Virtual to Real Utilization Warning Threshold 90

Virtual to Real Utilization Error Threshold 100

Virtual to Real Utilization Max display 150

Close Update

Status	Progress
Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Manage Parameters)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Parameters

Threshold GUI BTS Functionality NFS Attention Required Definitions Security License

VM Connections Options

3270 Terminal Mode 4

Accept All Certificates

CLC Login Flag Last login:

SSH Options

SSH Port no. 22

SSH Timeout 300

Functionality and Activation Levels

Name	Activation Level
N/A	1

CSL-WAVE Parameter Update

The following CSL-WAVE Parameters were updated successfully:  
 WAVE\_RESOURCE\_CHECK\_ACTIVATION to Yes  
 WAVE\_DYNAMIC\_GRANT to Yes

OK

Add

Scripts Options

Site Exit Script Name Exit is disabled... Browse... Clear

Miscellaneous

CSC Communication Port 9999

Use Dynamic Grant

Check Virtual Server Resources when activating

Automatic Guest Classification

Use Automatic Guest Classification (AGC)

Close Update

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attenti

Workunit Name	Status	Progress
Sync NFS Servers	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Manage Parameters - license)

CSL-WAVE Demo


CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom



z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attenti

Workunit Name	Status	Progress
Sync NFS Servers	Done	100%

CSL-WAVE Parameters

Threshold GUI BTS Functionality NFS Attention Required Definitions Security License

License:

Close Update

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Manage Parameters - license)

The screenshot shows the CSL-WAVE 3.2.0 GUI interface. The main window is titled "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The left sidebar contains "Hardware Viewer", "Enterprise Viewer", and "Dashboard View". The "Hardware Viewer" shows a rack of servers labeled "z10". Below it is the "Property Viewer" for the "z10" device, listing properties like Name, Model, Status, Description, CPU ID, Modified By, and Created By.

The main content area shows the "CSL-WAVE Parameters" dialog with the "License" tab selected. The license key is displayed as a long alphanumeric string. A "CSL-WAVE Parameter Update" pop-up window is overlaid, showing an information icon and the message: "The following CSL-WAVE Parameters were updated successfully: license". An "OK" button is visible in the pop-up.

At the bottom of the main window, there is a "Workunit Name" section with a table showing the status and progress of various tasks:

Workunit Name	Status	Progress
Sync NFS Servers	Done	100%

The taskbar at the bottom shows the Start button, several open applications including "A - zvm\_tmcc16.WS", "Command Prompt", "cslwave.z0plex.com - Pu...", "CSL-WAVE 3.2.0 (WAY...", and "Launch CSL-WAVE v3.2...". The system tray shows "BTS Online" and the user "waveadm".

# The WAVE GUI (Manage CSL-WAVE users)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The title bar indicates the hostname is cslwave.z0plex.com and the IP address is 192.168.9.70. The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The Administrative menu is open, showing options like Site Management, Toggle Single User Mode, Backup CSL-WAVE Database, Restore CSL-WAVE Database, **Manage CSL-WAVE Users** (highlighted), Manage CSL-WAVE User Profiles, Project Manager, View Logged in Users, View WRS Elements, BTS Manager, Send Message, Broadcast Message to CSL-WAVE Users, Recycle Service Machines, Recycle API Server, and Manage Parameters.

On the left, the Hardware Viewer shows a server rack labeled 'z10'. Below it, the Property Viewer displays details for 'z10':

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

At the bottom, the CSL-WAVE Log table shows a completed task:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

Annotations on the screenshot include 'Select A' pointing to the menu and 'View panel on the left' pointing to the hardware viewer area.



# The WAVE GUI (Manage CSL-WAVE users)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Stop Updates

CSL-WAVE User Manager

CSL-WAVE user waveadm is an active super user

Existing Users

Name	WA	SLA	NA	Status	Description	Created By	Created On	Modified By	Modified On	Locked	IAN
CLIUser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2007-12-13 13:1...	WAVEinit	2009-09-03 21:5...		
WAVE Daemon Updater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2000-01-01 00:0...	WAVEinit	2007-09-23 13:1...		
waveadm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Active		WAVEinit	2013-08-16 22:3...	WAVEinit	2013-08-16 22:3...		
waveadmin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Dummy User for active dir...	WAVEinit	2007-12-13 13:1...	WAVEinit	2007-12-24 14:3...		
WAVEBTSAttReq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Initial WAE user for the A...	WAVEinit	2007-12-13 13:1...	WAVEinit	2009-09-03 21:5...		
WAVEBTSMsgListen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Initial WAE user for the M...	WAVEinit	2007-12-13 13:1...	WAVEinit	2012-01-23 08:3...		
WAVEBTScheduler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Initial WAE user for the sc...	WAVEinit	2007-12-13 13:1...	WAVEinit	2007-12-13 22:1...		
WAVEinit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	temp user to initiate the cr...	WAVEinit	2000-01-01 00:0...	WAVEinit	2007-09-23 13:1...		

Filter

Active  Regular Users  Site Level Administrators

Suspended  CSL-WAVE Administrators  Network Administrators

Reset

Review Scopes and Permissions Add New CSL-WAVE User Close

Progress 100%

z10

Property

Name z10

Model 2097

Status Active

Description z10 Demo

CPU ID 07B440

Modified By waveadm c

Created By waveadm c

CSL-WAVE Log BTS Work

Sync NFS Servers

Start

A - zvm\_tmcc16.WS

Command Prompt

cslwave.z0plex.com - Pu...

CSL-WAVE 3.2.0 (WAY...

Launch CSL-WAVE v3.2...

BTS Online

waveadm

# The WAVE GUI (Manage CSL-WAVE users)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Stop Updates

Some of the active CSL-WAVE Users are super users

Existing Users

Name	WA	SLA	NA	Status	Description	Created By	Created On	Modified By	Modified On	Locked	IAN
CLIUser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2007-12-13 13:1...	WAVEinit	2009-09-03 21:5...		
WAVE Daemon Updater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2007-01-01 00:0...	WAVEinit	2007-09-23 13:1...		
waveadm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2008-08-16 22:3...	WAVEinit	2013-08-16 22:3...		
waveadmin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2007-12-13 13:1...	WAVEinit	2007-12-24 14:3...		
WAVEBTSAttReq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2009-09-03 21:5...	WAVEinit	2009-09-03 21:5...		
WAVEBTSMsgListen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2012-12-13 13:1...	WAVEinit	2012-01-23 08:3...		
WAVEBTS Scheduler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2007-12-13 13:1...	WAVEinit	2007-12-13 22:1...		
WAVEinit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEinit	2007-01-01 00:0...	WAVEinit	2007-09-23 13:1...		
demousr	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		waveadm	2013-08-19 17:2...	waveadm	2013-08-19 17:2...		

z10

Property

Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	078440
Modified By	waveadm
Created By	waveadm

Filter

Active  Regular Users

Suspended  CSL-WAVE Admin

Update CSL-WAVE User demousr

Actions

General Details User Type Scope and Permissions

Current Permissions

System	Permission Type	Entry Value	Permissions
*	Project	*	All
*	DASDGroup	*	All
*	DevicePool	*	All
*	System	*	All

Reset

and Permissions Add New CSL-WAVE User Close

Progress 100%

Delete Permission Add Permission

Update Close

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2....

# The WAVE GUI (Project Management)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Project Manager

Name	Description
CSL-WAVE Demo	CSL-WAVE demo environment

Add New Project

General Information

Name

Description

Contact Information

Contact Name

Contact Phone

Contact Email

Organizational Information

Project Team

Project Department

CSL-WAVE Information

Created By

Last Modified By

Add Close

anel on the left

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAV... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Site Management)


CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom



z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Select A

Site Management

- Toggle Single User Mode
- Backup CSL-WAVE Database
- Restore CSL-WAVE Database
- Manage CSL-WAVE Users
- Manage CSL-WAVE User Profiles
- Project Manager
- View Logged in Users
- View WRS Elements
- BTS Manager
- Send Message
- Broadcast Message to CSL-WAVE Users
- Recycle Service Machines
- Recycle API Server
- Manage Parameters

External Entities Manager

- Manage Device Pools
- Manage CSL-WAVE Virtual Network Segment
- Custom Attribute Manager
- z/VM Directory Manager
- z/VM Account Manager
- AGC Manager
- Manage FCP Information
- CSL-WAVE Linux Repository Manager
- Add New CPC
- Delete CPC
- Tools

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | CSL-WAVE 3.2.0 (WAY... | Launch CSL-WAVE v3.2.... | DE

# The WAVE GUI (Site Management – Create z/VM Entity)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE External Entities Manager

Existing CSL-WAVE Managed Entities

Type	Name	Description
No Objects Associated		

Create New CSL-WAVE External Entity

General Information

Name: TMCC16

Type: z/VM

Description: Demo z/VM TMCC16

Associated Objects

No Objects Associated

Cancel Create

Waiting for user input

Create CSL-WAVE External Entity Close

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAV... Launch CSL-WAVE v3.2....

# The WAVE GUI (Site Management – Entities Manager)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE External Entity

Existing CSL-WAVE Managed I

Type
z/VM
Router
Storage Controller

Create New CSL-WAVE External Entity

General Information

Name:

Type: z/VM

Description: z/VM

Associated Objects

Storage Controller

Router

No Objects Associated

Cancel Create

Managed by CSL-WAVE

External Entity Close

Waiting for user input

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Site Management – manage LAN segment)


CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom



z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Select A

Site Management

- Toggle Single User Mode
- Backup CSL-WAVE Database
- Restore CSL-WAVE Database
- Manage CSL-WAVE Users
- Manage CSL-WAVE User Profiles
- Project Manager
- View Logged in Users
- View WRS Elements
- BTS Manager
- Send Message
- Broadcast Message to CSL-WAVE Users
- Recycle Service Machines
- Recycle API Server
- Manage Parameters

External Entities Manager

- Manage Device Pools
- Manage CSL-WAVE Virtual Network Segment
- Custom Attribute Manager
- z/VM Directory Manager
- z/VM Account Manager
- AGC Manager
- Manage FCP Information
- CSL-WAVE Linux Repository Manager
- Add New CPC
- Delete CPC
- Tools

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Site Management – manage LAN segment)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Virtual Network Segment Manager

Existing Virtual Network Segments:

Name	Network	Netmask	Broad
DEMOLAN	192.168.9.0	255.255.255.0	192.168.9.0

Filters

Show Unknown IP VNSs

Update Virtual Network Segment

General Information

Name: TESTLAN

Description: private Demo LAN 172.16.47.0

Created By: waveadm on 2013-08-19 17:41:57

Last Modified By: waveadm on 2013-08-19 17:41:57

IP Information Connected Virtual Networks Connected CSL-WAVE Resources

IP Information

Network: 172.16.47.0 Default GW: 172.16.47.1

Netmask: 255.255.255.0

Broadcast: 172.16.47.255 VLAN ID:

Update Cancel

Create New Virtual Network Segment Close

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2....



# The WAVE GUI (Site Management – manage BMI repository)


CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom



z10

Property Viewer

z10

Property	Value
Name	z10
Model	Z097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Select A

Site Management

- Toggle Single User Mode
- Backup CSL-WAVE Database
- Restore CSL-WAVE Database
- Manage CSL-WAVE Users
- Manage CSL-WAVE User Profiles
- Project Manager
- View Logged in Users
- View WRS Elements
- BTS Manager
- Send Message
- Broadcast Message to CSL-WAVE Users
- Recycle Service Machines
- Recycle API Server
- Manage Parameters

External Entities Manager

- Manage Device Pools
- Manage CSL-WAVE Virtual Network Segment
- Custom Attribute Manager
- z/VM Directory Manager
- z/VM Account Manager
- AGC Manager
- Manage FCP Information
- CSL-WAVE Linux Repository Manager
- Add New CPC
- Delete CPC
- Tools

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Site Management – manage BMI repository)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

CSL-WAVE Linux Repository Manager

Existing CSL-WAVE Linux Repositories

### Create New CSL-WAVE Linux Repository

Descriptive Information

Repository Name: sles11sp2

Repository Description: sles11 sp2 install server

Repository Server Information

Server IP Address: 192.168.9.80

Media Location: sles11sp2/s390x/1

Protocol Information

Repository Protocol: FTP

User Name: anonymous

Password: \*\*\*\*\*

Detected Repository Contents

Linux Distribution: Not Detected

Linux Architecture: Not Detected

Linux Version: Not Detected

Linux Service Pack: Not Detected

Modification Information

Created By: N/A

Last Modified By: N/A

Cancel Create

Create CSL-WAVE Linux Repository Close

Property Viewer

z10

Property	
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 20
Created By	waveadm on 20

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Ir	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds Done 100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds Done 100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds Done 100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds Done 100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds Done 100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds Done 100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds Done 100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAY... Launch CSL-WAVE v3.2.... DE

# The WAVE GUI (Site Management – manage BMI repository)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

z10

Name	IP Address	Media Location	Distribution	Version	SP	Architecture	Description	Status
sles11sp2	192.168.9.80	sles11sp2/s390x/1/	SUSE	11	2	s390x	sles11 sp2 install server	OK
sles11sp3	192.168.9.80	sles11sp3/s390x/1/	SUSE	11	3	s390x	sles11 sp3 install server	OK
rhel6u4	192.168.9.80	rhel6u4/s390x/	REDHAT	6	4	s390x	rhel 6.4 install server	OK

Create CSL-WAVE Linux Repository Close

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAV... Launch CSL-WAVE v3.2....

# The WAVE GUI (Site Management – manage BMI repository)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 20
Created By	waveadm on 20

CSL-WAVE Linux Repository Manager

Existing CSL-WAVE Linux Repositories

Name	IP Address	Media Location	Distribution	Version	SP	Architecture	Description	Status
sles11sp2	192.168.9.80	sles11sp2/s390x/1/	SUSE	11	2	s390x	sles11 sp2 install server	OK
sles11sp3	192.168.9.80	sles11sp3/s390x/1/	SUSE	11	3	s390x	sles11 sp3 install server	OK
rhel6u4	192.168.9.80	rhel6u4/s390x/	REDHAT	6	4	s390x	rhel 6.4 install server	OK

Display Details Update Details Remove

Create CSL-WAVE Linux Repository Close

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAV... Launch CSL-WAVE v3.2....

# The WAVE GUI (User Tasks – User Preferences)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Select A System

Panel on the left

View Log

- Change CSL-WAVE user Password
- Change CSL-WAVE user Preferences**
- Display Effective Scope/Permissions for Session
- CSL-WAVE User Script Manager
- Display Projects
- Display Device Pools
- Display CSL-WAVE Managed Entities
- Display CSL-WAVE Virtual Network Segments
- Display CSL-WAVE Linux Repositories
- Display CSL-WAVE Messages
- Init Users for CSL-WAVE use
- Show Changes Log
- Trace GUI
- Gather Debug Information

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (User Tasks – User Preferences)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

**Change Preferences**

GUI Preferences

- Use Animation
- Hide When Minimized

BTS Preferences

BTS Log Level: Information

BTS Log Size: 100

Users and Groups Viewer

- Hide Well Known IBM Machines
- Hide Ineligible Guests

SSH Options

External SSH Program Location: "C:\Program Files (x86)\PuTTY\putty.exe" <LOGIN\_USER>@<I... Browse...

Location of private key file: Browse...

SSH Login user

SSH login user name: root

z/VM Login user

- z/VM logon by

z/VM logon by user: WAVEADM

Close Update

on the left

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

BTS Online waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (User Tasks – Script Manager)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The title bar indicates the hostname is cslwave.z0plex.com and the IP address is 192.168.9.70. The 'User Tasks' menu is open, showing various options. The 'CSL-WAVE User Script Manager' option is highlighted. The main workspace shows a hardware viewer with a 'z10' system selected. The property viewer below it lists details for the selected system. At the bottom, a table shows the execution log of various tasks.

**CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)**

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

BTS Online waveadm

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (User Tasks – Script Manager)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled 'CSL-WAVE Demo' and shows a 'Hardware Viewer' with a server rack labeled 'z10'. A 'Property Viewer' for 'z10' shows details like Name, Model (2097), Status (Active), and CPU ID (076440). The 'CSL-WAVE User Script Manager' is open, showing a table of 'Available Scripts' with columns for Script Name, Script File, Script Description, Created By, and Created At. A 'Create CSL-WAVE User Script' dialog box is open, allowing the user to create a new script named 'testscript' in the 'Linux scripts' category. The script description is 'simple bash script to test execution'. The script content is as follows:

```
#!/bin/sh
echo "test script called via WAVE - will show userid, hostname and IP address"
echo $USER
hostname
ip addr
```

A success message dialog box is displayed: 'WAVE user script testscript saved successfully.' The bottom of the screen shows a taskbar with several open applications, including 'Command Prompt', 'Launch CSL-WAVE v3.2...', and 'CSL-WAVE 3.2.0 (WAV...'. A progress bar at the bottom right shows various tasks completed at 100%.



# The WAVE GUI (Hardware Viewer)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

**CPC Name:** z10  
**CPC Model:** 2097  
**CPC Status:** Active  
**CPC License:** License Valid  
**CPC Description:** z10 Demo

**IAN:**  
 waveadm 08-19-2013 18:05:53  
 machine will be relocated in the next week - expected outage end august

Property Viewer

Property	
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

Select A System from the Hardware View panel on the left

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update Intelligent Active Note	waveadm	2013-08-19 18:04:48	2013-08-19 18:04:49	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – Add New System)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Display Details Update Details More Actions

Lock CPC Unlock CPC Read IAN Update IAN Delete IAN Add New System Delete CPC

Select A System from the Hardware View panel on the left

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update Intelligent Active Note	waveadm	2013-08-19 18:04:48	2013-08-19 18:04:49	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – Add New System)

**CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com)**

**Create New z/VM System for CPC z10**

**General Information**

- System Name: TMCC16
- CPC Name: z10
- System Status: suspend

**Version Information**

- z/VM Version: [ ]
- API Port no: [ ]
- z/VM Service Level: [ ]
- z/VM Architecture: 64
- z/VM name: [ ]

**Communication Information**

- IP Address: [ ]
- IPv6 Address: [ ]
- Hostname: [ ]
- NFS Server: WAVESERV

**Site Information**

- System Type: Other
- Description: [ ]
- 3270 connection Port: 23
- Use TLS/SSL tunnel for 3270
- Associate Directory: [ ]

**CPC Information**

- No. of CPUs: [ ]
- No. of Licensed CPUs: [ ]
- CPU Serial: 07B440

**CSL-WAVE Service Machine Information**

- Service Machine IP: [ ]
- Service Machine Port: 1952
- Short Service Machine: WAVEWRKS
- Long Service Machine: WAVEWRKL
- CSC Service Machine: WAVEWRKC
- Performance Machine: [ ]

**Directory Manager Options**

- Directory Manager: DIRMAINT
- API User Name: [ ]
- API User Password: [ ]
- DASD Dummy Region Name: [ ]
- DASD Dummy Region VOLID: [ ]

**Buttons:** Cancel, Create

**Hardware Viewer:** z10

**Property Viewer:**

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

**Taskbar:** Start, A - zVM\_tmcc16.W5, Command Prompt, cslwave.z0plex.com - Pu..., Launch CSL-WAVE v3.2..., CSL-WAVE 3.2.0 (WAV...)

**System Tray:** BTS Online, waveadm

**Bottom Right Panel:**

Status	Progress
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

# The WAVE GUI (Hardware Viewer – Add New System)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com)

File Auto Detect User-Group Management Network Management

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention

Workunit Name

Update Intelligent Active Note	Done	100%
Add New Linux Repository	Done	100%
Add New Linux Repository	Done	100%
Add New Linux Repository	Done	100%
Add New Virtual Network Segment	Done	100%
Update Virtual Network Segment	Done	100%
Add New Virtual Network Segment	Done	100%
Add New Managed Entity	Done	100%

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention

Workunit Name

Status	Progress
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

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panel on the left

# The WAVE GUI (Hardware Viewer – Add New System)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled "CSL-WAVE Demo" and shows a "Hardware Viewer" tab. A dialog box titled "CSL-WAVE Auto-Detect Wizard for z/VM System TMCC16" is open, detailing the auto-detect process. The wizard lists the following steps:

- \* Define the CSL-WAVE Service Machines.
- \* Update various Directory Manager parameters.
- \* Scan the z/VM System for Virtual Machines, Virtual LANs, DASD Volumes and DASD Groups.
- \* Create a list of site-specific virtual machines for OS classification.

The wizard also includes a "Next" button and a "Cancel" button. Below the wizard, a table shows the progress of various tasks:

Task	Progress
Update Intelligent Active Note	100%
Add New Linux Repository	100%
Add New Linux Repository	100%
Add New Linux Repository	100%
Add New Virtual Network Segment	100%
Update Virtual Network Segment	100%
Add New Virtual Network Segment	100%
Add New Managed Entity	100%

The "Property Viewer" on the left shows details for system "z10":

Property	Value
Name	z10
Model	Z097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

The bottom status bar shows the user is logged in as "waveadm" and the system is "BTS Online".

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16

CSL-WAVE Auto-Detect Wizard

Please fill in the following fields (mandatory)

Directory Manager Information

Directory manager command interface machine name: DIRMAINT

CSL-WAVE Service Machines Information

DASD Group / Volume name: CSLVOL  DASD Group  Volume

TCPIP PROFILE information

Virtual machine name: TCPIP Virtual address of disk where PROFILE resides: 0592

Update Autolog machine

Update Autolog machine

Autolog machine name: AUTOLOG1

Device Pool Information

New Device Pool For DASD Devices: New DASD Device Pool for TMCC16

New Device Pool For OSA Devices: New OSA Device Pool for TMCC16

New Device Pool For HIPER Devices: New HIPER Device Pool for TMCC16

New Device Pool For FCP Devices: New FCP Device Pool for TMCC16

Next Cancel

Waiting for user input

Workunit Name	Progress
Update Intelligent Active Note	100%
Add New Linux Repository	100%
Add New Linux Repository	100%
Add New Linux Repository	100%
Add New Virtual Network Segment	100%
Update Virtual Network Segment	100%
Add New Virtual Network Segment	100%
Add New Managed Entity	100%

CSL-WAVE Log BTS Work Units BTS System COR BTS Log

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

the left

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16

CSL-WAVE Auto-Detect Wizard

Trying to connect to z/VM system API OK

Checking Directory Manager OK

Searching for active CSL-WAVE Short service machine from previous installation Not Found

Searching for active CSL-WAVE Long service machine from previous installation Not Found

Searching for active CSL-WAVE CSC service machine from previous installation Not Found

**Creating CSL-WAVE Short service machine** Running

Adding CSL-WAVE Short service machine disk 191

Adding CSL-WAVE Short service machine disk 0399

Creating CSL-WAVE Long service machine

Adding CSL-WAVE Long service machine disk 191

Adding CSL-WAVE Long service machine disk 0399

Creating CSL-WAVE CSC service machine

Adding CSL-WAVE CSC service machine disk 191

Adding CSL-WAVE CSC service machine disk 0399

Populating CSL-WAVE Short service machine disks

Starting the CSL-WAVE Service Machines

Checking CSL-WAVE Service Machine level

Checking the z/VM System Version

Checking the z/VM System CP language

Checking z/VM Hardware information

get System information

Next Cancel

Elapsed Time: 00:00:21 - WAVE Service Machine (Short)...

Workunit Name	Progress
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Update Intelligent Active Note	100%
Add New Linux Repository	100%
Add New Linux Repository	100%
Add New Linux Repository	100%

CSL-WAVE Log BTS Work Units BTS System COR BTS Log

Workunit Name

Create and Associate Device Pool with z/VM System

Create and Associate Device Pool with z/VM System

Create and Associate Device Pool with z/VM System

Create and Associate Device Pool with z/VM System

Update Intelligent Active Note

Add New Linux Repository

Add New Linux Repository

Add New Linux Repository

Workunit Name	Created By	Created	Modified	Duration	Status	Progress
Create and Associate Device Pool with z/VM System	waveadm	2013-08-19 18:13:17	2013-08-19 18:13:18	1 seconds	Done	100%
Update Intelligent Active Note	waveadm	2013-08-19 18:04:48	2013-08-19 18:04:49	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

TMCC16

z/VM

CSL-WAVE Auto-Detect Wizard for z/VM System TMCC16

CSL-WAVE Auto-Detect Wizard

Trying to connect to z/VM system API OK

Checking Directory Manager OK

Searching for active CSL-WAVE Short service machine from previous installation Not Found

Searching for active CSL-WAVE Long service machine from previous installation Not Found

Searching for active CSL-WAVE CSC service machine from previous installation Not Found

Creating CSL-WAVE Short service machine OK

**Adding CSL-WAVE Short service machine disk 191** Running

Adding CSL-WAVE Short service machine disk 0399

Creating CSL-WAVE Long service machine

Invalid password for CSL-WAVE service machine

CSL-WAVE could not access the service machine using the default password. Refer to the Installation chapter in the CSL-WAVE User Manual and make sure the pre-requisites for the service machine security profile are met. Press "OK" to have CSL-WAVE retry to access the service machine, or "Cancel" to cancel the action.

Starting the CSL-WAVE Service Machines

Checking CSL-WAVE Service Machine level

Checking the z/VM System Version

Checking the z/VM System CP language

Checking z/VM Hardware information

get System information

No Object Selected

CSL-WAVE Log BTS Work Units BTS System COR BTS Log

Workunit Name

Workunit Name	Progress
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%

Elapsed Time: 01:40:34 - WAVE Service Machine (Short)...

Waveadm	Start Time	End Time	Duration	Status	Progress
waveadm	2013-08-20 08:56:16	2013-08-20 08:56:17	1 seconds	Done	100%
waveadm	2013-08-20 08:43:06	2013-08-20 08:43:07	1 seconds	Done	100%
waveadm	2013-08-20 08:43:06	2013-08-20 08:43:07	1 seconds	Done	100%
waveadm	2013-08-20 08:43:06	2013-08-20 08:43:07	1 seconds	Done	100%
waveadm	2013-08-20 08:43:06	2013-08-20 08:43:07	1 seconds	Done	100%
waveadm	2013-08-20 08:43:06	2013-08-20 08:43:07	1 seconds	Done	100%

BTS Online waveadm

Start A - zvm\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...



# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Property Viewer

No Object Selected

CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16

CSL-WAVE Auto-Detect Wizard

- Searching for active CSL-WAVE Long service machine from previous installation Not Found
- Searching for active CSL-WAVE CSC service machine from previous installation Not Found
- Creating CSL-WAVE Short service machine OK
- Adding CSL-WAVE Short service machine disk 191 OK
- Adding CSL-WAVE Short service machine disk 0399 OK
- Creating CSL-WAVE Long service machine OK
- Adding CSL-WAVE Long service machine disk 191 OK
- Adding CSL-WAVE Long service machine disk 0399 OK
- Creating CSL-WAVE CSC service machine OK
- Adding CSL-WAVE CSC service machine disk 191 OK
- Adding CSL-WAVE CSC service machine disk 0399 OK
- Populating CSL-WAVE Short service machine disks OK
- Starting the CSL-WAVE Service Machines OK
- Checking CSL-WAVE Service Machine level** Running
- Checking the z/VM System Version
- Checking the z/VM System CP language
- Checking z/VM Hardware information
- get System information
- Building CSL-WAVE Dummy Region
- Building AUTOLOG
- Add CSL-WAVE Service Machines to AUTOLOG

Next Cancel

Elapsed Time: 00:02:25 - Waiting for Service Machines to load... (15000 ms)

Workunit Name	Progress
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%

CSL-WAVE Log BTS Work Units BTS System COR BTS Log

BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

the left

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

TMCC16

z10

Property Viewer

No Object Selected

CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16

**CSL-WAVE Auto-Detect Wizard**

**CSL-WAVE Auto-Detection Aborted!**

CSL-WAVE Auto Detect failed!

Error getting the CSL-WAVE Service Machine level  
Could not get CSL-WAVE Service Machines level. Verify that the CSL-WAVE service machines are up

View Log

Exit Cancel

CSL-WAVE Log BTS Work Units BTS System COR BTS Log

Workunit Name

Workunit Name	Start Time	End Time	Duration	Status	Progress
Create and Associate Device Pool with z/VM System	2013-08-20 11:47:58	2013-08-20 11:47:58	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%

Elapsed Time: 00:02:36 - WAVE service Machines level...

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

the left

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Run Autodetect Wizard Refresh Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM

TMCC16

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	suspend
Modified By	waveadm on 2013-08-20 8:30
Created By	waveadm on 2013-08-20 8:30

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attention Requ

Workunit Name	
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav
Create and Associate Device Pool with z/VM System	wav

z3270-4 9.152.123.14

File Options Macros

```

netstat co
VM TCP/IP Netstat Level 630      TCP/IP Server Name: TCPIP

Active IPv4 Transmission Blocks:

User Id  Conn      Local Socket      Foreign Socket      State
-----  ---      -
FTPSEVE  1030     *..FTP-C          *..*                Listen
INTCLIEN 1026     *..TELNET         *..*                Listen
INTCLIEN 1051     TMCC16..TELNET    TMCC14..47969       Established
VSMREQIN 1038     *..44444          *..*                Listen
VSMREQIN 1047     TMCC16..44444     192.168.9.70..60633 Established
VSMEVSRV 1006     *..55555          *..*                Listen
PERFSVM  1005     *..81             *..*                Listen
WAVEWRKS 1048     *..1952           *..*                Listen
WAVEWRKL 1025     *..1953           *..*                Listen
WAVEWRKC 1001     *..1954           *..*                Listen

Active IPv6 Transmission Blocks:

User Id  Conn      State
-----  ---      -
VSMREQI6 1002     Listen
Local Socket: *..44445
Foreign Socket: *..*

Ready; T=0.01/0.01 11:52:41
    
```

RUNNING TMCC16

MA 042/001

waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Property Viewer

No Object Selected

CSL-WAVE Auto-Detect Wizard for z/VM System TMCC16

CSL-WAVE Auto-Detect Wizard

- Creating CSL-WAVE Long service machine Skipped
- Adding CSL-WAVE Long service machine disk 191 Skipped
- Adding CSL-WAVE Long service machine disk 0399 Skipped
- Creating CSL-WAVE CSC service machine Skipped
- Adding CSL-WAVE CSC service machine disk 191 Skipped
- Adding CSL-WAVE CSC service machine disk 0399 Skipped
- Populating CSL-WAVE Short service machine disks Skipped
- Starting the CSL-WAVE Service Machines Skipped
- Checking CSL-WAVE Service Machine level OK
- Checking the z/VM System Version OK
- Checking the z/VM System CP language OK
- Checking z/VM Hardware information OK
- get System information OK
- Building CSL-WAVE Dummy Region Skipped
- Building AUTOLOG Skipped
- Adding CSL-WAVE Service Machines to AUTOLOG Skipped
- Updating Directory for z/VM System OK
- Updating z/VM Guest information OK
- Updating z/VM Network information OK
- Updating z/VM Prototype information OK
- Updating z/VM Storage information OK

the left

Next Cancel

Workunit Name	Progress
Update z/VM Storage Aspect for z/VM System	100%
Update z/VM Prototype Aspect for z/VM System	100%
Update z/VM Network Aspect for z/VM System	100%
Update z/VM Guest Aspect for z/VM System	100%
Assign Directory for z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%

Elapsed Time: 00:00:41 - Waiting for user input

Workunit Name	Waveadm	Start Time	End Time	Duration	Status	Progress
Update z/VM Storage Aspect for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done	100%
Update z/VM Prototype Aspect for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done	100%
Update z/VM Network Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%

BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Stop Updates

Property Viewer

No Object Selected

CSL-WAVE Auto-Detect Wizard

Step 4/5 - User-Defined Classifications

CSL-WAVE has found the following site-specific z/VM Guests (virtual machines). Optionally, you can specify the type of Operating System for these virtual machines now by **RIGHT-CLICKING** the desirable Guest, or press "Next" to continue to the next step.

Guest Name	OS Distribution
ZHCP16	UNASSIGNED
PURIT	UNASSIGNED
5697J10C	UNASSIGNED
ZVMND	UNASSIGNED
XVMON	UNASSIGNED
WAVEADM	UNASSIGNED
CSLWAVE	UNASSIGNED
LINUX390	UNASSIGNED
CFCONSOL	UNASSIGNED
CF2	UNASSIGNED
ELIZA	UNASSIGNED
CF1	UNASSIGNED
OPMGRS2	UNASSIGNED
MVSMINT	UNASSIGNED
OPMCRM1	UNASSIGNED

the left

All except the wellknown IBM z/VM service machines are shown in a list – can be sorted – classification can also be done later as guest update action

Next Cancel

Progress

Task	Progress
Update z/VM Storage Aspect for z/VM System	100%
Update z/VM Prototype Aspect for z/VM System	100%
Update z/VM Network Aspect for z/VM System	100%
Update z/VM Guest Aspect for z/VM System	100%
Assign Directory for z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%

Elapsed Time: 00:07:18 - Waiting for user input

Task	User	Start Time	End Time	Duration	Status
Update z/VM Storage Aspect for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done
Update z/VM Prototype Aspect for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done
Update z/VM Network Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done
Update z/VM Guest Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done

Workunit Name

Update z/VM Storage Aspect for z/VM System

Update z/VM Prototype Aspect for z/VM System

Update z/VM Network Aspect for z/VM System

Update z/VM Guest Aspect for z/VM System

Assign Directory for z/VM System

Create and Associate Device Pool with z/VM System

Create and Associate Device Pool with z/VM System

Create and Associate Device Pool with z/VM System

CSL-WAVE Log BTS Work Units BTS System COR BTS Log

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Stop Updates

### CSL-WAVE Auto-Detect Wizard for z/VM System TMCC16

#### Step 4/5 - User-Defined Classifications

CSL-WAVE has found the following site-specific z/VM Guests (virtual machines). Optionally, you can specify the type of Operating System for these virtual machines now by **RIGHT-CLICKING** the desirable Guest, or press "Next" to continue to the next step.

Guest Name	OS Distribution
CF2	UNASSIGNED
CFCONSOL	UNASSIGNED
CSLWAVE	UNASSIGNED
ELIZA	UNASSIGNED
LINUX390	UNASSIGNED
MVSMMAINT	UNASSIGNED
OPMGRM1	UNASSIGNED
OPMGRS1	UNASSIGNED
OPMGRS2	UNASSIGNED
PURIT	UNASSIGNED
WAVEADM	UNASSIGNED
XCAT80	UNASSIGNED
XYMON	UNASSIGNED
ZHCP16	UNASSIGNED

Assign Distribution

- CMS
- Other
- RHEL4-31b
- RHEL4-64b
- RHEL5-64b
- RHEL6-64b
- SLES10-64b
- SLES11-64b**
- SLES9-31b
- SLES9-64b
- Solaris
- UNASSIGNED
- z/OS
- z/TPF
- z/VM
- z/VSE

Assign appropriate OS to the guest – so that WAVE knows how to “interact” with the guest

Next

Property Viewer

No Object Selected

CSL-WAVE Log BTS Work Units BTS System COR BTS Log

Workunit Name

Update z/VM Storage Aspect for z/VM System
Update z/VM Prototype Aspect for z/VM System
Update z/VM Network Aspect for z/VM System
Update z/VM Guest Aspect for z/VM System
Assign Directory for z/VM System
Create and Associate Device Pool with z/VM System
Create and Associate Device Pool with z/VM System
Create and Associate Device Pool with z/VM System

Elapsed Time: 00:08:14 - Waiting for user input

Workunit Name	Workunit	Start Time	End Time	Duration	Status	Progress
Update z/VM Storage Aspect for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done	100%
Update z/VM Prototype Aspect for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done	100%
Update z/VM Network Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Update z/VM Guest Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM Discovery)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled "CSL-WAVE Demo" and shows a "Hardware Viewer" on the left with a "Property Viewer" below it. A central dialog box titled "CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16" is open, indicating "Step 5/5 - CSL-WAVE Auto-Detection Done!". The wizard includes a green cloud icon with document symbols and a top hat. A yellow callout box states: "If GUI animation is enabled in the background you will now see the discovered objects". The bottom of the wizard shows a "Finish" button and a progress table with 100% completion for all tasks. The task list includes: "Update z/VM Storage Aspect for z/VM System", "Update z/VM Prototype Aspect for z/VM System", "Update z/VM Network Aspect for z/VM System", "Update z/VM Guest Aspect for z/VM System", "Assign Directory for z/VM System", and three instances of "Create and Associate Device Pool with z/VM System". The bottom status bar shows "BTS Online" and the user "waveadm".

**CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16**

**Step 5/5 - CSL-WAVE Auto-Detection Done!**

CSL-WAVE Auto-Detect Wizard

CSL-WAVE has completed the necessary steps to configure the z/VM System TMCC16. Press "Finish" to close this window.

If GUI animation is enabled in the background you will now see the discovered objects

Task Name	User	Start Time	End Time	Duration	Status	Progress
Update z/VM Storage Aspect for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done	100%
Update z/VM Prototype Aspect for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done	100%
Update z/VM Network Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Update z/VM Guest Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%

# The WAVE GUI (Hardware Viewer)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

IBM-NA (TMCC16) 0 Users IBM-SEC (TMCC16) 0 Users IBM-DIRM (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users USER-LOCAL (TMCC16) 19 Users All Accessible WAVE-INTERNAL (TMCC16) 3 Users All Accessible IBM-SYSTEM (TMCC16) 0 Users IBM-SMAPI (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users IBM-OPER (TMCC16) 0 Users IBM-ENS (TMCC16) 0 Users

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	3
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.75 GB

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update z/VM Storage Aspect for z/VM System	waveadm	2013-08-20 11:52:35	2013-08-20 11:52:45	10 seconds	Done	100%
Update z/VM Prototype Aspect for z/VM System	waveadm	2013-08-20 11:52:33	2013-08-20 11:52:35	2 seconds	Done	100%
Update z/VM Network Aspect for z/VM System	waveadm	2013-08-20 11:52:28	2013-08-20 11:52:32	4 seconds	Done	100%
Update z/VM Guest Aspect for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done	100%
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...



# The WAVE GUI (Hardware Viewer – z/VM User Groups)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window shows a grid of z/VM User Groups. The 'USER-LOCAL (TMCC16)' group is highlighted with an orange border and contains 19 users with 'All Access' permissions. A yellow callout box points to this group with the text: "Now focus on the USER-LOCAL group – this is the only unlocked group where you find the guests you can manage".

User Group	Users	Access
IBM-NA (TMCC16)	0	Locked
IBM-SEC (TMCC16)	0	Locked
IBM-DIRM (TMCC16)	0	Locked
IBM-UTIL (TMCC16)	0	Locked
<b>USER-LOCAL (TMCC16)</b>	<b>19</b>	<b>All Access</b>
WAVE-INTERNAL (TMCC16)	3	Locked
IBM-SYSTEM (TMCC16)	0	Locked
IBM-SMAPI (TMCC16)	0	Locked
IBM-COM (TMCC16)	0	Locked
IBM-OPER (TMCC16)	0	Locked
IBM-ENS (TMCC16)	0	Locked

# The WAVE GUI (Hardware Viewer – z/VM User Groups)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

Context sensitive actions are shown when you select an object (red boundary) – in this example for all objects in the selected group

- IBM-FNA (TMCC16) 0 Users
- IBM-SEC (TMCC16) 0 Users
- IBM-DIRM (TMCC16) 0 Users
- IBM-UTIL (TMCC16) 0 Users
- USER-LOC (TMCC16) 19 Users All Accessible
- IBM-COM (TMCC16) 0 Users
- IBM-OF (TMCC16) 0 Users
- IBM-... (TMCC16) 0 Users
- IBM-... (TMCC16) 0 Users

Context Menu (z/VM User Actions):

- Display Group Information
- Update Group Information
- Expand
- Collapse
- More Actions
- z/VM User Actions
  - Create New z/VM User
  - Update
    - Activate
    - Deactivate
    - More Action...
- Lock z/VM User
- Unlock z/VM User
- Mark As CSL-WAVE Service Machine
- Init Users for CSL-WAVE use
- Refresh Linux Data
- Run AGC
- Execute REXX
- Generate Disk Storage Map
- Delete

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

# The WAVE GUI (Hardware Viewer – z/VM User Groups)

The screenshot displays the CSL-WAVE 3.2.0 interface. The top menu bar includes options like File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The main window is titled 'Current System View - "TMCC16"' and shows a grid of z/VM User Groups. A yellow callout box on the right states: "You can create your own 'managed' groups". Another yellow callout box at the bottom center states: "Depending on the assigned OS you will see different icons for the guests".

The 'Property Viewer' on the left shows details for the 'ZLIN79 (TMCC16)' group:

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVE Daemon Updater on 2013-08-20 ...
Create By	WAVE Daemon Updater on 2013-08-20 ...

The main grid of user groups includes: IBM-COM (TMCC16) 0 Users, CF2, ZVMND, XYMON, IBM-OPER (TMCC16) 0 Users, CF1, BACKUPVM, ZLIN79 ("Unknown"), OPMGRS1, MVSMOINT, WAVEADM, CSLWAVE ("Unknown"), ZHCP16 ("Unknown"), XCAT80 ("Unknown"), PURIT, ELIZA, WAVE-INTERNAL (TMCC16), LINUX390, USER-LOCAL (TMCC16) 19 Users All Accessible, IBM-SMAPI (TMCC16) 0 Users, IBM-ENS (TMCC16) 0 Users, IBM-UTIL (TMCC16) 0 Users, and IBM-NA (TMCC16) 0 Users.

# The WAVE GUI (Hardware Viewer – z/VM User Groups)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	3
Total Prototy ...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.75 GB
DASD Stora...	34.72 GB
DASD Stora...	92.60 GB
Modified By	waveadm on 2013-08-20 8:30
Created By	waveadm on 2013-08-20 8:30

Site defined group DEMO LINUX updated successfully.

IBM-DIRM (TMCC16) 0 Users

IBM-SE 0

MVSMAINT

ELIZA

OPMGRM1

OPMGRS1

LINUX390

WAVE-INTERNAL (TMCC16) 3 Users All Accessible

IBM-NA (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

IBM-OPER (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

IBM-SYSTEM (TMCC16) 0 Users

DEMO LINUX (TMCC16) 0 Users

ZVMND

OPMGRS2

5697J10C

CFCONSOL

CF1

XYMON

USER-LOCAL (TMCC16) 19 Users All Accessible

IBM-SMAPI (TMCC16) 0 Users

IBM-ENS (TMCC16) 0 Users

CSLWAVE ("Unknown")

PURIT

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...



# The WAVE GUI (Hardware Viewer – z/VM User Groups)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage

Group By: Site Defined Groups

Hide Filter Panel

Filtering can be used to reduce the number of shown objects

IBM-UTIL (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users

IBM-SEC (TMCC16) 0 Users

DEMO LINUX (TMCC16) 0 Users

ZHCP16 (\*Unknown\*)

ZLIN79 (\*Unknown\*)

ZVMND

USER-LOCAL (TMCC16) 3 Users All Accessible

IBM-SMAPI (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

IBM-OPER (TMCC16) 0 Users

IBM-ENS (TMCC16) 0 Users

IBM-SYSTEM (TMCC16) 0 Users

Property Viewer

C16) ZHCP16 (TMCC16) ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A
Total Disk Sp...	2.00
Inconsistent	No
Connectable	Yes
Prototype	N/A
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	waveadm on 2013-08-20 13:52:19
Create By	WAVE Daemon Updater on 2013-08-20 ...

Filter Active Guest Name = z\*, Account = \*

Guest Name = z\* And Account = \*

Go Reset

Filtering based on multiple criteria is also possible

BTS Online waveadm

Start A - zVm\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM User Groups)

The screenshot displays the CSL-WAVE 3.2.0 interface. The top menu includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The main window is titled "Current System View - 'TMCC16'" and shows a list of z/VM User Groups. A yellow callout box points to a button in the top right corner of the list view, with the text: "Switch here from icon view to list view -> result of search is now presented as list". Another yellow callout box points to the list of user groups, with the text: "Color indicates the status of the guest". The list includes entries like OPMGRM1, XYMON, ELIZA, CF1, CF2, MVSMAINT, LINUX390, ZVMND, XCAT80, CSLWAVE, PURIT, WAVEADM, CFCONSOL, WAVEWRKC, OPMGRS2, WAVEWRKS, 5697310C, BACKUPVM, OPMGRS1, WAVEWRKL, ZHCP16, and ZLIN79. A "Property Viewer" on the left shows details for ZLIN79, including Name, Status (Active), Group (USER-LOCAL), Type (Linux), and various system parameters.

# The WAVE GUI (Hardware Viewer – z/VM User Groups)

```

x3270-4 9.152.123.14
File Options Macros
USER TOTAL = 42 , ACTIV = 3 , DISCO = 39 , NETZ = 0
CSLWAVE - DSC OPERATOR - SYSC VMSERVS - DSC WAVEWRKC - DSC
DATAMOVE - DSC OPERSYMP - DSC VMSERVU - DSC WAVEWRKL - DSC
DIRMAINT - DSC OPMGRM1 - DSC VSM - TCP/IP WAVEWRKS - DSC
DISKACNT - DSC OPMGRS1 - DSC VSMEVSRV - DSC XCAT - DSC
DTCSMAPI - DSC OPMGRS2 - DSC VSMGUARD - DSC XCAT80 - DSC
DTCVSW1 - DSC PERFSVM - DSC VSMREQIN - DSC XYMON - DSC
DTCVSW2 - DSC PERSMAPI - DSC VSMREQIU - DSC ZHCP - DSC
EREP - DSC PURIT -L0003 VSMREQI6 - DSC ZHCP16 - DSC
FTPSEVE - DSC TCP/IP - DSC VSMWORK1 - DSC ZLIN
LOHCOST - DSC VMSERVP - DSC VSMWORK2 - DSC
OPERATNS - DSC VMSERVR - DSC VSMWORK3 - DSC

Ready; T=0.01/0.01 12:45:10

RUNNING TMCC16
MA 042/001
  
```

Here the view from the "green screen" in z/VM



# The WAVE GUI (Hardware Viewer – Refresh)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Run Autodetect Wizard Refresh

- Schedule z/VM User Update
- Schedule z/VM Network Update
- Schedule z/VM Prototype Update
- Schedule Storage Update
- Schedule Update For All Aspects

Hardware Viewer Enterprise Viewer

Hardware Viewer

View - "TMCC16"

Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

z10 zEC12

zVM63CAT

TMCC16

Property Viewer

TMCC16 ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Inactive
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	CSL-WAVE Demo
Functionality	N/A

IBM-DIRM (TMCC16)  
3 Users  
All Accessible

IBM-UTIL (TMCC16)  
11 Users  
All Accessible

IBM-OPER (TMCC16)  
6 Users  
All Accessible

nonlinux (TMCC16)  
14 Users  
All Accessible

IBM-NA (TMCC16)  
28 Users  
All Accessible

IBM-SEC (TMCC16)  
12 Users  
All Accessible

ZLIN79 (zlin79)

PURIT

XCAT80 (\*Unknown\*)

ZLIN119

IBM-SMAPI (TMCC16)  
11 Users  
All Accessible

IBM-ENS (TMCC16)  
4 Users  
All Accessible

WAVE-INTERNAL (TMCC16)  
3 Users  
All Accessible

IBM-SYSTEM (TMCC16)  
5 Users  
All Accessible

IBM-COM (TMCC16)  
37 Users  
All Accessible

USER-LOCAL (TMCC16)  
7 Users  
All Accessible

BTS Online waveadm

Start Command Prompt Launch CSL-WAVE v3.2... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Refresh)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

z10 zEC12

TMCC16 ZVM63CAT

Current System View - "TMCC16"

IBM-DIRM (TMCC16) 3 Users All Accessible

IBM-UTIL (TMCC16) 11 Users All Accessible

IBM-OPER (TMCC16) 6 Users All Accessible

nonlinux (TMCC16) 14 Users All Accessible

IBM-NA (TMCC16) 28 Users All Accessible

IBM-SEC (TMCC16) 12 Users All Accessible

ZLIN79 (zlin79)

PURIT

XCAT80 (\*Unknown\*)

ZLIN119

IBM-SMAPI (TMCC16) 11 Users All Accessible

IBM-ENS (TMCC16) 4 Users All Accessible

ZLIN72

CSLWAVE (\*Unknown\*)

ZHCP1 (\*Unknown\*)

USER-LOCAL (TMCC16) 7 Users All Accessible

IBM-SYSTEM (TMCC16) 5 Users All Accessible

IBM-COM (TMCC16) 37 Users All Accessible

z/VM User Name: ZLIN72  
 Status: Inactive  
 Directory: New Directory for TMCC16  
 This user was deleted from the System outside of WAVE.  
 Right-click for options

Property Viewer

Property	Value
Name	ZLIN72
Status	Inactive
Eligible	Yes
Group	USER-LOCAL
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max (...)	1024
Modified By	WAVE Daemon Updater on 2013-09-...

BTS Online waveadm

Start Command Prompt Launch CSL-WAVE v3.2... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Refresh)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

z10 zEC12

TMCC16 ZVM63CAT

Current System View - "TMCC16"

IBM-DIRM (TMCC16) 3 Users All Accessible

IBM-UTIL (TMCC16) 11 Users All Accessible

IBM-OPER (TMCC16) 6 Users All Accessible

nonlinux (TMCC16) 14 Users All Accessible

IBM-NA (TMCC16) 28 Users All Accessible

IBM-SEC (TMCC16) 12 Users All Accessible

ZLIN79 (zlin79)

PURIT

XCAT80 (\*Unknown\*)

ZLIN119

IBM-SMAPI (TMCC16) 11 Users All Accessible

IBM-ENS (TMCC16) 4 Users All Accessible

WAVE-IN All

IBM-SYSTEM (TMCC16) 5 Users All Accessible

IBM-COM (TMCC16) 37 Users All Accessible

USER-LOCAL (TMCC16) 7 Users All Accessible

Display Information

Remove from DB

More Actions

- Lock z/VM User
- Unlock z/VM User
- Read IAN
- Update IAN
- Delete IAN

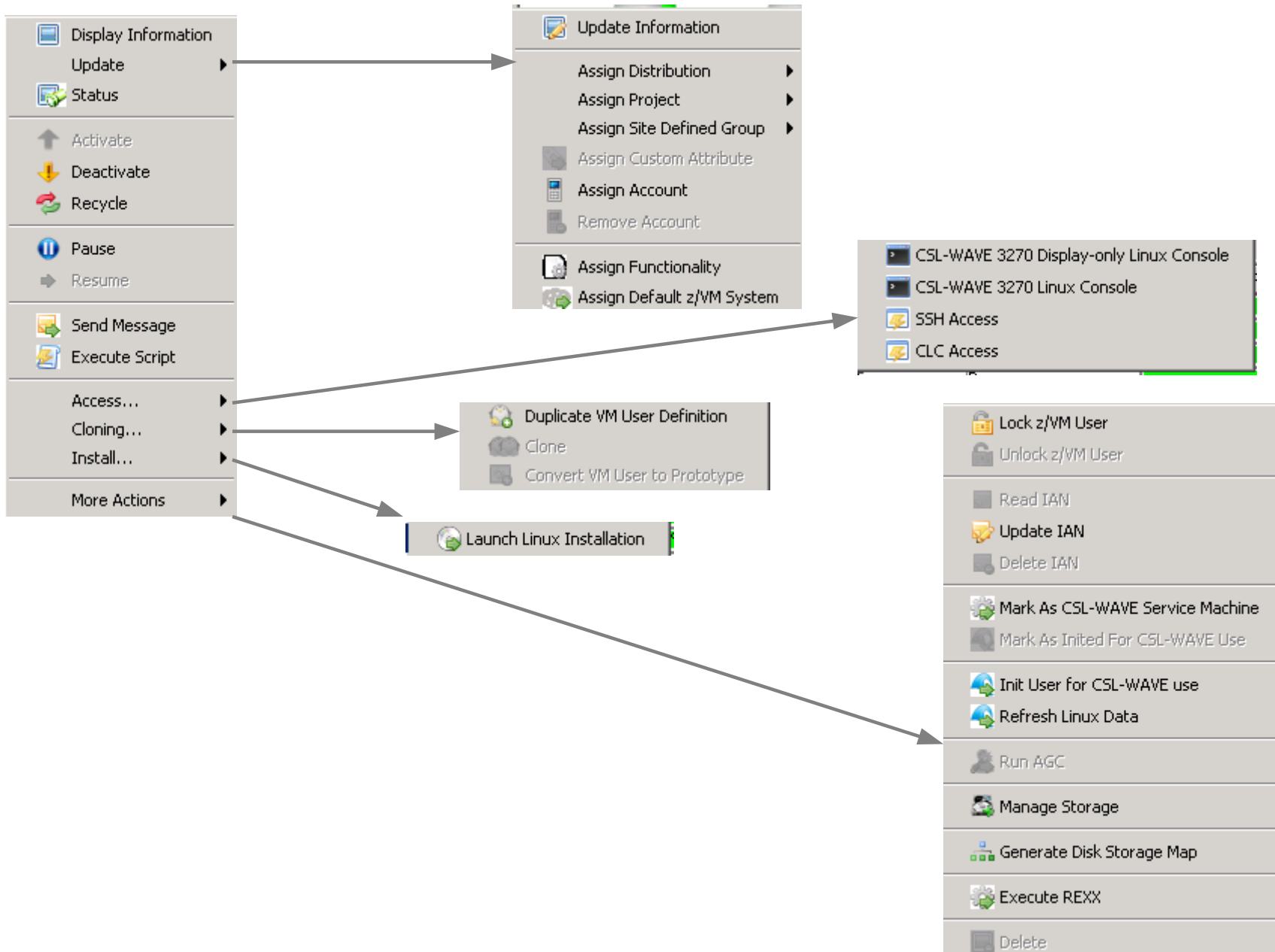
Property Viewer

Property	Value
Name	ZLIN72
Status	Inactive
Eligible	Yes
Group	USER-LOCAL
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max (...)	1024
Modified By	WAVE Daemon Updater on 2013-09-...

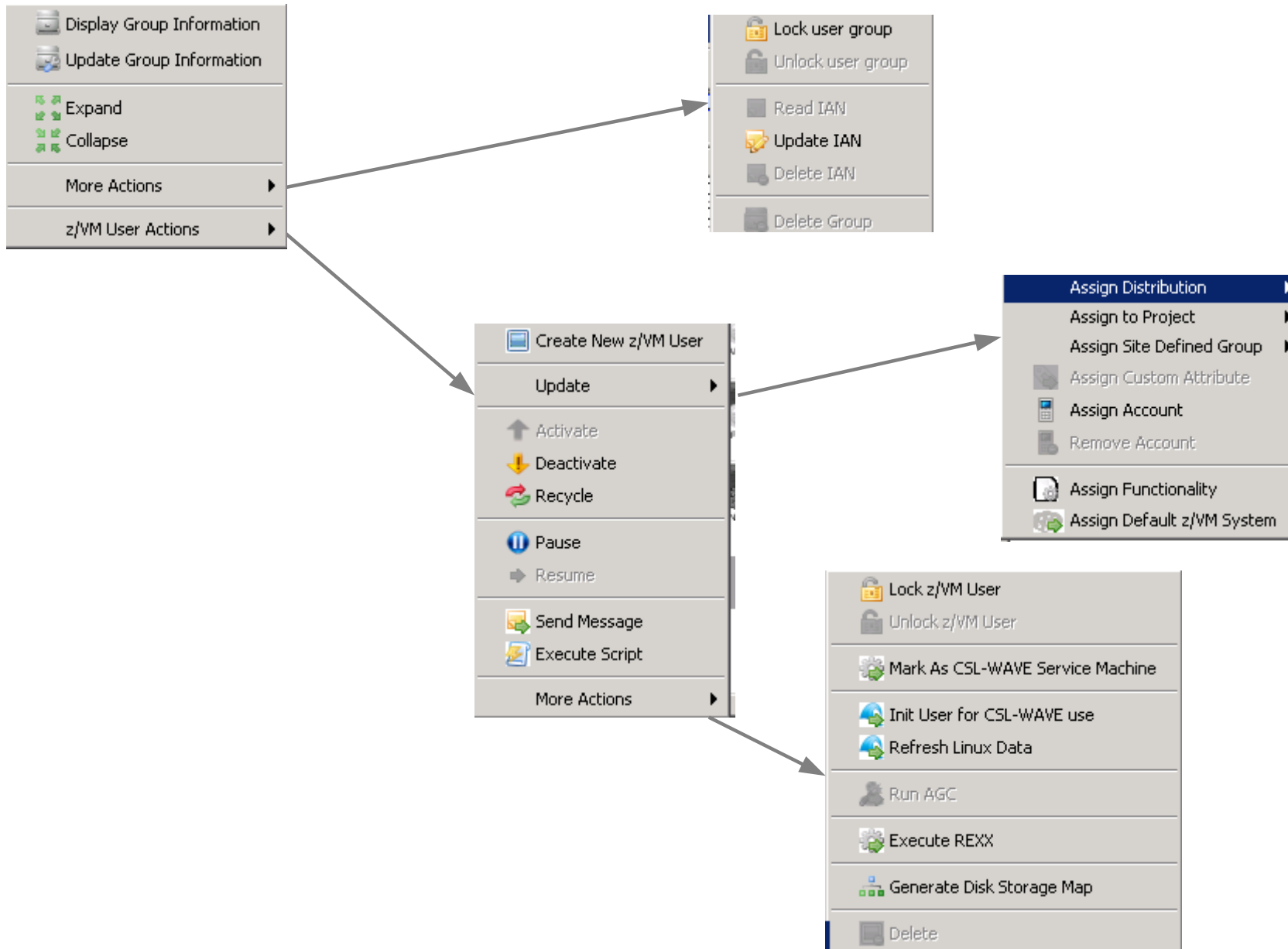
BTS Online waveadm

Start Command Prompt Launch CSL-WAVE v3.2... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)



# The WAVE GUI (Hardware Viewer – z/VM User Groups – Group Actions)



# The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window shows a grid of system icons representing various z/VM user groups. A context menu is open over the 'DEMO-LINUX' icon, listing actions such as 'Update', 'Status', 'Activate', 'Deactivate', 'Recycle', 'Pause', 'Resume', 'Send Message', 'Execute Script', 'Access...', 'Cloning...', 'Install...', and 'More Actions'. A sub-menu is also visible, showing options like 'Update Information', 'Assign Distribution', 'Assign Project', 'Assign Site Defined Group' (with 'DEMO-LINUX' selected), 'Assign Custom Attribute', 'Assign Account', 'Remove Account', 'Assign Functionality', and 'Assign Default z/VM System'. A yellow callout box on the left contains the text 'User Actions for "uninitialed" guest'. The bottom of the screen shows the Windows taskbar with several open applications, including 'A - zVM\_tmcc16.W5', 'Command Prompt', and 'CSL-WAVE 3.2.0 (WAV...'.

# The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups

Show Filter Panel

Move guest to new group

Property Viewer

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A
Total Disk Sp...	2.00
Inconsistent	No
Connectable	Yes
Prototype	N/A
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	waveadm on 2013-08-20 13:52:19
Create By	WAVE Daemon Updater on 2013-08-20 ...

IBM-OPER (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 3 Users All Accessible

IBM-SYSTEM (TMCC16) 0 Users

MVSMAINT

ELIZA

OPMGRM1

CF2

BACKUPVM

XCAT80 (\*Unknown\*)

OPMGRS1

LINUX390

IBM-DIRM (TMCC16) 0 Users

IBM-SMAP1 (TMCC16) 0 Users

IBM-ENS (TMCC16) 0 Users

WAVEADM

ZHCP16 (\*Unknown\*)

ZVMND

OPMGRS2

XYMON

URIT

IBM-NA (TMCC16) 0 Users

DEMO LINUX

DEMO LINUX

IBM-NA (TMCC16) 0 Users

Display Information

Update

Status

Activate

Deactivate

Recycle

Pause

Resume

Send Message

Execute Script

Update Information

Assign Distribution

Assign Project

Assign Site Defined Group

Assign Custom Attribute

Assign Account

Remove Account

Assign Functionality

Assign Default z/VM System

Access...

Cloning...

Install...

More Actions

BTS Online

waveadm

Start

A - zVM\_tmcc16.WS

Command Prompt

cslwave.z0plex.com - Pu...

Launch CSL

CSL-WAVE 3.2.0 (WAV...

DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tools

Information shown when moving mouse over the object

z/VM User Name: ZLIN79  
 Status: Active  
 Directory: New Directory for TMCC16  
 Running On: TMCC16  
 This user has not been initialized for CSL-WAVE use

Property Viewer

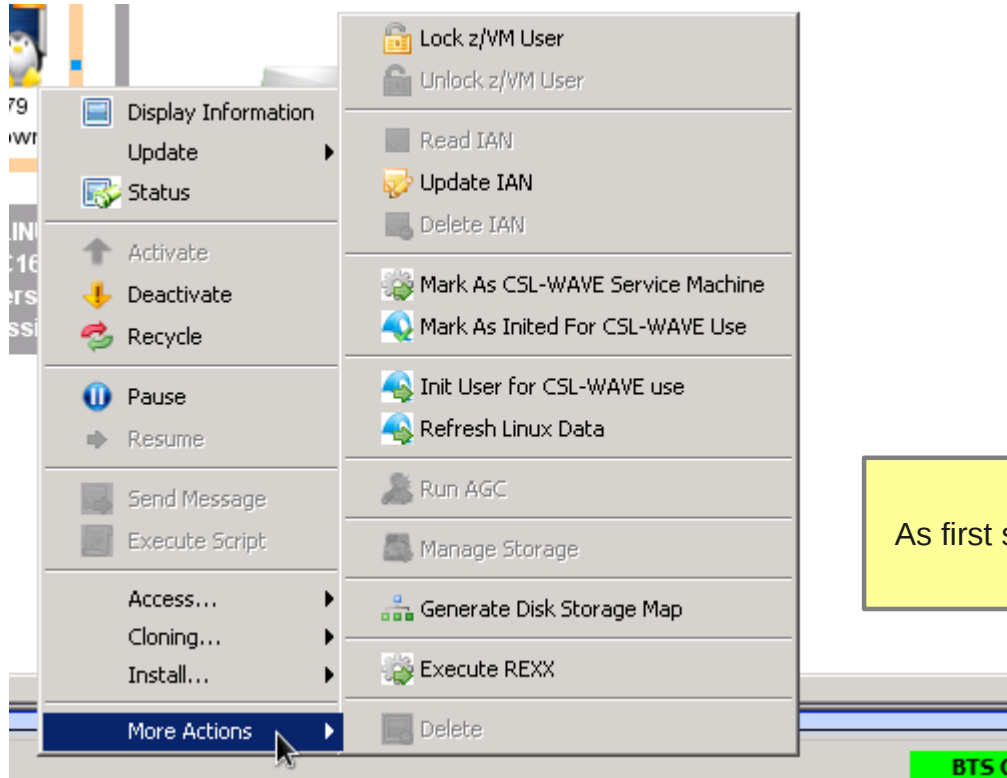
C16) ZHCP16 (TMCC16)

Property	Value
Name	ZHCP16
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.116
Project	N/A
Functionality	N/A
Total Disk Sp...	2,31
Inconsistent	No
Connectable	Yes
Prototype	N/A
CPUs	1
Memory Min (...)	1000
Memory Max ...	1000
Modified By	WAVE Daemon Updater on 2013-08-20 ...
Create By	WAVE Daemon Updater on 2013-08-20 ...

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Actions available for an “uninitialized” guest. As soon as initialization has completed, you’ll see additional actions provided

As first step select “Init User for CSL-WAVE Use”

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks (1)

Default Zoom Group By: Site Defined Gr...

Show Filter Panel

**Initialize z/VM Users for CSL-WAVE use (1/1) Selected**

Initialize the following z/VM users for CSL-WAVE use

Name	System	Status
<input checked="" type="checkbox"/> ZLIN79	TMCC16	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

Authorized user name and password:

Authorized Linux User:

Use Password:

Use Private/Public Key  Browse...

**This authorized user will not be saved by CSL-WAVE**

Use the following Virtual device to link to the CSL-WAVE Service Machine:

Enter virtual device:

Hide Cancel Go

Waiting for user input

IBM-ENS (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users

IBM-OPER (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

BTS Online

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

System Name	Users	Access
IBM-ENS (TMCC16)	0	
IBM-SYSTEM (TMCC16)	0	
IBM-SEC (TMCC16)	0	
IBM-DIRM (TMCC16)	0	
IBM-NA (TMCC16)	0	
WAVE-INTERNAL (TMCC16)	3	All Accessible
DEMO (TMCC16)	1	All Accessible
ZLIN79 (zlin79)	3	
IBM-COM (TMCC16)	0	
IBM-OPER (TMCC16)	0	
IBM-UTIL (TMCC16)	0	
IBM-SMAPI (TMCC16)	0	

z/VM User Name: ZLIN79  
 Status: Active  
 Directory: New Directory for TMCC16  
 Running On: TMCC16

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

**Display ZLIN79 Details**

General Information

z/VM Guest Name: ZLIN79  
 z/VM System Name: TMCC16  
 SDG Name: DEMO LINUX

Guest Meta Data

Distribution: SLES11 - 64 Bit  
 Functionality: N/A (Activation Level 1)  
 Description:  
 Default z/VM System:

z/VM Data

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC16	Active	Yes	DEMO LINUX	Yes		1	1024 MB	1024 MB	2.00 GB	G	N/A

Connection Availability from This Work Station

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.79	DEMOLAN	DEMOLAN	Reachable

Update

Created By: WAVE Daemon Updater on 2013-08-20 13:50:23  
 Last Modified By: waveadm on 2013-08-20 14:18:10

Waiting for user input

After successful initialization - all tabs are filled with values. For "uninitialized" guests only z/VM values are presented.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot shows the CSL-WAVE GUI interface. A window titled "Display ZLIN79 Details" is open, displaying the following information:

**General Information**

- z/VM Guest Name: ZLIN79
- z/VM System Name: TMCC16
- SDG Name: DEMO LINUX

**Data z/VM View**

```

USER ZLIN79 XXXXXXXX 1024M 1024M G
CPU 00
IPL 192
LOGONBY PURIT WAVEADM
MACHINE ESA 4
CONSOLE 0009 3215
NICDEF EA00 TYPE QDIO LAN SYSTEM DEMOLAN
SPOOL 000C 3505 A
SPOOL 000D 3525 A
SPOOL 000E 1403 A
*
*
*****
LINK MAINT 0190 0190 RR
LINK MAINT 019D 019D RR
LINK MAINT 019E 019E RR
LINK WAVEWRKS 0399 0399 RR
    
```

At the bottom of the window, it says "Waiting for user input". The main application window has a menu bar with "File", "Auto Detect", and "User-Group Management". The taskbar at the bottom shows the Start button and several open applications, including "A - zvm\_tmcc16.W5", "Command Prompt", "cslwave.z0plex.com - Pu...", "Launch CSL-WAVE v3.2...", and "CSL-WAVE 3.2.0 (WAV...".

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostna)

File Auto Detect User-Group Manage

z/VM User Groups Network Prototype

Default Zoom

### Display ZLIN79 Details

General Information

z/VM Guest Name: ZLIN79  
 z/VM System Name: TMCC16  
 SDG Name: DEMO LINUX

Data z/VM View zLinux View Performance View Custom Attributes

#### File System Information (df -ah)

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Mount Point	Status (Capacity)
/dev/dasda1	ext3	1.57	1.03	0.47	STD	/	65%
proc	proc	0.00	0.00	0.00	STD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	/dev/pts	0%

#### Network Information (ifconfig -all)

Device	MAC Address	IP Address	Status
eth0	02:00:16:00:00:31	192.168.9.79	ONLINE
lo		127.0.0.1	ONLINE

#### Routing Information (route)

Destination	Gateway	Mask	Flags	Metric	Ref	Use	Interface	Reachable
default	192.168.9.1	0.0.0.0	UG	0	0	0	eth0	Reachable
loopback	*	255.0.0.0	U	0	0	0	lo	N/A
link-local	*	255.255.0.0	U	0	0	0	eth0	N/A
192.168.9.0	*	255.255.255.0	U	0	0	0	eth0	N/A

#### Uptime Information

Uptime: up 0:12 hours

Close IAN

Waiting for user input

Show Filter Panel

BTS Online waveadm

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname)

File Auto Detect User-Group Management

**Display ZLIN79 Details**

General Information

z/VM Guest Name: ZLIN79  
z/VM System Name: TMCC16  
SDG Name: DEMO LINUX

Data | z/VM View | zLinux View | Performance View | Custom Attributes

z/VM Performance Data

Linux Performance Data

CPU:

Memory:

Swap (408449024/4...):

Load Average

1 Minute	5 Minutes	15 Minutes
0.05	0.07	0.05

Cache

Type	Amount
Buffers	5.70 MB
Cache	73.51 MB

Tasks (76 total)

Status	Amount
Running	2
Sleeping	74
Stopped	0
Zombie	0

Processes

Process Name	PID	User	Prio.	Nice	Virtual	Resident	Share	Status	% CPU	% Memory	Time
init	1	root	20	0	2.43 KB	888	752	S	0.0	0.1	0:00.24
kthreadd	2	root	20	0	0	0	0	S	0.0	0.0	0:00.00
ksoftirqd/0	3	root	20	0	0	0	0	S	0.0	0.0	0:00.02
kworker/0:0	4	root	20	0	0	0	0	S	0.0	0.0	0:00.00
kworker/u:0	5	root	20	0	0	0	0	S	0.0	0.0	0:00.02
migration/0	6	root	RT	0	0	0	0	S	0.0	0.0	0:00.00

Update

Close IAN

Waiting for user input

BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostn...)

File Auto Detect User-Group Manage...

Current System View - "TMCC16"

z/VM User Groups Network Prototyp...

Default Zoom

**Display ZLIN79 Details**

General Information

z/VM Guest Name: ZLIN79  
z/VM System Name: TMCC16  
SDG Name: DEMO LINUX

Data | z/VM View | zLinux View | Performance View | Custom Attributes

z/VM Performance Data

Machine Information: Machine Type: ESA, IPL Device: 0192

Storage Information: Storage Type: V, Configured Storage: 1 GB, XStore: 0 MB

Pages Information: RES: 43688, WS: 43636, RESVD: 0, LOCK: 52, PREF: 0, NPREF: 1, READS: 2, WRITES: 2

CPU Information

ID	CTIME	VTIME	TTIME	IO
00	00:16	000:18	000:18	008011

Linux Performance Data

CPU:

Memory:

Swap (408449024/4...):

Load Average

1 Minute	5 Minutes	15 Minutes
0.05	0.07	0.05

Cache

Type	Amount
Buffers	5.70 MB
Cache	73.51 MB

Tasks (76 total)

Status	Amount
Running	2
Sleeping	74

Processes

Process Name	PID	User	Prio.	Nice	Virtual	Resident	Share	Status	% CPU	% Memory	Time
init	1	root	20	0	2.43 KB	888	752	S	0.0	0.1	0:00.24

Update Close IAN

Waiting for user input

BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks (1)

Refresh Linux Data (1/1) Selected, Last Run: 1/1 Ended

Refresh Linux Data for the following z/VM Guests

Name	System	Status
<input checked="" type="checkbox"/> zLIN79	TMCC16	Done - Request added

Select All Deselect All Toggle Selection Show Filtering Parallel

Authorized user name and password:

Authorized Linux User:

Use Password:

Use Private/Public Key  Browse...

This authorized user will not be saved by CSL-WAVE

Hide Close Go

zlin7\* ... Show Filter Panel

IBM-COM (TMCC16) 0 Users

IBM-SYSTEM (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

Property Viewer

TMCC16 DEMOLAN

Property	Value
Type	VSwitch
VLAN Aware	No
Default VLAN ID	N/A
Name	DEMOLAN
Owner	SYSTEM
Protocol	QDIO
Life Span	Presist
Created By	WAVEinit on 2013-08-20 11:52:31
Last Modified...	waveadm on 2013-08-20 15:59:12

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Requ

Workunit Name	Waveadm	Start Time	End Time	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43	22 seconds	Done	100%
Delete z/VM Guests	waveadm	2013-08-23 07:36:21	2013-08-23 07:36:58	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24	15 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%

Waiting for user input

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI with the 'Update z/VM User ZLIN79' dialog box open. The dialog is titled 'Update z/VM User ZLIN79' and contains the following sections:

- General Information:**
  - z/VM Guest Name: ZLIN79
  - z/VM System Name: TMCC16
  - SDG Name: DEMO LINUX
- Status Information:**
  - Status: Active
  - Connectable:
  - Locker: (empty)
- Machine information:**
  - Memory Min(MB): 1024
  - Memory Max(MB): 1024
  - Virtual CPUs: 1
  - Disk Space(GB): 2.00
- Machine source:**
  - Distribution: SLES11 - 64 Bit
  - Prototype: (empty)
  - Original userid: (empty)
- password:**
  - Current Password: (empty)
  - New Password: (empty)
  - Verify New Password: (empty)
- Update:**
  - Created By: WAVE Daemon Updater on 2013-08-20 13:50:23
  - Last Modified By: WAVEinit on 2013-08-20 14:52:49

At the bottom of the dialog, there are buttons for 'Close', 'IAN', and 'Update'. The status bar at the bottom of the window shows 'Waiting for user input'.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE Demo interface. The title bar reads "CSL-WAVE Demo" and the address bar shows "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The main menu includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The current system view is "TMCC16".

The "z/VM User Groups" section shows a grid of system icons. A yellow callout box with the text "Deactivate" action" is indicated via yellow arrow to the bottom" points to a yellow arrow on the ZLIN79 icon. The ZLIN79 icon is highlighted with a blue border and contains a yellow arrow pointing down. Below the icon, the text reads "ZLIN79 (zlin79)", "DEMO LINUX (TMCC16)", "1 Users", and "All Accessible".

Other user groups shown include:

- IBM-COM (TMCC16) 0 Users
- IBM-OPER (TMCC16) 0 Users
- IBM-UTIL (TMCC16) 0 Users
- USER-LOCAL (TMCC16) 18 Users All Accessible
- IBM-DIRM (TMCC16) 0 Users
- IBM-SEC (TMCC16) 0 Users
- IBM-SMAPI (TMCC16) 0 Users
- IBM-ENS (TMCC16) 0 Users
- WAVE-INTERNAL (TMCC16) 3 Users All Accessible
- IBM-SYSTEM (TMCC16) 0 Users
- IBM-NA (TMCC16) 0 Users

The bottom taskbar shows the Start button, several open applications (A - zVM\_tmcc16.W5, Command Prompt, cslwave.z0plex.com - Pu..., Launch CSL-WAVE v3.2..., CSL-WAVE 3.2.0 (WAV...)), and system tray icons including "BTS Online" and "waveadm".

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface for the 'Current System View - "TMCC16"'. The main area shows a grid of z/VM user groups, each represented by a server icon and associated text:

- IBM-COM (TMCC16) 0 Users
- IBM-OPER (TMCC16) 0 Users
- IBM-SMAPI (TMCC16) 0 Users
- IBM-ENS (TMCC16) 0 Users
- IBM-UTIL (TMCC16) 0 Users
- USER-LOCAL (TMCC16) 18 Users All Accessible
- IBM-LOCAL (TMCC16) 1 Users All Accessible
- IBM-LOCAL (TMCC16) 3 Users All Accessible
- IBM-SYSTEM (TMCC16) 0 Users
- IBM-DIRM (TMCC16) 0 Users
- IBM-SEC (TMCC16) 0 Users
- IBM-NA (TMCC16) 0 Users

A yellow callout box with a green arrow points to the top of the USER-LOCAL group icon, with the text: "Activate" action" is indicated via green arrow to the top".

The GUI includes a menu bar (File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help), a toolbar with various icons and a 'Stop Updates' button, and a bottom taskbar with the Start button, several open applications (A - zvm\_tmcc16.W5, Command Prompt, cslwave.z0plex.com - Pu..., Launch CSL-WAVE v3.2..., CSL-WAVE 3.2.0 (WAV...)), and system tray icons (BTS Online, waveadm, DE).

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Group By: Site Defined Groups zlin7\* ... Show Filter Panel

z10

TMCC16

ZVM63CAT

IBM-ENS (TMCC16) 0 Users

IBM-SMAPI (TMCC16) 0 Users

ZLIN79 (zlin79)

DEMO LINUX (TMCC16) 1 Users All Accessible

IBM-OPER (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 4 Users All Accessible

IBM-SYSTEM (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

USER-LOCAL (TMCC16) 17 Users All Accessible

IBM-SEC (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users

Property Viewer

TMCC16 DEMOLAN

Property	Value
Type	VSwitch
VLAN Aware	No
Default VLAN ID	N/A
Name	DEMOLAN
Owner	SYSTEM
Protocol	QDIO
Life Span	Presist
Created By	WAVEinit on 2013-08-20 11:52:31
Last Modified...	waveadm on 2013-08-20 15:59:12

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

z10

TMCC16

ZVM63CAT

IBM-ENS (TMCC16) 0 Users

IBM-SYSTEM (TMCC16) 0 Users

IBM-SEC (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 4 Users All Accessible

IBM-COM (TMCC16) 0 Users

IBM-OPER (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

ZLIN79 (zlin79)

DEMO L... (TMCC16) 1 User All Accessible

- Display Information
- Update
- Status
- Activate
- Deactivate
- Recycle
- Pause
- Resume
- Send Message**
- Execute Script
- Access...
- Cloning...
- Install...
- More Actions

Property Viewer

INUX ZLIN79 (TMCC16) TMCC16 z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks (1)

**Send Messages to Linux User Terminals (1/1) Selected**

Send Message to the following users

Name	System	Status
<input checked="" type="checkbox"/> ZLIN79	TMCC16	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

Message

```
test from csl-wave gui
```

Hide Cancel Go

Waiting for user input

Property Viewer

INUX ZLIN79 (TMCC16) TMCC16 z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

z10

TMCC16

ZVM63CAT

IBM-DIRM (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled "zlin79.z0plex.com - PuTTY" and shows a terminal session where a user has logged in as root. The terminal output includes the login process, the last login time (Tue Aug 20 21:43:12 2013 from 192.168.9.27), and a message from the administrator waveadm: "test from csl-wave gui". A note at the bottom of the terminal states: "\*This message was sent using CSL-WAVE".

On the right side of the GUI, the "Hardware View" pane shows two user groups:

- IBM-DIRM (TMCC16) 0 Users
- IBM-COM (TMCC16) 0 Users

At the bottom left, the "Property View" pane shows details for the selected user group:

Property	
Name	ZLIN7
Model	
Status	
Description	
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

The Windows taskbar at the bottom shows the Start button and several open applications: "Launch CSL-WAVE v3.2...", "A - zVM\_tmcc16.WS", "zlin79.z0plex.com - P...", and "CSL-WAVE 3.2.0 (WAVE...". The system tray includes a "BTS Online" button, a user profile for "waveadm", and system icons for network, volume, and power.



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE Demo application window. The title bar reads "CSL-WAVE Demo". The menu bar includes: File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help. Below the menu bar is a toolbar with icons for home, refresh, search, and a "Stop Updates" button.

The main content area is titled "Current System View - 'TMCC16'". It features a navigation bar with tabs: z/VM User Groups, Network, Prototypes, Storage, System Status (highlighted), and Session Tasks. Below the tabs is a toolbar with a "Default Zoom" button, a "Group By:" dropdown menu set to "Site Defined Groups", a search input field, and a "Show Filter Panel" button.

The main area contains a grid of z/VM user group icons. Each icon is labeled with its name and the number of users:

- IBM-COM (TMCC16) 0 Users
- IBM-OPER (TMCC16) 0 Users
- IBM-SMAPI (TMCC16) 0 Users
- IBM-ENS (TMCC16) 0 Users
- IBM-UTIL (TMCC16) 0 Users
- USER-LOCAL (TMCC16) 18 Users All Accessible
- IBM-DIRM (TMCC16) 0 Users
- IBM-SEC (TMCC16) 0 Users
- IBM-SYSTEM (TMCC16) 0 Users

A context menu is open over the "USER-LOCAL (TMCC16)" icon. The menu items are:

- Display Information
- Update
- Status
- Activate
- Deactivate
- Recycle
- Pause
- Resume
- Send Message
- Execute Script (highlighted)
- Access...
- Cloning...
- Install...
- More Actions

The Windows taskbar at the bottom shows the Start button, several open applications including "A - zVM\_tmcc16.W5", "Command Prompt", "cslwave.z0plex.com - Pu...", "Launch CSL-WAVE v3.2...", and "CSL-WAVE 3.2.0 (WAV...". The system tray on the right includes "BTS Online" and "waveadm".

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com IP Address: 192.168.9.70)

File Auto Execute Script (1/1) Selected

Specify user credentials for script execution

Linux User Name:

Specify Password:

Use Public/Private Key File:   Specify Key Phrase

Execute Selected Script on the

Name	System
<input checked="" type="checkbox"/> ZLIN79	TMCC16

With the following Execution Options

Script Name:

Script Parameters:

Script Description:

Created By:

Show Private Scripts  Show Global Scripts

Hide

Waiting for user input

TMCC16) users

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE |



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM

Workunit Details

Workunit Name: Execute Script on z/VM Guests Workunit Start Time: 2013-08-20 21:54:21

Workunit ID: 2013232-21:54:21\_644 Workunit End Time: 2013-08-20 21:54:23

Workunit Initiator: waveadm Workunit Duration: 2 seconds

Workunit Status: Done

BTS Requests

Request Name	Status	Progress
Execute Script WAVEInit.testscript on g...	Done	100%

COR Entries

Log COR Script COR

```
test script called via WAVE - will show userid, hostname and IP address
WAVEuser
zlin79
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
   link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
   inet 127.0.0.1/8 brd 127.255.255.255 scope host lo
   inet 127.0.0.2/8 brd 127.255.255.255 scope host secondary lo
   inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1492 qdisc pfifo_fast state UNKN
   link/ether 02:00:16:00:00:11 brd ff:ff:ff:ff:ff:ff
```

Log for All Requests Close

Property Viewer

INUX ZLIN79 (TMCC16) TMCC16 z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	076440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Alter

Workunit Name	Status	Progress
Execute Script on z/VM Guests	Done	100%
Init z/VM Guests for CSL-WAVE	Done	100%
Update z/VM Prototype	Done	100%
Update z/VM Prototype	Done	100%
Update All z/VM Aspects	Done	100%
Update Distribution to z/VM Guests	Done	100%
Remove z/VM Virtual Network From Knowledgebase	Done	100%
Disconnect VNS from z/VM Virtual Network	Done	100%

z10

zlin79.z0plex.com - PuTTY

CSL-WAVE 3.2.0 (WAY...

BTS Online waveadm

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

IBM-COM (TMCC16) 0 Users  
IBM-OPER (TMCC16) 0 Users  
IBM-SMAPI (TMCC16) 0 Users  
IBM-ENS (TMCC16) 0 Users  
IBM-UTIL (TMCC16) 0 Users  
USER-LOCAL (TMCC16) 18 Users All Accessible  
IBM-DIRM (TMCC16) 0 Users  
IBM-SEC (TMCC16) 0 Users  
IBM-SYSTEM (TMCC16) 0 Users

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13				100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24				100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41				100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20				100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

3270 connection to ZLIN79

Enter VM User Password

Enter Password:

Use LogonBY

LogonBY User : WAVEADM

LogonBY Password : \*\*\*\*\*

Cancel Login

Connecting to ZLIN79

Logging in...

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

BTS Online waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Group By: Site Defined Groups

IBM-COM (TMC 0 Users)

IBM-UTIL (TMCC16 0 Users)

IBM-DIRM (TV 0 Users)

**Linux Console for ZLIN79**

```

16:13:18 * MSG FROM WAVEWRKS: WAVE-3270 SESSION ACTIVATED SUCCESSFULLY
vmcp q userid
ZLIN79 AT TMCC16
zlin79:~ #

```

"Read only" access to 3270 green-screen

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Status	Progress
Update All z/VM Aspects	waveadm		100%
Refresh Linux Data for z/VM Guests	waveadm		100%
Activate z/VM Guests	waveadm		100%
Deactivate z/VM Guests	waveadm		100%
Init z/VM Guests for CSL-WAVE	waveadm		100%
Refresh Linux Data for z/VM Guests	waveadm		100%
Update All z/VM Aspects	waveadm		100%
Init z/VM Guests for CSL-WAVE	waveadm		100%

RUNNING TMCC16

BTS Online

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

IBM-COM (TMCC16) 0 Users  
 IBM-OPER (TMCC16) 0 Users  
 IBM-SMAPI (TMCC16) 0 Users  
 IBM-ENS (TMCC16) 0 Users  
 IBM-UTIL (TMCC16) 0 Users  
 USER-LOCAL (TMCC16) 18 Users All Accessible  
 IBM-DIRM (TMCC16) 0 Users  
 IBM-SEC (TMCC16) 0 Users

Display Information  
 Update  
 Status  
 Activate  
 Deactivate  
 Recycle  
 Pause  
 Resume  
 Send Message  
 Execute Script

Access...  
 Cloning...  
 Install...  
 More Actions

CSL-WAVE 3270 Display-only Linux Console  
 CSL-WAVE 3270 Linux Console  
 SSH Access  
 CLC Access

Workunit Name	Initiator	Start At	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	100%

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV...



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Group By: Site Defined Groups

IBM-COM (TMC) 0 Users

IBM-UTIL (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

**Linux Console for ZLIN79**

Key Pad

```

16:23:07 * MSG FROM WAVEWRKS: WAVE-3270 SESSION ACTIVATED SUCCESSFULLY
hostname
hostname
zlin79
zlin79:~ # ps aux
ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   2492   888 ?        Ss   15:00   0:00 init [3]
root         2  0.0  0.0     0     0 ?        S    15:00   0:00 [kthreadd]
root         3  0.0  0.0     0     0 ?        S    15:00   0:00 [ksoftirqd/0]
root         4  0.0  0.0     0     0 ?        S    15:00   0:00 [kworker/0:0]
root         5  0.0  0.0     0     0 ?        S    15:00   0:00 [kworker/u:0]
root         6  0.0  0.0     0     0 ?        S    15:00   0:00 [migration/0]
root         7  0.0  0.0     0     0 ?        S<   15:00   0:00 [cpuset]
root         8  0.0  0.0     0     0 ?        S<   15:00   0:00 [khelper]
root         9  0.0  0.0     0     0 ?        S<   15:00   0:00 [netns]
root        10  0.0  0.0     0     0 ?        S    15:00   0:00 [sync_supers]
root        11  0.0  0.0     0     0 ?        S    15:00   0:00 [bdi-default]
root        12  0.0  0.0     0     0 ?        S<   15:00   0:00 [kintegrityd]
root        13  0.0  0.0     0     0 ?        S<   15:00   0:00 [kblockd]
root        14  0.0  0.0     0     0 ?        S<   15:00   0:00 [md]
root        21  0.0  0.0     0     0 ?        S    15:00   0:00 [fsnotify_mark]
root        22  0.0  0.0     0     0 ?        S<   15:00   0:00 [crypto]
root        28  0.0  0.0     0     0 ?        S<   15:00   0:00 [kthrotld]
root        29  0.0  0.0     0     0 ?        S    15:00   0:00 [khvwd]
root        30  0.0  0.0     0     0 ?        S    15:00   0:00 [kmcheck]
root        32  0.0  0.0     0     0 ?        S    15:00   0:00 [kworker/0:1]
root        79  0.0  0.0     0     0 ?        S<   15:00   0:00 [kmpath_aluad]
root       101  0.0  0.0     0     0 ?        S<   15:00   0:00 [kmpath_rdaod]
root       257  0.0  0.0     0     0 ?        S    15:00   0:00 [kjournald]
root       263  0.0  0.0     0     0 ?        S    15:00   0:00 [flush-94:0]
root       334  0.0  0.1   2776  1024 ?        S<S  15:00   0:00 /sbin/udevd --
HOLDING TMCC16
  
```

Interactive access to 3270 green-screen

Progress

- 100%
- 100%
- 100%
- 100%
- 100%
- 100%
- 100%
- 100%

BTS Online waveadm

Go Break (^C)

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator
Update All z/VM Aspects	waveadm
Refresh Linux Data for z/VM Guests	waveadm
Activate z/VM Guests	waveadm
Deactivate z/VM Guests	waveadm
Init z/VM Guests for CSL-WAVE	waveadm
Refresh Linux Data for z/VM Guests	waveadm
Update All z/VM Aspects	waveadm
Init z/VM Guests for CSL-WAVE	waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

**SSH to ZLIN79**

Login Credentials

User Name: root

Password: \*\*\*\*\*

Interface: 192.168.9.79

Connection Options

Set this connection as default

Use Public key Authentication

Cancel Login

Waiting for user input

IBM-COM (TMCC16) 0 Users

IBM-OPS (TMCC16) 0 Users

IBM-ENS (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

USER-LOC (TMCC16) 18 Users

IBM-SYSTEM (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

IBM-SE (TMCC16) 0 Users

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

zlin72.z0plex.com - PuTTY

```
login as: root
Using keyboard-interactive authentication.
Password:
Last login: Tue Aug 20 15:12:48 2013
zlin79:~ # █
```

						Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%	
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%	
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%	
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%	
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%	
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%	
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%	
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%	

BTS Online waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | zlin72.z0plex.com - P... | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAVE... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

**Connecting to ZLIN79**

Linux Login Credentials

User Name: root

Password: \*\*\*\*\*

VM Login Credentials

VM Guest Password:

Use LogonBY

LogonBY User : WAVEADM

LogonBY Password : \*\*\*\*\*

Cancel Login

Waiting for user input

IBM-SEC (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

USER-LOCAL (TMCC16) 17 Users All Accessible

IBM-COM (TMCC16) 0 Users

IBM-SMAPI (TMCC16) 0 Users

Property Viewer

INUX TMCC16 z10 ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36	3 seconds	Done	100%
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23	2 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02	19 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06	4 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Property Viewer

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

Executing CP commands

Please Note: You cannot run CP commands from CLC. the command will be changed to vmcp command. Proceed?

Yes No

```

clicprompt>hostname
hostname
zlin79
clicprompt>vmcp q userid
vmcp q userid
ZLIN79 AT TMCC16
clicprompt>
  
```

us	Progress
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%

Workunit Name

- Refresh Linux Data for z/VM Guests
- Execute Script on z/VM Guests
- Init z/VM Guests for CSL-WAVE
- Update z/VM Prototype
- Update z/VM Prototype
- Update All z/VM Aspects
- Update Distribution to z/VM Guests
- Remove z/VM Virtual Network From Knowledgebase

#op q oplevel1 Go Break

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Property Viewer

INUX TMCC16 z10 ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log**

Workunit Name

- Refresh Linux Data for z/VM Guests
- Execute Script on z/VM Guests
- Init z/VM Guests for CSL-WAVE
- Update z/VM Prototype
- Update z/VM Prototype
- Update All z/VM Aspects
- Update Distribution to z/VM Guests
- Remove z/VM Virtual Network From Knowledgebase

CLC Connection for ZLIN79

```

cleprompt>hostname
hostname
zlin79
cleprompt>vmcp q userid
vmcp q userid
ZLIN79 AT TMCC16
cleprompt>vmcp q cplevel
vmcp q cplevel
z/VM Version 6 Release 3.0, service level 1301 (64-bit)
Generated at 06/28/13 14:58:28 CES
IPL at 08/20/13 17:41:15 CES
cleprompt>
    
```

us	Progress
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

IBM-COM (TMCC16) 0 Users  
IBM-OPER (TMCC16) 0 Users  
IBM-SMAPI (TMCC16) 0 Users  
IBM-ENS (TMCC16) 0 Users  
IBM-UTIL (TMCC16) 0 Users  
USER-LOCAL (TMCC16) 18 Users All Accessible  
ZLIN79 (zlin79)  
DEMO LINUX (TMCC16) 1 Users All Accessible  
IBM-SYSTEM (TMCC16) 0 Users  
IBM-DIRM (TMCC16) 0 Users  
IBM-SEC (TMCC16) 0 Users

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24			100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41			100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20			100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39			100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done

BTS Online waveadm

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

**CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)**

**Duplicate ZLIN79's VM User Definition**

New user Information

New z/VM User name: zlin71

New user password: \*\*\*\*\*

Confirm new password: \*\*\*\*\*

New DASH Group: LINUX (11.75 GB Free)

Data: z/VM View | zLIN79 | XCAT1 (0.00 GB Free) | LINUX (11.75 GB Free)

Status Information

Status: Active

Connectable:

Locker: [ ]

Project: CSL-WAVE Demo

Functionality: N/A (Activation Level 1)

Description: [ ]

Default z/VM System: TMCC16

Machine information

Memory Min(MB): 1024

Memory Max(MB): 1024

Virtual CPUs: 1

Disk Space(GB): 2.00

Machine source

Distribution: Other

Prototype: [ ]

Original userid: [ ]

Virtual Segment	Virtual Network	Network

Update

Created By: WAVE Daemon Updater on 2013-08-20 13:50:23

Last Modified By: WAVEinit on 2013-08-20 14:52:49

Close Create

Waiting for user input

Status	Progress
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%
	100%

Workunit Name

- Update All z/VM Aspects
- Refresh Linux Data for z/VM Guests
- Activate z/VM Guests
- Deactivate z/VM Guests
- Init z/VM Guests for CSL-WAVE
- Refresh Linux Data for z/VM Guests
- Update All z/VM Aspects
- Init z/VM Guests for CSL-WAVE

Start | A - zVM\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

Duplicate ZLIN79's VM User Definition

New user ZLIN71 created successfully

OK

A new z/VM machine ZLIN71 is defined - the guest definitions are simply copied from ZLIN79. No OS is being provided.

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The title bar reads "CSL-WAVE Demo" and the main window title is "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes: File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help.

The main area is titled "Current System View - 'TMCC16'" and shows a grid of VM icons. A context menu is open over the "ZCHCP 16 (zhcp16)" icon. The menu options are:

- Display Information
- Update
- Status
- Activate
- Deactivate
- Recycle
- Pause
- Resume
- Send Message
- Execute Script
- Access...
- Cloning...
  - Duplicate VM User Definition
  - Clone
  - Convert VM User to Prototype
- Install...
- More Actions

Other VM icons visible include IBM-ENS (TMCC16), IBM-UTIL (TMCC16), IBM-COM (TMCC16), WAVE-INTERNAL (TMCC16), IBM-SYSTEM (TMCC16), OPMGRM1, OPMGRS2, ZVMND, WAVEADM, CF2, BACKUPVM, ELIZA, LINUX390, ZCHCP 16 (zhcp16), 5697J10C, CF1, PMGRS1, XYMON, CONSOL, DEMO LINUX (TMCC16), IBM-OPER (TMCC16), IBM-SMAPI (TMCC16), and IBM-DIRM (TMCC16).

The taskbar at the bottom shows the Start button, a taskbar with "Launch CSL-WAVE v3.2...", "A - zVM\_tmcc16.WS", and "CSL-WAVE 3.2.0 (WAY...)", and system tray icons for "BTS Online" and "waveadm".

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management

**Clone z/VM Guest ZLIN79 in z/VM System TMCC16 (2/2) Selected**

New Clone information

CSC Information

Target z/VM System Name:

New Clone Parameters

Number of clones  Basename for clones  New Password  Verify new password

New Storage Group

Clone the following users

	Name	Hostname	System	DEMOLAN	Virtual Network 2	Virtual Network 3	Status
<input checked="" type="checkbox"/>	ZLIND	ZLIND	TMCC16	192.168.9.2			Ready
<input checked="" type="checkbox"/>	ZLIN1	ZLIN1	TMCC16	192.168.9.3			Ready

Total Storage Needed

Network Configuration | FCP Configuration | Optional Configuration

Network Information

	Virtual Segment	Virtual Network	Network	Default GW	Port type
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.60.100.0	<input type="checkbox"/>	N/A
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.70.100.0	<input type="checkbox"/>	N/A
<input checked="" type="checkbox"/>	DEMOLAN	SYSTEM.DEMOLAN (z/VM VSwitch)	192.168.9.0	<input checked="" type="checkbox"/>	N/A

Waiting for user input

Hardware Viewer Enterprise Viewer Dashboard

Hardware Viewer

z10 zEC12

TMCC16

ZVM63CAT

Property Viewer

TMCC16 ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Inactive
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	CSL-WAVE Demo
Functionality	N/A

Start Command Prompt Launch CSL-WAVE v3.2... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE waveadm

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Manager

Clone z/VM Guest ZLIN79 in z/VM System TMCC16 (2/2) Selected

New Clone information

CSC Information

Target z/VM System Name: **TMCC16**

New Clone Parameters

Number of clones: **2** Basename for clones: **zlin7** New Password: **\*\*\*\*\*** Verify new password: **\*\*\*\*\***

New Storage Group: **LINUX (11.61 GB Free)** Update

Clone the following users

	Name	Hostname	System	DEMOLAN	Virtual Network 2
<input checked="" type="checkbox"/>	ZLIN70	ZLIN71	TMCC16	192.168.9.2	
<input checked="" type="checkbox"/>	ZLIN71	ZLIN72	TMCC16	192.168.9.73	

Select All Deselect All Toggle Selection

**Assign IP addresses in VNS...**

Associated IP Addresses

IP

192.168.9.72

Close

Status

Ready

Show Filtering Parallel

Total Storage Needed 4.0 GB

Network Configuration FCP Configuration Optional Configuration

Network Information

	Virtual Segment	Virtual Network	Network	Default GW	Port type
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.60.100.0	<input type="checkbox"/>	N/A
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.70.100.0	<input type="checkbox"/>	N/A
<input checked="" type="checkbox"/>	DEMOLAN	SYSTEM.DEMOLAN (z/VM VSwitch)	192.168.9.0	<input checked="" type="checkbox"/>	N/A

Hide Cancel Go

Waiting for user input

Online waveadm

Property Viewer

TMCC16 ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Inactive
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	CSL-WAVE Demo
Functionality	N/A

Start Command Prompt Launch CSL-WAVE v3.2... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The title bar reads "CSL-WAVE Demo" and the main window title is "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes "File", "Auto Detect", "User-Group Management", "Network Management", "Prototype Management", "Storage Management", "Administrative", "User Tasks", "Reports", "Window", and "Help".

The main content area is titled "Current System View - 'TMCC16'" and shows a grid of VM icons. A context menu is open over the "ZHCP 16 (zhcp16)" icon, listing the following actions:

- Display Information
- Update
- Status
- Activate
- Deactivate
- Recycle
- Pause
- Resume
- Send Message
- Execute Script
- Access...
- Cloning...
  - Duplicate VM User Definition
  - Clone
  - Convert VM User to Prototype
- Install...
- More Actions

The taskbar at the bottom shows the Start button, several open applications including "Launch CSL-WAVE v3.2...", "A - zVM\_tmcc16.WS", and "CSL-WAVE 3.2.0 (WAY...)", and system tray icons for "BTS Online" and "waveadm".

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototypes Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Group By: Site Defined Groups

**Create Prototype From z/VM User ZLIN79**

General Information

z/VM Guest Name: ZLIN79

z/VM System Name: TMCC16

SDG Name: JSER-LOCAL

---

Data z/VM View

General Information

Full Name: ZLIN79

Description: ZLIN79-ptototype

Functionality: N/A (Activation Level 1)

Project: CSL-WAVE Demo

DASD Group: LINUX

Associated z/VM Guest: ZLIN79

Update

Created By:

Last Modified By:

Cancel Create

Waiting for user input

IBM-ENS (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 4 Users All Accessible

IBM-SYSTEM (TMCC16) 0 Users

OPMGRM1

ELIZA

XYMON

IBM-SEC (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users

DEMO LINUX (TMCC16) 0 Users

IBM-OPER (TMCC16) 0 Users

IBM-SMAPI (TMCC16) 0 Users

IBM-DIRM (TMCC16) 0 Users

Show Filter Panel

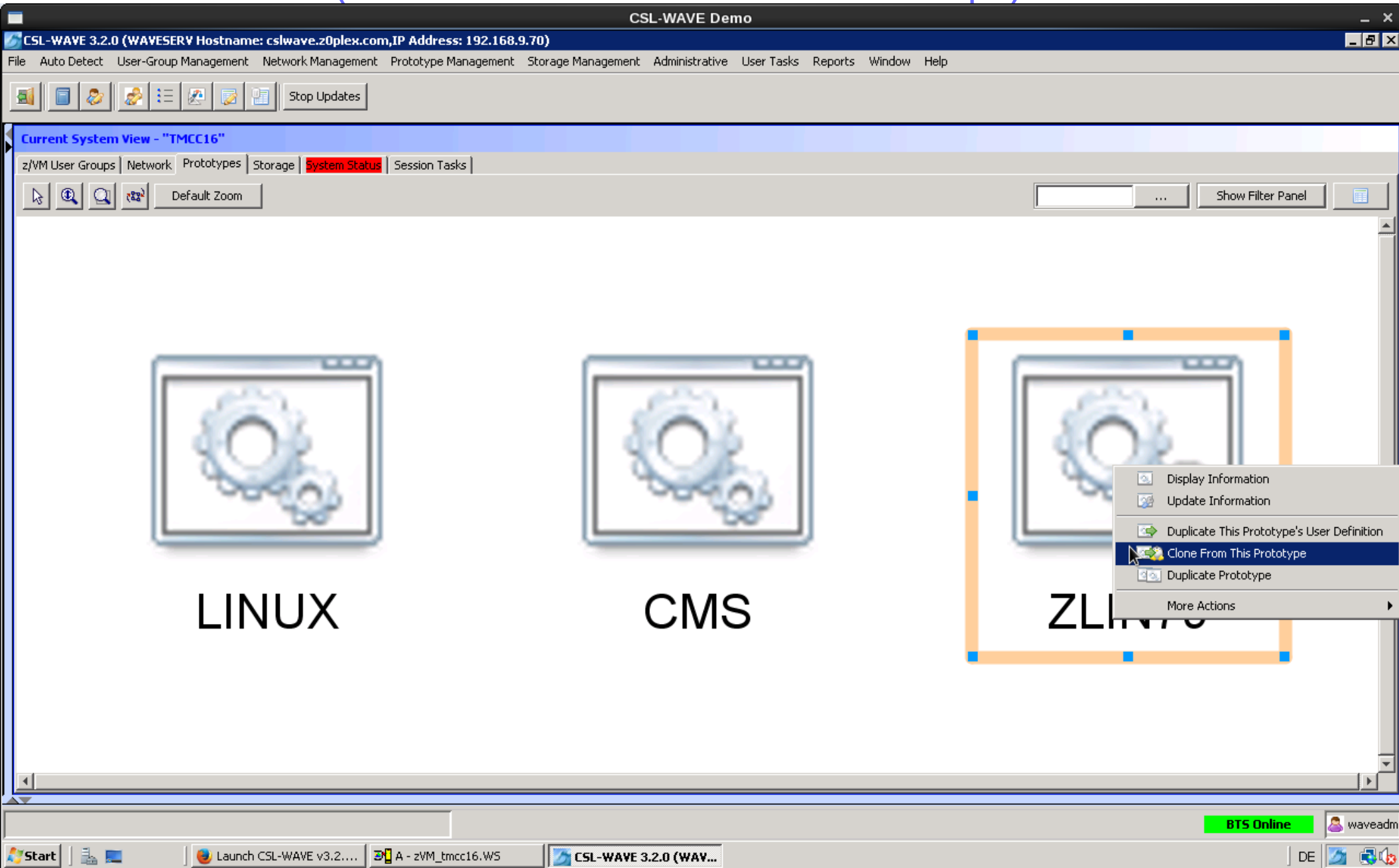
BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 interface. The title bar reads "CSL-WAVE Demo" and the address bar shows "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The main content area is titled "Current System View - 'TMCC16'" and features a tabbed interface with "z/VM User Groups", "Network", "Prototypes", "Storage", "System Status", and "Session Tasks". Below the tabs are navigation icons and a "Default Zoom" button. The main display area shows three user group icons: "LINUX" (gears), "CMS" (gears), and "ZLIN79" (gears and a penguin). A "Show Filter Panel" button is visible on the right. The Windows taskbar at the bottom shows the Start button, several open applications, and a system tray with "BTS Online" and "waveadm" indicators.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions





# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Manager

**Clone From z/VM Prototype ZLIN79 in z/VM System TMCC16 (2/2) Selected**

New Clone information

CSC Information

Target z/VM System Name:

New Clone Parameters

Number of clones:  Basename for clones:  New Password:  Verify new password:

New Storage Group:

Clone the following users

	Name	Hostname	System	DEMOLAN	Virtual Network 2	Virtual Network 3	Status
<input checked="" type="checkbox"/>	ZLIN710	ZLIN710	TMCC16	192.168.9.2			Ready
<input checked="" type="checkbox"/>	ZLIN711	ZLIN711	TMCC16	192.168.9.3			Ready

Total Storage Needed:

Network Configuration | FCP Configuration | Optional Configuration

Network Information

	Virtual Segment	Virtual Network	Network	Default GW	Port type
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.60.100.0	<input type="checkbox"/>	N/A
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.70.100.0	<input type="checkbox"/>	N/A
<input checked="" type="checkbox"/>	DEMOLAN	SYSTEM.DEMOLAN (z/VM VSwitch)	192.168.9.0	<input checked="" type="checkbox"/>	N/A

Waiting for user input

Online waveadm

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Manager

Clone From z/VM Prototype ZLIN79 in z/VM System TMCC16 (2/2) Selected

New Clone information

CSC Information

Target z/VM System Name:

New Clone Parameters

Number of clones:  Basename for clones:  New Password:  Verify new password:

New Storage Group:

Update

Clone the following users

	Name	Hostname	System	DEMOLAN	Virtual Network 2	Virtual Network 1
<input checked="" type="checkbox"/>	ZLIN71	ZLIN71	TMCC16	192.168.9.72		
<input checked="" type="checkbox"/>	ZLIN72	ZLIN72	TMCC16	192.168.9.73		

Select All Deselect All Toggle Selection

Assign IP addresses in VNS... X

Associated IP Addresses

IP

192.168.9.73

Close

status

Ready

Show Filtering Parallel

Total Storage Needed 4.39 GB

Network Configuration FCP Configuration Optional Configuration

Network Information

	Virtual Segment	Virtual Network	Network	Default GW	Port type
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.60.100.0	<input type="checkbox"/>	N/A
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.70.100.0	<input type="checkbox"/>	N/A
<input checked="" type="checkbox"/>	DEMOLAN	SYSTEM.DEMOLAN (z/VM VSwitch)	192.168.9.0	<input checked="" type="checkbox"/>	N/A

Hide Cancel Go

Waiting for user input

Online waveadm

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

Property Viewer

TMCC16 ZLIN79

Property	Value
Name	ZLIN79
Functionality	N/A
Project	CSL-WAVE Demo
Type	Linux
IP Address 1	192.168.9.79
Distribution	7
Total Disk Sp...	2.19 GB
CPUs	1
Memory Min	1024

IBM-ENS (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 4 Users All Accessible

ZVMND OPMGRS2 ELIZA WAVEADM OPMGRS1

XYMON XCAT80 (xeat80) ZLIN72 (ZLIN72) ZLIN71 (ZLIN71) ZHCP 16 (zhcp 16) LINUX390 CF1

CF2 WAVE-INTERNAL OPMGRM1

BACKUPVM

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%
Pause z/VM Guests	waveadm	2013-08-23 10:12:37	2013-08-23 10:12:37	0 seconds	Done	100%
Pause z/VM Guests	waveadm	2013-08-23 10:12:23	2013-08-23 10:12:23	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups Show Filter Panel

IBM-NA (TMCC16) 0 Users IBM-SEC (TMCC16) 0 Users IBM-SYSTEM (TMCC16) 0 Users IBM-DIRM (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users USER-LOCAL (TMCC16) 17 Users All Accessible ZLIN71 ZLIN79 (zlin79) WAVE-INTERNAL (TMCC16) 4 Users All Accessible

IBM-COM (TMCC16) 0 Users IBM-SMAPI (TMCC16) 0 Users DEMO LINUX (TMCC16) 2 Users All Accessible

z/VM User Actions

- Display Group Information
- Update Group Information
- Expand
- Collapse
- More Actions
- Create New z/VM User
- Update
- Activate
- Deactivate
- More Actions

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	140
Total Virtual ...	3
Total Prototy ...	2
Total Volumes	22
Total Volume ...	2
DASD Free St...	4.56 GB

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 12:57:29	2013-08-20 12:57:29	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 12:49:37	2013-08-20 12:49:37	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Stop Update

### Create New z/VM Guest

General Information

User Name:

System Name:

Group Name:

Data

password

New Password:

Verify New Password:

Storage

add:

from:

**LINUX (11.56 GB Free)**

Machine information

Memory Min(MB):

Memory Max(MB):

Virtual CPUs:

Description

Project:  Details...

Functionality:

Description:

Default z/VM System:

Network Information

	Virtual Segment	Virtual Network	Network
<input type="checkbox"/>	Auto-created Virtual Network Segment (10.60.100.0)	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.60.100.0
<input type="checkbox"/>	Auto-created Virtual Network Segment (10.70.100.0)	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.70.100.0
<input checked="" type="checkbox"/>	DEMOLAN	SYSTEM.DEMOLAN (z/VM VSwitch)	192.168.9.0

Close Create

Waiting for user input

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	140
Total Virtual ...	3
Total Prototy...	2
Total Volumes	22
Total Volume ...	2
DASD Free St...	4.56 GB

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log**

Workunit Name	Status	Progress
Execute REXX on z/VM Objects	Done	100%
Update Distribution to z/VM Guests	Done	100%
Deactivate z/VM Guests	Done	100%
Activate z/VM Guests	Done	100%
Deactivate z/VM Guests	Done	100%
Update Distribution to z/VM Guests	Done	100%
Activate z/VM Guests	Done	100%
Deactivate z/VM Guests	Done	100%

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log**

Waveadm | 2013-08-20 12:49:37 | 2013-08-20 12:49:37 | 0 seconds | Done

Start | Launch CSL-WAVE v3.2... | zlin79.z0plex.com - PuTTY | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

BTS Online

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups Show Filter Panel

IBM-OPER (TMCC16) 0 Users IBM-SYSTEM (TMCC16) 0 Users IBM-SMAPI (TMCC16) 0 Users IBM-COM (TMCC16) 0 Users IBM-ENS (TMCC16) 0 Users WAVE-INTERNAL (TMCC16) 4 Users All Accessible USER-LOCAL (TMCC16) 17 Users All Accessible IBM-DIRM (TMCC16) 0 Users IBM-NA (TMCC16) 0 Users IBM-UTIL (TMCC16) 0 Users IBM-SEC (TMCC16) 0 Users

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:14		Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:02		Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:06		Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:54		Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 12:57:29	2013-08-20 12:57:29	0 seconds	Done	100%

Access... Cloning... Install... More Actions

Launch Linux Installation

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups

Launch Linux Installation on Guest ZLIN71

1. Welcome 2. Customize Installation 3. Repository Verification 4. Summary

Step 1 - Welcome

Welcome to the CSL-WAVE Bare-Metal Installation Wizard

This wizard will guide you through the process of launching an interactive Linux installation

Prev Next Go Cancel

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR BTS

Workunit Name							Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done		100%	
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done		100%	
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done		100%	
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done		100%	
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done		100%	
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done		100%	
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done		100%	
Activate z/VM Guests	waveadm	2013-08-20 12:57:29	2013-08-20 12:57:29	0 seconds	Done		100%	

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Stop Updates

Launch Linux Installation on Guest ZLIN71

1. Welcome

2. **Customize Installation**

3. Repository Verification

4. Summary

Step 2 - Customize Installation

Hostname Information

Hostname: ZLIN71

DNS: 192.168.9.23

Network Information

Networking Interface: NICDEF EA00 Connected to z/VM VSwitch DEMOLAN

Virtual Network Segment: DEMOLAN (192.168.9.0)

Temporary IP Address: 192.168.9.71

Password Information

Temporary Installation Password: \*\*\*\*\* Show Password

Linux Repository Information

Use Linux Repository: sles11sp2 (SUSE 11 SP2)

Prev Next Go Cancel

Temporary Installation SSH Password

Temporary installation SSH password is: tSnDqvbd

OK

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR BTS

Workunit Name							Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done		Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done		Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done		Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done		Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done		Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done		Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done		Done	100%
Activate z/VM Guests	waveadm	2013-08-20 12:57:29	2013-08-20 12:57:29	0 seconds	Done		Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Group By: Site Defined Groups

Show Filter Panel

**Launch Linux Installation on Guest ZLIN71**

1. Welcome

2. Customize Installation

**3. Repository Verification**

4. Summary

**Step 3 - Repository Verification**

It seems that this is the first time you are using this Linux Repository with this Hypervisor. CSL-WAVE will allocate a special minidisk on the Short Service Machine, and transfer the basic installation files to it. Please input the Storage Group and minidisk address to be used.

Specify Minidisk Allocation Parameters

Select Storage Group: LINUX (7.36 GB Free)

Minidisk Address: 400

Prev Next Go Cancel

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR **BTS**

Workunit Name						Status	Progress
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%	
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%	
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%	
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%	
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%	
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%	
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%	
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done	100%	

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Group By: Site Defined Groups

Show Filter Panel

### Launch Linux Installation on Guest ZLIN71

1. Welcome

2. Customize Installation

3. Repository Verification

4. Summary

#### Step 4 - Summary

Linux Repository Information  
Using Linux Repository sles11sp2 (SUSE version 11 SP2)

Repository Verification Information  
Service Machine will be populated with repository files using DASD Group LINUX, at minidisk address 400  
Hypervisor TMCC16 is now using this repository

Generated Linux PARMFILE Information

```
ZLIN71.INSTBASE:
ramdisk_size=65536 root=/dev/ram1 ro init=/linuxrc TERM=dumb
Hostname=ZLIN71
nameserver=192.168.9.23 InstNetDev=osa OsaInterface=qdio OsaMedium=eth

Portname=DEMOLAN layer2=1 readchannel=0.0.ea00 writechannel=0.0.ea01
datachannel=0.0.ea02 Portno=1 HostIP=192.168.9.71 Gateway=192.168.9.1
Netmask=255.255.255.0 Broadcast=192.168.9.255
install=ftp://anonymous:anonym@192.168.9.80/sles11sp2/s390x/1
```

Prev Next Go

Cancel

### Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR **BTS**

Workunit Name							Status	Progress
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done		Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done		Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done		Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done		Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done		Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done		Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done		Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done		Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

IBM-OPER (TMCC16) 0 Users IBM-SYSTEM (TMCC16) 0 Users IBM-SMAPI (TMCC16) 0 Users IBM-COM (TMCC16) 0 Users

IBM-ENS (TMCC16) 0 Users WAVE-INTERNAL (TMCC16) 4 Users All Accessible ZLIN71 ZLIN79 (zlin79) ZLIN72 DEMO LINUX (TMCC16) 3 Users All Accessible USER-LOCAL (TMCC16) 17 Users All Accessible IBM-DIRM (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users IBM-UTIL (TMCC16) 0 Users IBM-SEC (TMCC16) 0 Users

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Launch Linux Installation	waveadm	2013-08-23 06:53:12			Active	17%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM

**Workunit Details**

Workunit Name: Launch Linux Installation Workunit Start Time: 2013-08-23 06:53:12

Workunit ID: 2013235-06:53:12\_779 Workunit End Time: 2013-08-23 06:53:12

Workunit Initiator: waveadm Workunit Duration: 0 seconds

Workunit Status: Active

BTS Requests

Request Name	Status	Progress
Write Parmfile information for Linux Inst...	Done	100%
Launch Interactive Linux Installation (sl...	Done	100%
Wait for Installation Medium availability	Active	30%
Wait for Interactive Installation to start	Scheduled	0%
Wait for Interactive Installation to compl...	Scheduled	0%

COR Entries

Select a BTS Request

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Alter

Workunit Name	Status	Progress
Launch Linux Installation	Active	66%
Verify Linux Repository	Done	100%
Update All z/VM Aspects	Done	100%
Execute REXX on z/VM Objects	Done	100%
Update Distribution to z/VM Guests	Done	100%
Deactivate z/VM Guests	Done	100%
Activate z/VM Guests	Done	100%
Deactivate z/VM Guests	Done	100%

Log for All Requests Close

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM

**Workunit Details**

Workunit Name: Launch Linux Installation Workunit Start Time: 2013-08-23 06:53:12  
 Workunit ID: 2013235-06:53:12\_779 Workunit End Time: 2013-08-23 06:53:12  
 Workunit Initiator: waveadm Workunit Duration: 0 seconds  
 Workunit Status: Active

BTS Requests

Request Name	Status	Progress
Write Parmfile information for Linux Inst...	Done	100%
Launch Interactive Linux Installation (sl...	Done	100%
Wait for Installation Medium availability	Active	30%
Wait for Interactive Installation to start	Scheduled	0%
Wait for Interactive Installation to compl...	Scheduled	0%

COR Entries

Log COR

Time Stamp	Data
2013-08-23 06:53:44	BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availab...
2013-08-23 06:53:44	Request running with debug level: Debug
2013-08-23 06:53:44	Waiting for the interactive Linux installation program to be ready for SSH connections...
2013-08-23 06:53:44	Waiting for port 22... ( approximately 500 seconds)

Log for All Requests Close

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Alter

Workunit Name	Status	Progress
Launch Linux Installation	Active	66%
Verify Linux Repository	Done	100%
Update All z/VM Aspects	Done	100%
Execute REXX on z/VM Objects	Done	100%
Update Distribution to z/VM Guests	Done	100%
Deactivate z/VM Guests	Done	100%
Activate z/VM Guests	Done	100%
Deactivate z/VM Guests	Done	100%

Log for All Requests Close

Start

Launch CSL-WAVE v3.2.... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV...

BTS Online waveadm

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Property Viewer

TMCC16 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Inactive
Eligible	Yes
Group	DEMO LINUX
Type	CMS
CPUs	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	WAVEinit on 2013-08-23 06:48:17

Workunit Details

Workunit Name: Launch Linux Installation Workunit Start Time: 2013-08-23 06:53:12

Workunit ID: 2013235-06:53:12\_779 Workunit End Time: 2013-08-23 06:53:12

Workunit Initiator: waveadm Workunit Duration: 0 seconds

Workunit Status: Active

BTS Requests

Request Name	Status	Progress
Write Parmfile information for Linux Inst...	Done	100%
Launch Interactive Linux Installation (sl...	Done	100%
Wait for Installation Medium availability	Done	100%

Interactive Installation Ready

The interactive installation is ready for guest ZLIN71 in hypervisor TMCC16  
Click "Start SSH Session" to access the guest and start the installation process.

Ok Start SSH Session

COR Entries

Time	Request
2013-08-23 06:53:44	Request running with debug level: Debug
2013-08-23 06:53:44	Waiting for the interactive Linux installation program to be ready for SSH connections...
2013-08-23 06:53:44	Waiting for port 22... ( approximately 500 seconds)
2013-08-23 06:53:44	BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availab...
2013-08-23 06:53:44	Request running with debug level: Debug
2013-08-23 06:53:44	Waiting for the interactive Linux installation program to be ready for SSH connections...
2013-08-23 06:53:44	Waiting for port 22... ( approximately 500 seconds)
2013-08-23 06:55:12	Port is available for connections.
2013-08-23 06:55:12	BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availab...

Log for All Requests Close

Status	Progress
Active	78%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Alter

Workunit Name

Launch Linux Installation	2013-08-23 06:53:12	2013-08-23 06:53:12	0 seconds	Active
Verify Linux Repository	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done
Update All z/VM Aspects	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done
Execute REXX on z/VM Objects	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done
Update Distribution to z/VM Guests				
Deactivate z/VM Guests				
Activate z/VM Guests				
Deactivate z/VM Guests				

Start

Launch CSL-WAVE v3.2.... zlin79.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV...

BTS Online waveadm

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

zlin71.z0plex.com - PuTTY

```

YaST2 - installation @ ZLIN71

Welcome
Language
English (US) v

Keyboard Layout
English (US) v

License Agreement

SUSE(R) Linux Enterprise Server ("SLES (TM)")11 SP2
Novell(R) Software License Agreement

PLEASE READ THIS AGREEMENT CAREFULLY. BY INSTALLING OR OTHERWISE
USING THE SOFTWARE (INCLUDING ITS COMPONENTS), YOU AGREE TO THE

[ ] I Agree to the License Terms.          [License Translations...]

[Help]                [Back]                [Abort]                [Next]

F1 Help  F9 Abort  F10 Next
                
```

Show Filter Panel

SMAPI (TMCC16)  
0 Users

IBM-COM (TMCC16)  
0 Users

SER-LOCAL (TMCC16)  
17 Users  
All Accessible

IBM-DIRM (TMCC16)  
0 Users

SEC (TMCC16)  
0 Users

Workunit Name	2013-08-23 06:55:12	BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium avail...			
Launch Linux Installation					
Verify Linux Repository					
Update All z/VM Aspects					
Execute REXX on z/VM Objects					
Update Distribution to z/VM Guests					
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done

Status	Progress
Active	91% <div style="width: 91%; height: 10px; background-color: green; border: 1px solid black;"></div>
Done	100% <div style="width: 100%; height: 10px; background-color: green; border: 1px solid black;"></div>
Done	100% <div style="width: 100%; height: 10px; background-color: green; border: 1px solid black;"></div>
Done	100% <div style="width: 100%; height: 10px; background-color: green; border: 1px solid black;"></div>
Done	100% <div style="width: 100%; height: 10px; background-color: green; border: 1px solid black;"></div>
Done	100% <div style="width: 100%; height: 10px; background-color: green; border: 1px solid black;"></div>

BTS Online

waveadm

Start | Launch CSL-WAVE v3.2.... | zlin71.z0plex.com - P... | A - z/VM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAVE...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

### Workunit Details

Workunit Name: Launch Linux Installation Workunit Start Time: 2013-08-23 06:53:12

Workunit ID: 2013235-06:53:12\_779 Workunit End Time: 2013-08-23 06:53:12

Workunit Initiator: waveadm Workunit Duration: 0 seconds

Workunit Status: Active

### BTS Requests

Request Name	Status	Progress
Write Parmfile information for Linux Inst...	Done	100%
Launch Interactive Linux Installation (sl...	Done	100%
Wait for Installation Medium availability	Done	100%
Wait for Interactive Installation to start	Done	100%
Wait for Interactive Installation to compl...	Active	30%

### COR Entries

Log COR

Time Stamp	Data
2013-08-23 06:57:06	BTS Workunit: Launch Linux Installation, Request: Wait for Interactive Installation to ...
2013-08-23 06:57:06	Request running with debug level: Debug
2013-08-23 06:57:06	Waiting for console output (500 seconds)
2013-08-23 06:57:06	Got console output: RDR FILE 0001 SENT FROM WAVEWRKS PUN WAS 0281 RECS 10...

### Session Tasks

Defined Groups

End At	Duration	Status	Progress
2013-08-23 06:52:11	0 seconds	Active	91%
2013-08-23 06:48:33	19 seconds	Done	100%
2013-08-20 15:54:02	1 seconds	Done	100%
2013-08-20 15:41:06	1 seconds	Done	100%
2013-08-20 13:38:54	1 seconds	Done	100%
2013-08-20 13:34:47	1 seconds	Done	100%
2013-08-20 13:34:05	1 seconds	Done	100%

Log for All Requests Close

Update	Initiator	Time	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%

Start | Launch CSL-WAVE v3.2... | zlin71.z0plex.com - PuTTY | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAV... | DE | **BTS Online** waveadm



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups

IBM-OPER (TMCC16) 0 Users

IBM-SYSTEM (TMCC16) 0 Users

IBM-SMAPI (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

ZLIN71 ZLIN79 (zlin79) ZLIN72

DEMO LINUX (TMCC16) 3 Users All Accessible

IBM-ENS (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 4 Users All Accessible

USER-LOCAL (TMCC16) 17 Users All Accessible

IBM-DIRM (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

IBM-SEC (TMCC16) 0 Users

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	140
Total Virtual ...	3
Total Prototy...	2
Total Volumes	22
Total Volume ...	2
DASD Free St...	4.56 GB

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin71.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	140
Total Virtual ...	3
Total Prototy...	2
Total Volumes	22
Total Volume ...	2
DASD Free St...	4.56 GB

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Alter

Workunit Name

Launch Linux Installation						
Verify Linux Repository						
Update All z/VM Aspects						
Execute REXX on z/VM Objects						
Update Distribution to z/VM Guests						
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%

Full Workunit Log COR

z/VM	Time Stamp	Data
	2013-08-23 06:53:34	BTS Workunit: Launch Linux Installation, Request: Write Parmfile information for Linux ...
	2013-08-23 06:53:35	BTS Workunit: Launch Linux Installation, Request: Launch Interactive Linux Installation...
	2013-08-23 06:53:35	Request running with debug level: Debug
	2013-08-23 06:53:35	Activating Guest...
	2013-08-23 06:53:35	Linking guest with Repository minidisk...
	2013-08-23 06:53:35	Output from delink is:
	2013-08-23 06:53:35	Output from link is:
	2013-08-23 06:53:35	Starting Console spooling on guest...
	2013-08-23 06:53:35	Output from spool console: HCPFOR069I Command Complete. CP return code = 0000.
	2013-08-23 06:53:35	Starting Interactive Linux Installation on guest...
	2013-08-23 06:53:44	Starting Linux installation on Guest ZLIN71...Loading installation files...Punching SUSE1...
	2013-08-23 06:53:44	Interactive Linux Installation started
	2013-08-23 06:53:44	BTS Workunit: Launch Linux Installation, Request: Launch Interactive Linux Installation...
	2013-08-23 06:53:44	BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availabi...
	2013-08-23 06:53:44	Request running with debug level: Debug
	2013-08-23 06:53:44	Waiting for the interactive Linux installation program to be ready for SSH connections...
	2013-08-23 06:53:44	Waiting for port 22... ( approximately 500 seconds)
	2013-08-23 06:55:12	Port is available for connections.
	2013-08-23 06:55:12	BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availabi...
	2013-08-23 06:55:12	BTS Workunit: Launch Linux Installation, Request: Wait for Interactive Installation to s...
	2013-08-23 06:55:12	Request running with debug level: Debug
	2013-08-23 06:55:12	Waiting for interactive installation to start (500 seconds)
	2013-08-23 06:57:05	Installation program started
	2013-08-23 06:57:05	BTS Workunit: Launch Linux Installation, Request: Wait for Interactive Installation to s...
	2013-08-23 06:57:06	BTS Workunit: Launch Linux Installation, Request: Wait for Interactive Installation to c...
	2013-08-23 06:57:06	Request running with debug level: Debug
	2013-08-23 06:57:06	Waiting for console output (500 seconds)
	2013-08-23 06:57:06	***WAVE*** Could not add data
	2013-08-23 07:05:26	Timeout reached for request, not all stages completed
	2013-08-23 07:05:26	BTS Workunit: Launch Linux Installation, Request: Wait for Interactive Installation to c...

Close

SMAP1 (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

ER-LOCAL (TMCC16) 17 Users All Accessible

IBM-DIRM (TMCC16) 0 Users

SEC (TMCC16) 0 Users

Status	Progress
Error	
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... zlin71.z0plex.com - PuTTY A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups

IBM-ENS (TMCC16) 0 Users  
IBM-SYSTEM (TMCC16) 0 Users  
IBM-SEC (TMCC16) 0 Users  
IBM-DIRM (TMCC16) 0 Users  
IBM-NA (TMCC16) 0 Users  
WAVE-INTERNAL (TMCC16) 4 Users All Accessible  
ZLIN79 (zlin79) 1 User All Accessible  
IBM-OPER (TMCC16) 0 Users  
IBM-UTIL (TMCC16) 0 Users

Property Viewer

INUX TMCC16 z10 ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36			
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23			
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02			
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06			
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23			
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%

More Actions

- Lock z/VM User
- Unlock z/VM User
- Read IAN
- Update IAN
- Delete IAN
- Mark As CSL-WAVE Service Machine
- Mark As Initied For CSL-WAVE Use
- Init User for CSL-WAVE use
- Refresh Linux Data
- Run AGC
- Manage Storage
- Generate Disk Storage Map
- Execute REXX
- Delete

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View **Current System View - "TMCC16"**

Hardware Viewer Manage z/VM User ZLIN79 Storage

General Information

z/VM Guest Name: ZLIN79  
z/VM System Name: TMCC16  
SDG Name: DEMO LINUX

Linux File Systems LVM Volume Groups

Current Active File Systems on Server

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Storage Type	Mount Point	Status (Capacity)
/dev/dasda1	ext3	1.57	1.03	0.47	STD	DASD	/	65%
proc	proc	0.00	0.00	0.00	STD	DASD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	DASD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	DASD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	DASD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	DASD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	DASD	/dev/pts	0%

Close Extend Partition Create New Partition...

IBM.DIR (TMCC16) 0 Users  
IBM.COM (TMCC16) 0 Users

Property Viewer

INUX TMCC16

Property	Value
Name	ZL
Status	Ac
Eligible	Ye
Group	DE
Type	Lir
Distribution	SL
1st IP Address	19
Project	N/
Functionality	N/

CSL-WAVE Log BT Waiting for user input

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36	3 seconds	Done	100%
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23	2 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02	19 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06	4 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%

FCP / DASD Selection

Please select the type of partition to add

DASD  FCP

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View **Current System View - "TMCC16"**

Hardware Viewer Manage z/VM User ZLIN79 Storage

General Information

z/VM Guest Name: ZLIN79  
z/VM System Name: TMCC16  
SDG Name: DEMO LINUX

Linux File Systems LVM Volume Groups

Current Active File Systems on Server

Device	FS Type	Size (GB)	used (GB)
/dev/dasda1	ext3	1.57	1.03
proc	proc	0.00	0.00
sysfs	sysfs	0.00	0.00
debugfs	debugfs	0.00	0.00
udev	tmpfs	0.49	0.00
tmpfs	tmpfs	0.49	0.00
devpts	devpts	0.00	0.00

Property Viewer

INUX TMCC16

Property	Value
Name	ZL
Status	Ac
Eligible	Ye
Group	DE
Type	Lir
Distribution	SL
1st IP Address	19
Project	N/
Functionality	N/

CSL-WAVE Log

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36	3 seconds	Done	100%
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23	2 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02	19 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06	4 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%

Waiting for user input

**Create New DASD Partition**

Unit Specifications

DASD Allocation: 200 MB (CKD)

Storage Group: LINUX (11.75 GB Free)

Partition Definitions

Standard Partition  LVM

VG Name: N/A LV Name: N/A

File System Options

FS Type: ext3

Mount on: /test

Add new filesystem to /etc/fstab

Go Cancel

IBM-DIRM (TMCC16) 0 Users 65%  
IBM-COM (TMCC16) 0 Users 0%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM

**Workunit Details**

Workunit Name: Create New DASD Partition Workunit Start Time: 2013-08-20 22:08:46

Workunit ID: 2013232-22:08:46\_978 Workunit End Time: 2013-08-20 22:09:11

Workunit Initiator: waveadm Workunit Duration: 25 seconds

Workunit Status: Done

BTS Requests

Request Name	Status	Progress
Add 200 MB (CKD) to Guest ZLIN79(TMCC16)	Done	100%
Create New DASD Partition for z/VM Guest ZLIN79 (TMCC16)	Done	100%
Create New ext3 Filesystem for z/VM Guest ZLIN79 (TMCC16)	Done	100%
Update Storage Aspect for z/VM Directory New Directory for TMCC16(TMCC16)	Done	100%

COR Entries

Select a BTS Request

Property Viewer

INUX TMCC16 z10 ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Atter

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Create New DASD Partition	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Execute Script on z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%

Log for All Requests Close

IBM-DIRV (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

**Display ZLIN79 Details**

General Information

z/VM Guest Name: ZLIN79  
 z/VM System Name: TMCC16  
 SDG Name: DEMO LINUX

Data | z/VM View | zLinux View | Performance View | Custom Attributes

```

USER ZLIN79 XXXXXXXX 1024M 1024M G
CPU 00
IPL 192
LOGONBY PURIT WAVEADM
MACHINE ESA 4
CONSOLE 0009 3215
NICDEF EA00 TYPE QDIO LAN SYSTEM DEMOLAN
SPOOL 000C 3505 A
SPOOL 000D 3525 A
SPOOL 000E 1403 A
**
*****
LINK MAINT 0190 0190 RR
LINK MAINT 019D 019D RR
LINK MAINT 019E 019E RR
LINK WAVEWRKS 0399 0399 RR
MDISK 0192 3390 1 2884 Z16LXB
MDISK 0193 3390 3085 281 Z16LXB WR
*DVHOPT LNK0 LOG1 RCM1 SMS0 NPW1 LNGAMENG PWC20130820 CRC
  
```

Close | IAN

Waiting for user input

Progress

- 100%
- 100%
- 100%
- 100%
- 100%
- 100%
- 100%

BTS Online | waveadm

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostna)

File Auto Detect User-Group Managem

Hardware Viewer Enterprise Viewer Das

Hardware Viewer

Display ZLIN79 Details

General Information

z/VM Guest Name: ZLIN79

z/VM System Name: TMCC16

SDG Name: DEMO LINUX

Data z/VM View zLinux View Performance View Custom Attributes

File System Information (df -ah)

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Mount Point	Status (Capacity)
proc	proc	0.00	0.00	0.00	STD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	/dev/pts	0%
/dev/dasdb1	ext3	0.19	0.02	0.17	STD	/test	8%

Network Information (ifconfig -all)

Device	MAC Address	IP Address	Status
eth0	02:00:16:00:00:11	192.168.9.79	ONLINE
lo		127.0.0.1	ONLINE

Routing Information (route)

Destination	Gateway	Mask	Flags	Metric	Ref	Use	Interface	Reachable
default	192.168.9.1	0.0.0.0	UG	0	0	0	eth0	Reachable
loopback	*	255.0.0.0	U	0	0	0	lo	N/A
link-local	*	255.255.0.0	U	0	0	0	eth0	N/A
192.168.9.0	*	255.255.255.0	U	0	0	0	eth0	N/A

Property Viewer

INUX TMCC16 z10 ZLIN79

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS Sys

Workunit Nam

Create New DASD Partition

Refresh Linux Data for z/VM Guests

Execute Script on z/VM Guests

Init z/VM Guests for CSL-WAVE

Update z/VM Prototype

Update z/VM Prototype

Update All z/VM Aspects

Update Distribution to z/VM Guests

Uptime Information

Uptime: up 4:27 hours

Close IAN

Waiting for user input

Progress

100%

100%

100%

100%

100%

100%

100%

100%

BTS Online waveadm

Start

Launch CSL-WAVE v3.2....

A - zVM\_tmcc16.WS

zlin79.z0plex.com - PuTTY

CSL-WAVE 3.2.0 (WAV...

DE



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups

zlin7\*

Show Filter Panel

IBM-ENS (TMCC16) 0 Users

IBM-SMAPI (TMCC16) 0 Users

IBM-OPER (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

ZLIN79 (zlin79)

DEMO LIN (TMCC16) 1 User All Accessible

IBM-UTIL (TMCC16) 0 Users

USER-LOCAL (TMCC16) 17 Users All Accessible

IBM-NA (TMCC16) 0 Users

Property Viewer

TMCC16 DEMOLAN ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At			
Delete z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43			
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:57	2013-08-23 07:36:58			
Delete z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24			
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32			
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%

Access... Cloning... Install... More Actions

- Lock z/VM User
- Unlock z/VM User
- Read IAN
- Update IAN
- Delete IAN
- Mark As CSL-WAVE Service Machine
- Mark As Initiated For CSL-WAVE Use
- Init User for CSL-WAVE use
- Refresh Linux Data
- Run AGC
- Manage Storage
- Generate Disk Storage Map
- Execute REXX
- Delete

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups

zlin7\* Show Filter Panel

IBM-ENS (TMCC16) 0 Users IBM-SMAPI (TMCC16) 0 Users IBM-OPER (TMCC16) 0 Users IBM-COM (TMCC16) 0 Users WAVE-INTERNAL (TMCC16) 4 Users All Accessible IBM-SYSTEM (TMCC16) 0 Users IBM-SEC (TMCC16) 0 Users IBM-DIRM (TMCC16) 0 Users IBM-NA (TMCC16) 0 Users

**Generate DASD Map**

Options

Include IBM Service Machines

Go Cancel

Waiting for user input

Property Viewer

TMCC16 DEMOLAN ZLIN79 (TMCC16)

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43	22 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:57	2013-08-23 07:36:58	1 seconds	Done	100%
Delete z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24	15 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
<b>Launch Linux Installation</b>	waveadm	<b>2013-08-23 06:53:12</b>	<b>2013-08-23 07:05:26</b>	<b>12:14 minutes</b>	<b>Error</b>	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY...



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups

Show Filter Panel

IBM-COM (TMCC16) 0 Users  
IBM-OPER (TMCC16) 0 Users  
IBM-SMAP (TMCC16) 0 Users  
IBM-UTIL (TMCC16) 0 Users  
USER-LOCAL (TMCC16) 18 Users All Accessible  
IBM-DIRM (TMCC16) 0 Users  
IBM-SEC (TMCC16) 0 Users

Context Menu:

- Lock z/VM User
- Unlock z/VM User
- Read IAN
- Update IAN
- Delete IAN
- Mark As CSL-WAVE Service Machine
- Mark As Initiated For CSL-WAVE Use
- Init User for CSL-WAVE use
- Refresh Linux Data
- Run AGC
- Manage Storage
- Generate Disk Storage Map
- Execute REXX
- Delete

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	Status	Progress
Execute Script on z/VM Guests	waveadm	2013-08-20 15:44:38		100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 15:43:36		100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06		100%
Update Linux Repository	waveadm	2013-08-20 15:40:41		100%
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13		100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24		100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41		100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20		100%

BTS Online waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes St

Default Zoom

**Execute REXX (1/1) Selected**

REXX Parameters

REXX Name:

Specify REXX Location

Owning Machine Name:  Minidisk Address:

Name	System	Parameters	Status
<input checked="" type="checkbox"/> ZLIN79	TMCC16	ZLIN79	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

REXX Parameters

Name  Status  Eligible  Group  Type  Distribution

1st IP Address  Project  Functionality  Total Disk Space (GB)  Inconsistent  Connectable

Prototype  CPUs  Memory Min (MB)  Memory Max (MB)  Modified By  Create By

Hide Cancel Go

Waiting for user input

Workunit Name	Progress
Execute Script on z/VM Guests	100%
Init z/VM Guests for CSL-WAVE	100%
Update Distribution to z/VM Guests	100%
Update Linux Repository	100%
Update All z/VM Aspects	100%
Refresh Linux Data for z/VM Guests	100%
Activate z/VM Guests	100%
Deactivate z/VM Guests	100%

Workunit Name	Operator	Start Time	End Time	Duration	Status
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done

BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status**

Default Zoom Group By: Site

**Workunit Details**

Workunit Name: Execute REXX on z/VM Objects  
 Workunit ID: 2013232-15:54:02\_880  
 Workunit Initiator: waveadm  
 Workunit Status: Done

Workunit Start Time: 2013-08-20 15:54:02  
 Workunit End Time: 2013-08-20 15:54:03  
 Workunit Duration: 1 seconds

**BTS Requests**

Request Name	Status	Progress
Execute REXX testrexx using zVMUser T...	Done	100%

**COR Entries**

Log COR | REXX COR

Time Stamp	Data
2013-08-20 15:54:03	BTS Workunit: Execute REXX on z/VM Objects, Request: Execute REXX testrexx using...
2013-08-20 15:54:03	Request running with debug level: Debug
2013-08-20 15:54:03	Connecting to Service Machine in z/VM System TMCC16...
2013-08-20 15:54:03	Locating REXX on the specified guest (WAVEWRKS)...
2013-08-20 15:54:03	Executing REXX testrexx from guest: WAVEWRKS at minidisk address: <All> with para...
2013-08-20 15:54:03	REXX output stored in REXX output COR entry for request
2013-08-20 15:54:03	Performing volatile DEQs for Request...
2013-08-20 15:54:03	BTS Workunit: Execute REXX on z/VM Objects, Request: Execute REXX testrexx using...

Log for All Requests Close

Show Filter Panel

Status	Progress
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

CSL-WAVE Log | BTS Work Units | BTS System COR | **BTS Log** | Atter

Workunit Name

- Execute REXX on z/VM Objects
- Execute Script on z/VM Guests
- Init z/VM Guests for CSL-WAVE
- Update Distribution to z/VM Guests
- Update Linux Repository
- Update All z/VM Aspects
- Refresh Linux Data for z/VM Guests
- Activate z/VM Guests

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%

BTS Online waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status**

Default Zoom Group By: Site

**Workunit Details**

Workunit Name: Execute REXX on z/VM Objects Workunit Start Time: 2013-08-20 15:54:02

Workunit ID: 2013232-15:54:02\_880 Workunit End Time: 2013-08-20 15:54:03

Workunit Initiator: waveadm Workunit Duration: 1 seconds

Workunit Status: Done

**BTS Requests**

Request Name	Status	Progress
Execute REXX testrexx using zVMUser T...	Done	100%

**COR Entries**

Log COR REXX COR

```

Executing REXX TESTREXX FM: L with parameters: ZLIN71

***** Start of REXX Output *****
Setting Privileges...
done
userid parsed is: ZLIN71
userid running REXX is: WAVEWRKS AT TMCC16
The z/VM level is 6.3.0
***** End of REXX Output *****

USER REXX RC : 0
    
```

Log for All Requests Close

Show Filter Panel

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** After

Workunit Name	Status	Progress
Execute REXX on z/VM Objects	Done	100%
Execute Script on z/VM Guests	Done	100%
Init z/VM Guests for CSL-WAVE	Done	100%
Update Distribution to z/VM Guests	Done	100%
Update Linux Repository	Done	100%
Update All z/VM Aspects	Done	100%
Refresh Linux Data for z/VM Guests	Done	100%
Activate z/VM Guests	Done	100%

Status	Progress
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

BTS Online waveadm

Start | A - zvm\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | Launch CSL-WAVE v3.2... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups zlin7\* Show Filter Panel

IBM-OPER (TMCC16) 0 Users IBM-SYSTEM (TMCC16) 0 Users IBM-SMAPI (TMCC16) 0 Users IBM-COM (TMCC16) 0 Users

IBM-ENS (TMCC16) 0 Users WAVE-INTERNAL (TMCC16) 4 Users All Accessible ZLIN79 (zlin79) ZLIN7 ("Linko") DEMO LINUX 3 Users All Accessible USER-LOCAL (TMCC16) 17 Users All Accessible IBM-DIRM (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users IBM-UTIL (TMCC16) 0 Users

Property Viewer

TMCC16 DEMOLAN ZLIN72 (TMCC...)

Property	Value
Name	ZLIN71
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
Project	CSL-WAVE Demo
Functionality	N/A
Total Disk Sp...	2.19

Update  
Activate  
Deactivate  
More Actions

- Lock z/VM User
- Unlock z/VM User
- Mark As CSL-WAVE Service Machine
- Init Users for CSL-WAVE use
- Refresh Linux Data
- Run AGC
- Execute REXX
- Generate Disk Storage Map
- Delete

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Progress
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	100%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks (1)

Group By: Site Defined Groups

zlin7\* ... Show Filter Panel

**Delete z/VM Users (2/2) Selected**

Delete the following z/VM Users

Name	System	Status
<input checked="" type="checkbox"/> ZLIN72	TMCC16	Ready
<input checked="" type="checkbox"/> ZLIN71	TMCC16	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

With the following options:

Erase Disk Contents

Hide Cancel Go

Waiting for user input

**Property Viewer**

TMCC16 DEMOLAN ZLIN72 (TMCC...)

Property	Value
Name	ZLIN71
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
Project	CSL-WAVE Demo
Functionality	N/A
Total Disk Sp...	2.19

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY...

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks (1)

Group By: Site Defined Groups

zlin7\* ... Show Filter Panel

Delete z/VM Users (2/2) Selected, 0/2 Ended

Delete the following z/VM Users

Name	System	Status
<input checked="" type="checkbox"/> ZLIN72	TMCC16	Ready
<input checked="" type="checkbox"/> ZLIN71	TMCC16	Ready

Confirm Delete action

You are about to delete these virtual servers. This action is not reversible. Are you sure?

With the following options:

Erase Disk Contents

Yes No

Hide Cancel Go

Performing action on all selected objects...

M-SMAPI (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

BER-LOCAL (TMCC16) 17 Users All Accessible

IBM-DIRM (TMCC16) 0 Users

M-SEC (TMCC16) 0 Users

Property Viewer

TMCC16 DEMOLAN ZLIN72 (TMCC...)

Property	Value
Name	ZLIN71
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
Project	CSL-WAVE Demo
Functionality	N/A
Total Disk Sp...	2.19

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks (1)

Group By: Site Defined Groups zlin7\* Show Filter Panel

Delete z/VM Users (2/2) Selected, Last Run: 2/2 Ended

Delete the following z/VM Users

Name	System	Status
<input checked="" type="checkbox"/> ZLIN72	TMCC16	Done - Request added
<input checked="" type="checkbox"/> ZLIN71	TMCC16	Skipped - z/VM Guest is not inactive

**BTS Interaction**

Request sent to BTS

Select All Deselect

With the following options:

Erase Disk Contents

Hide Close Go

Waiting for user input

M-SMAPI (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

BER-LOCAL (TMCC16) 17 Users All Accessible

IBM-DIRM (TMCC16) 0 Users

M-SEC (TMCC16) 0 Users

Property Viewer

TMCC16 DEMOLAN ZLIN71 (TMCC16)

Property	Value
Name	ZLIN71
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
Project	CSL-WAVE Demo
Functionality	N/A
Total Disk Sp...	2.19

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:36:09			Active	65%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%

BTS Online waveadm

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Group By: Site Defined Groups

zlin7\*

Show Filter Panel

IBM-OPER (TMCC16) 0 Users

IBM-SYSTEM (TMCC16) 0 Users

IBM-SMAPI (TMCC16) 0 Users

IBM-COM (TMCC16) 0 Users

IBM-ENS (TMCC16) 0 Users

WAVE-INTERNAL (TMCC16) 4 Users All Accessible

ZLIN79 (zlin79)

DEMO LINUX (TMCC16) 1 Users All Accessible

USER-LOCAL (TMCC16) 17 Users All Accessible

IBM-DIRM (TMCC16) 0 Users

IBM-NA (TMCC16) 0 Users

IBM-UTIL (TMCC16) 0 Users

IBM-SEC (TMCC16) 0 Users

Property Viewer

TMCC16 DEMOLAN

Property	Value
Type	VSwitch
VLAN Aware	No
Default VLAN ID	N/A
Name	DEMOLAN
Owner	SYSTEM
Protocol	QDIO
Life Span	Presist
Created By	WAVEinit on 2013-08-20 11:52:31
Last Modified...	waveadm on 2013-08-20 15:59:12

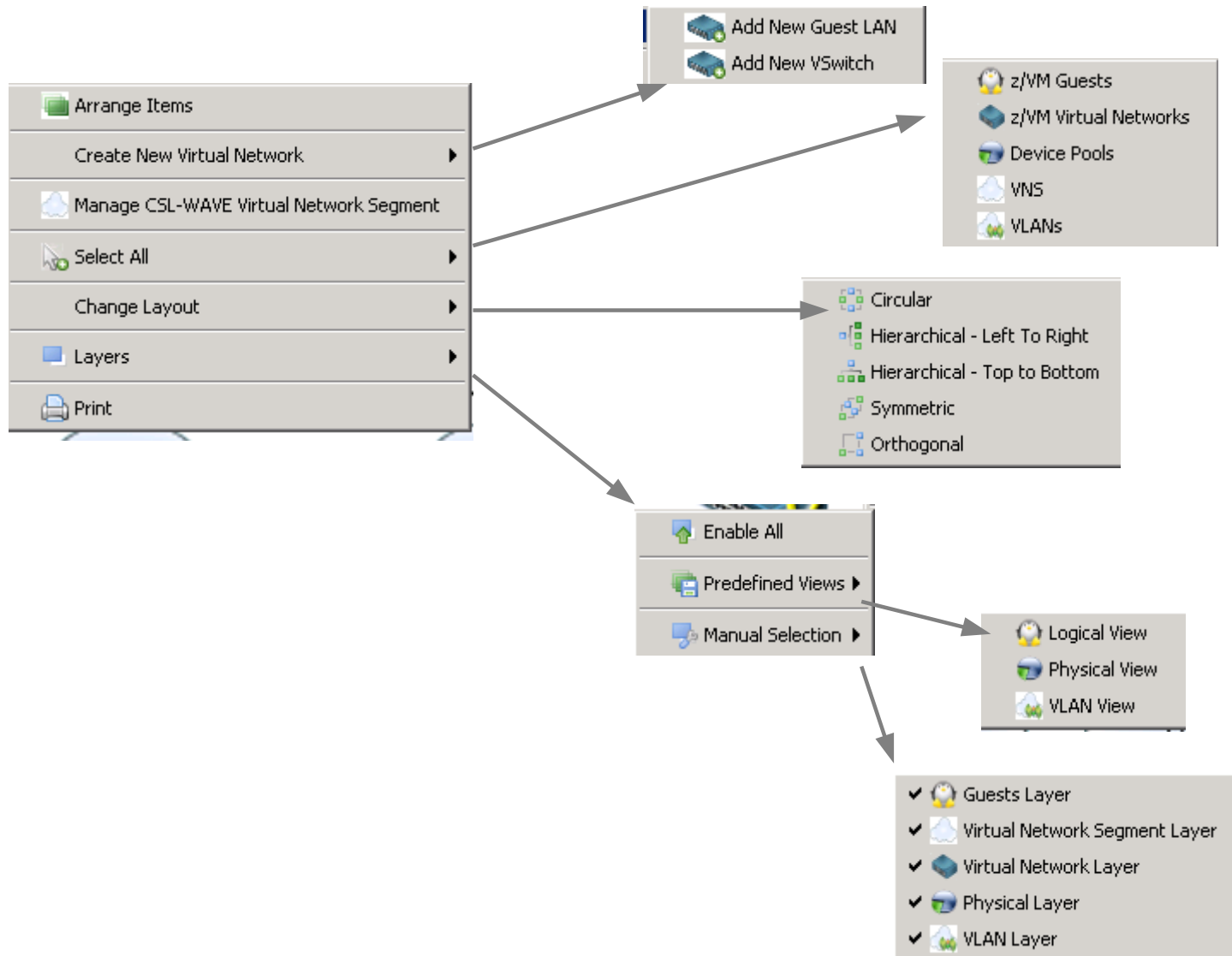
CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43	22 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:57	2013-08-23 07:36:58	1 seconds	Done	100%
Delete z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24	15 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
<b>Launch Linux Installation</b>	waveadm	<b>2013-08-23 06:53:12</b>	<b>2013-08-23 07:05:26</b>	<b>12:14 minutes</b>	<b>Error</b>	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)



# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

New HIPER Device Pool for TMCC16  
00 devices available

New OSA Device Pool for TMCC16  
52/64 devices available

DEMOLAN

XCATVSW1

DTCSMAPI

Unknown IP (DEMOLAN)

192.168.9.0

Unknown IP (XCATVSW1)

Unknown IP (DTCSMAPI)

Auto-created Virtual Network Segment (10.70.100.0)

XCAT80 ("Unknown")

CSLWAVE ("Unknown")

ZHCP16 (zhcp16)

ZLIN79 (zlin79)

TMCC16  
14 Users  
All Accessible

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window title is "CSL-WAVE Demo" and the subtitle is "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. A toolbar contains icons for home, refresh, and other functions, along with a "Stop Updates" button.

The main content area is titled "Current System View - 'TMCC16'". It features a navigation pane on the left with sections for "Predefined Views" (Enable All, VLAN View, Logical View, Physical View, Custom View), "By Layers" (External, VLAN, Physical, VN, VNS, Guests), and "Layout". The central area shows a network diagram with a switch labeled "XCATVSW" and a server labeled "XCAT80 (xcat80)". A message box indicates "New HIPER Device Pool for TMCC16: 0/0 devices available".

An "Update Virtual Network 'DEMOLAN' Information" dialog box is open in the foreground. It contains the following fields and options:

- General Information:**
  - Name: DEMOLAN
  - Owner: SYSTEM
  - z/VM System: TMCC16
  - Default NIC: EA00
  - Lifespan:  Temporary  Persistent  Permanent
  - Created By: WAVEinit on 2013-08-20 11:52:31
  - Modified By: waveadm on 2013-08-20 15:59:12
- Descriptive Information:**
  - Connected Segments | VSwitch Specific
  - Descriptive Information (254/254 left)
  - Description: (Empty text area)

Buttons for "Update" and "Close" are at the bottom of the dialog. The status bar at the bottom of the dialog reads "Waiting for user input".

The Windows taskbar at the bottom shows the Start button, several open applications including "Launch CSL-WAVE v3.2...", "A - zVM\_tmcc16.WS", and "CSL-WAVE 3.2.0 (WAY...)", and the system tray with "BTS Online" and "waveadm" icons.

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage System Status Ses

Default Zoom Show Legend

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

New HPER Device Pool for TMCC16: 0/0 devices available

XCATVSW

Unknown IP (XCATVSW1)

XCAT80 (xcat80)

**Update Virtual Network "DEMOLAN" Information**

General Information

Name: DEMOLAN Owner: SYSTEM

z/VM System: TMCC16 Default NIC: EA00

Lifespan:  Temporary  Persistent  Permanent

Created By: WAVEinit on 2013-08-20 11:52:31

Modified By: waveadm on 2013-08-20 15:59:12

Descriptive Connected Segments vSwitch Specific

Name	Network	VLAN ID
Unknown IP		N/A
DEMOLAN	192.168.9.0	N/A

Update Close

Waiting for user input

Show Filter Panel

Auto-created Virtual Network Segment (10.70.100.0)

10.70.100.0

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE



# The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window title is "CSL-WAVE Demo" and the subtitle is "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. A toolbar contains icons for various actions and a "Stop Updates" button.

The main content area is titled "Current System View - 'TMCC16'". It features a left-hand navigation pane with "Predefined Views" (Enable All, VLAN View, Logical View, Physical View, Custom View) and "By Layers" (External, VLAN, Physical, VN, VNS, Guests). Below this is a "Layout" section with several icons.

The central network diagram shows a switch labeled "XCATVSW" connected to a cloud labeled "Unknown IP (XCATVSW1)" and a server icon labeled "XCAT80 (xcat80)". A message at the top of the diagram reads "New HIPER Device Pool for TMCC16: 0/0 devices available".

A "Create New Virtual Network" dialog box is open in the foreground. It has a "General Information" tab with the following fields:
 

- Name: TESTLAN
- Owner: SYSTEM
- z/VM System: TMCC16
- Default NIC: FF00
- Lifespan:  Temporary  Persistent  Permanent
- Created By: N/A
- Modified By: N/A

 Below these fields are tabs for "Descriptive", "Connected Segments", and "Guest LAN Specific". The "Descriptive" tab is active, showing "Descriptive Information (254/254 left)" and a large empty text area for the description. At the bottom of the dialog are "Cancel" and "Create" buttons.

The background network diagram also shows a cloud labeled "10.70.100.0" with the text "Auto-created Virtual Network Segment (10.70.100.0)" below it.

The bottom of the screen shows a Windows taskbar with the Start button, several open applications (Launch CSL-WAVE v3.2..., A - zVM\_tmcc16.WS, CSL-WAVE 3.2.0 (WAY...)), and system tray icons including "BTS Online" and "waveadm".

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

A - zVM\_tmcc16.WS

File Edit View Communication Actions Window Help

```

USERBASED
VLAN Unaware
MAC address: 02-00-16-00-00-06    MAC Protection: OFF
IPTimeout: 5          QueueStorage: 8
Isolation Status: OFF          VEPA Status: OFF
Uplink Port:
State: Ready
PMTUD setting: EXTERNAL    PMTUD value: 8992
RDEV: EA00.P00 VDEV: 0603 Controller: DTCVSW1 ACTIVE
EQID: DEMOLAN
Ready; T=0.01/0.01 08:31:37
q lan testlan
LAN SYSTEM TESTLAN          Type: QDIO    Connected: 0    Maxconn: INFINITE
PERSISTENT UNRESTRICTED IP    Accounting: OFF
IPTimeout: 5          MAC Protection: OFF
Isolation Status: OFF          VEPA Status: OFF
Ready; T=0.01/0.01 08:33:20
    
```

—

RUNNING TMCC16

31/001

Start | Launch CSL-WAVE v3.2.... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAVE... | DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

TMCC16  
15 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Virtual Network Segment Manager

Existing Virtual Network Segments:

Name	Network	Netmask	Broadcast	Default GW	VLAN ID
TESTLAN	172.16.47.0	255.255.255.0	172.16.47.255	172.16.47.1	
Auto-created Virtual...	10.60.100.0	255.255.255.0	10.60.100.255	10.60.100.1	
Auto-created Virtual...	10.70.100.0	255.255.255.0	10.70.100.255	10.70.100.1	
DEMOLAN	192.168.9.0	255.255.255.0	192.168.9.255	192.168.9.1	

Filters

Show Unknown IP VNSs

Create New Virtual Network Segment Close

TMCC16  
15 Users  
All Accessible

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

BTS Online waveadm

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Update Virtual Network Segment

General Information

Name: TESTLAN  
Description: private Demo LAN 172.16.47.0  
Created By: waveadm on 2013-08-19 17:41:57  
Last Modified By: waveadm on 2013-08-19 17:44:11

IP Information

Network: 172.16.47.0 Default GW: 172.16.47.1  
Netmask: 255.255.255.0  
Broadcast: 172.16.47.255 VLAN ID:

Update Cancel

Virtual Network Segment

Name	VLAN ID
TESTLAN	N/A
Auto-created Virtual...	N/A
Auto-created Virtual...	N/A
DEMOLAN	N/A

Filters

Show Unknown IP

TMCC16  
15 Users  
All Accessible

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

BTS Online waveadm

# The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 interface for a z/VM system named 'TMCC16'. The main window shows a network diagram with several components: a 'New HAPER Device Pool for QVO devices available' icon, a 'Virtual Network Segment' table, and a 'Connect Virtual Network Segment TESTLAN to Virtual Networks' dialog box.

**Virtual Network Segment Table:**

Name	VLAN ID
TESTLAN	N/A
Auto-created Virtual...	N/A
Auto-created Virtual...	N/A
DEMOLAN	N/A

**Update Virtual Network Segment Dialog:**

General Information

- Name: TESTLAN
- Description: private Demo LAN 172.16.47.0
- Created By: waveadm on 2013-08-19 17:41:57
- Last Modified By: waveadm on 2013-08-19 17:44:11

IP Information | Connected Virtual Networks | Connected CSL-WAVE Resources

Connected Virtual Networks: No Virtual Networks

**Connect Virtual Network Segment TESTLAN to Virtual Networks Dialog:**

Select Existing Virtual Network

- z/VM System: TM...
- Virtual Network: TESTLAN (zVMLAN)
- TESTLAN (zVMLAN)
- DEMOLAN (zVMVSwitch)
- DTCSMAPI (zVMVSwitch)
- XCATVSW1 (zVMVSwitch)

Buttons: Connect to Virtual Network, Cancel

**System Status:** TMCC16, 15 Users, All Accessible

**Taskbar:** Start, Launch CSL-WAVE v3.2..., A - zVM\_tmcc16.WS, CSL-WAVE 3.2.0 (WAY...), BTS Online, waveadm

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

**Guest LAN Name: TESTLAN**  
**Switch Type: Guest LAN**

Network	VLAN ID
172.16.47.0	N/A

Connected Segments:

Unknown IP (TESTLAN) DEMOLAN XCATVSW1 DTCSMAPI

Auto-created Virtual Network Segment (10.60.100.0) Auto-created Virtual Network Segment (10.70.100.0)

Unknown IP (XCATVSW1) Unknown IP (DTCSMAPI)

XCAT80 (xcat80) CSLWAVE ("Unknown") ZHCP16 (zhcp16) ZLIN79 (zlin79)

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

New HIPER Device Pool for TMCC16  
0/0 devices available

New OSA Device Pool for TMCC16  
52/64 devices available

TESTLAN  
Unknown IP (TESTLAN) TESTLAN 172.16.47.0

DEMOLAN  
Unknown IP (DEMOLAN) DEMOLAN 192.168.9.0

XCATVSW1  
Unknown IP (XCATVSW1)

DTCSMAPI  
Unknown IP (DTCSMAPI)

Auto-created Virtual Network Segment (10.60.100.0)

Auto-created Virtual Network Segment (10.70.100.0)

XCAT80 (xcat80) CSLWAVE ("Unknown") ZHCP16 (zhcp16) ZLIN79 (zlin79)

z/VM User Name: ZLIN79 (zlin79)  
NIC Address: EA00  
VSwitch: DEMOLAN

Connections:

IP Address	VLAN ID
192.168.9.79	N/A

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE



# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.79)

File Auto Detect User-Group Management Network Management Prototype Manager

Stop Updates

### Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

#### Display ZLIN79 Details

General Information

z/VM Guest Name: ZLIN79  
z/VM System Name: TMCC16  
SDG Name: DEMO LINUX

Data | z/VM View | zLinux View | Performance View | Custom Attributes

Guest Meta Data

Distribution: SLES11 - 64 Bit Project: No Project Assigned  
Functionality: N/A (Activation Level 1) Prototype: N/A  
Description: Original Guest: N/A  
Default z/VM System: Locker: N/A

z/VM Data

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC16	Active	Yes	DEMO LINUX	Yes		1	1024 MB	1024 MB	2.19 GB	G	N/A

Connection Availability from This Work Station

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.79	DEMOLAN	DEMOLAN	Reachable

Update

Created By: WAVE Daemon Updater on 2013-08-20 13:50:23  
Last Modified By: WAVEinit on 2013-08-23 06:48:17

Close IAN

Waiting for user input

Windows Taskbar: Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
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- Logical View
- Physical View
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By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Network diagram components:

- New HPER Device Pod for TMCC16 (33 devices available)
- New OSA Device Pod for TMCC16 (5294 devices available)
- DEMO LAN (192.168.9.0)
- XCATVSW1
- DTCSMWP1
- TEST LAN
- Auto-created Virtual Network Segment (10.60.100.0)
- Auto-created Virtual Network Segment (10.70.100.0)
- Unknown IP (TEST LAN)
- TEST LAN (172.16.47.0)
- Unknown IP (DEMO LAN)
- XCAT181 (xcat181)
- CSLWAVE ("Unknown")
- ZHCP16 (zhcp16)
- ZUN1 (zuni)

Context Menu:

- Display Information
- Update
- Status
- Activate
- Deactivate
- Recycle
- Pause
- Resume
- Send Message
- Execute Script
- Access...
- Cloning...
- Install...
- More Actions

TMCC16  
15 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Use this magic wand tool to assign ZLIN79 to newly created TESTLAN

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks (1)

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Waiting for user input

**Connect z/VM Guest to Virtual Network Segment (1/1) Selected**

Connect The Following Users to the virtual network

Name	System	New IP Address	Status
<input checked="" type="checkbox"/> ZLIN79	TMCC16	172.16.47.79	

Select All Deselect All Toggle Selection Show Filtering Parallel

Select connection options

Connect through Virtual Network: TESTLAN (zVLAN) Using VLAN ID: And Port Type: N/A

Hide Cancel Go

Unknown IP (TESTLAN)

TESTLAN

Auto-created Virtual Network Segment (10.70.100.0)

10.70.100.0

ZLIN79 (zlin79) XCAT80 (xcat80) CSLWAVE ("Unknown") ZHCP16 (zhcp16)

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.zplex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
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By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

New HIPER Device Pool for TMCC16  
0/0 devices available

New OSA Device Pool for TMCC16  
52/64 devices available

TESTLAN

DEMOLAN

XCATVSW1

DTCSMAPI

Unknown IP (TESTLAN)

172.16.47.0

Unknown IP (DEMOLAN)

192.168.9.0

Unknown IP (XCATVSW1)

Unknown IP (DTCSMAPI)

Auto-created Virtual Network Segment (10.60.100.0)

Auto-created Virtual Network Segment (10.70.100.0)

ZLIN79 (zlin79)

XCAT80 (xca80)

CSLWAVE ("Unknown")

ZHCP16 (zhcp16)

ZLIN79 can now be reached via TESTLAN as well as DEMOLAN network segment

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname)

File Auto Detect User-Group Management

**Display ZLIN79 Details**

General Information

z/VM Guest Name: ZLIN79  
 z/VM System Name: TMCC16  
 SDG Name: DEMO LINUX

Data z/VM View zLinux View Performance View Custom Attributes

Guest Meta Data

Distribution: SLES11 - 64 Bit Project: No Project Assigned  
 Functionality: N/A (Activation Level 1) Prototype: N/A  
 Description: Original Guest: N/A  
 Default z/VM System: Locker: N/A

z/VM Data

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC16	Active	Yes	DEMO LINUX	Yes		1	1024 MB	1024 MB	2.19 GB	G	N/A

Connection Availability from This Work Station

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.79	DEMOLAN	DEMOLAN	Reachable
172.16.47.79	TESTLAN	TESTLAN	Unreachable

Update

Created By: WAVE Daemon Updater on 2013-08-20 13:50:23  
 Last Modified By: WAVEinit on 2013-08-23 08:52:05

Close IAN

Waiting for user input

Current System View - "TMCC16"

z/VM User Groups Network Prototype

Default Zoom

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

10.70.100.0  
 Created Virtual Network Segment (10.70.100.0)

BTS Online waveadm

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

# The WAVE GUI (Hardware Viewer – Network)

**CSL-WAVE 3.2.0 (WAVESERV Hostname)**

**Display ZLIN79 Details**

General Information

z/VM Guest Name: ZLIN79  
 z/VM System Name: TMCC16  
 SDG Name: DEMO LINUX

Data | z/VM View | zLinux View | Performance View | Custom Attributes

USER ZLIN79 XXXXXXXX 1024M 1024M G

CPU 00

IPL 192

LOGONBY PURIT WAVEADM

MACHINE ESA 4

CONSOLE 0009 3215

NICDEF EA00 TYPE QDIO LAN SYSTEM DEMOLAN

NICDEF FF00 TYPE QDIO LAN SYSTEM TESTLAN DEVICES 3

SPOOL 000C 3505 A

SPOOL 000D 3525 A

SPOOL 000E 1403 A

\*\*\*\*\*

LINK MAINT 0190 0190 RR

LINK MAINT 019D 019D RR

LINK MAINT 019E 019E RR

10.70.100.0  
 -created Virtual Network Segment (10.70.100.0)

Close | IAN

Waiting for user input

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostna...)

File Auto Detect User-Group Managemen...

**Display ZLIN79 Details**

General Information

z/VM Guest Name: ZLIN79  
 z/VM System Name: TMCC16  
 SDG Name: DEMO LINUX

Data | z/VM View | zLinux View | Performance View | Custom Attributes

File System Information (df -ah)

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Mount Point	Status (Capacity)
/dev/dasda1	ext3	1.57	1.03	0.47	STD	/	65%
proc	proc	0.00	0.00	0.00	STD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	/dev/pts	0%

Network Information (ifconfig -all)

Device	MAC Address	IP Address	Status
eth0	02:00:16:00:00:11	192.168.9.79	ONLINE
eth5	02:00:16:00:00:15	172.16.47.79	ONLINE
lo		127.0.0.1	ONLINE

Routing Information (route)

Destination	Gateway	Mask	Flags	Metric	Ref	Use	Interface	Reachable
default	192.168.9.1	0.0.0.0	UG	0	0	0	eth0	Reachable
loopback	*	255.0.0.0	U	0	0	0	lo	N/A
link-local	*	255.255.0.0	U	0	0	0	eth0	N/A
172.16.47.0	*	255.255.255.0	U	0	0	0	eth5	N/A
192.168.9.0	*	255.255.255.0	U	0	0	0	eth0	N/A

Uptime Information

Uptime: up 2:24 hours

Close IAN

Waiting for user input

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

10.70.100.0  
 -created Virtual Network Segment (10.70.100.0)

BTS Online waveadm

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE



# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.zplex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks (1)

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Waiting for user input

**Disconnect from virtual network Segment TESTLAN (1/1) Selected**

Disconnect the following users from Virtual Network Segment

Name	System	IP Address	Status
<input checked="" type="checkbox"/> ZLIN79	TMCC16	172.16.47.79	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

Hide Cancel Go

Unknown IP (TESTLAN) TESTLAN 172.16.47.79

10.60.100.0 segment (10.60.100.0) 10.70.100.0 Auto-created Virtual Network Segment (10.70.100.0)

ZLIN79 (zlin79) XCAT80 (xcat80) CSLWAVE ("Unknown") ZHCP16 (zhcp16)

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
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- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zvm\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend

Show Filter Panel

Predefined Views

- Enable All
- VLAN View
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- Physical View
- Custom View

By Layers

- External
- VLAN
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- VN
- VNS
- Guests

Layout

New HIPER Device Pool for TMCC16  
0/0 devices available

New OSA Device Pool for TMCC16  
52/64 devices available

Confirm Remove operation

Are you sure you want to remove the selected Virtual Network segments?

Yes No

TESTLAN

DTCSMAPI

Unknown IP (TESTLAN)

172.16.47.0

TESTLAN

Unknown IP (DEMOLAN)

192.168.9.0

DEMOLAN

Unknown IP (XCATVSW1)

Unknown IP (DTCSMAPI)

Auto-created Virtual Network Segment (10.60.100.0)

Auto-created Virtual Network Segment (10.70.100.0)

ZLIN79 (zlin79)

XCAT80 (xcat80)

CSLWAVE ("Unknown")

ZHCP16 (zhcp16)

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend

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Layout

TMCC16  
18 Users  
All Accessible

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Show Legend

Show Filter Panel

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- Enable All
- VLAN View
- Logical View
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By Layers

- External
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Layout

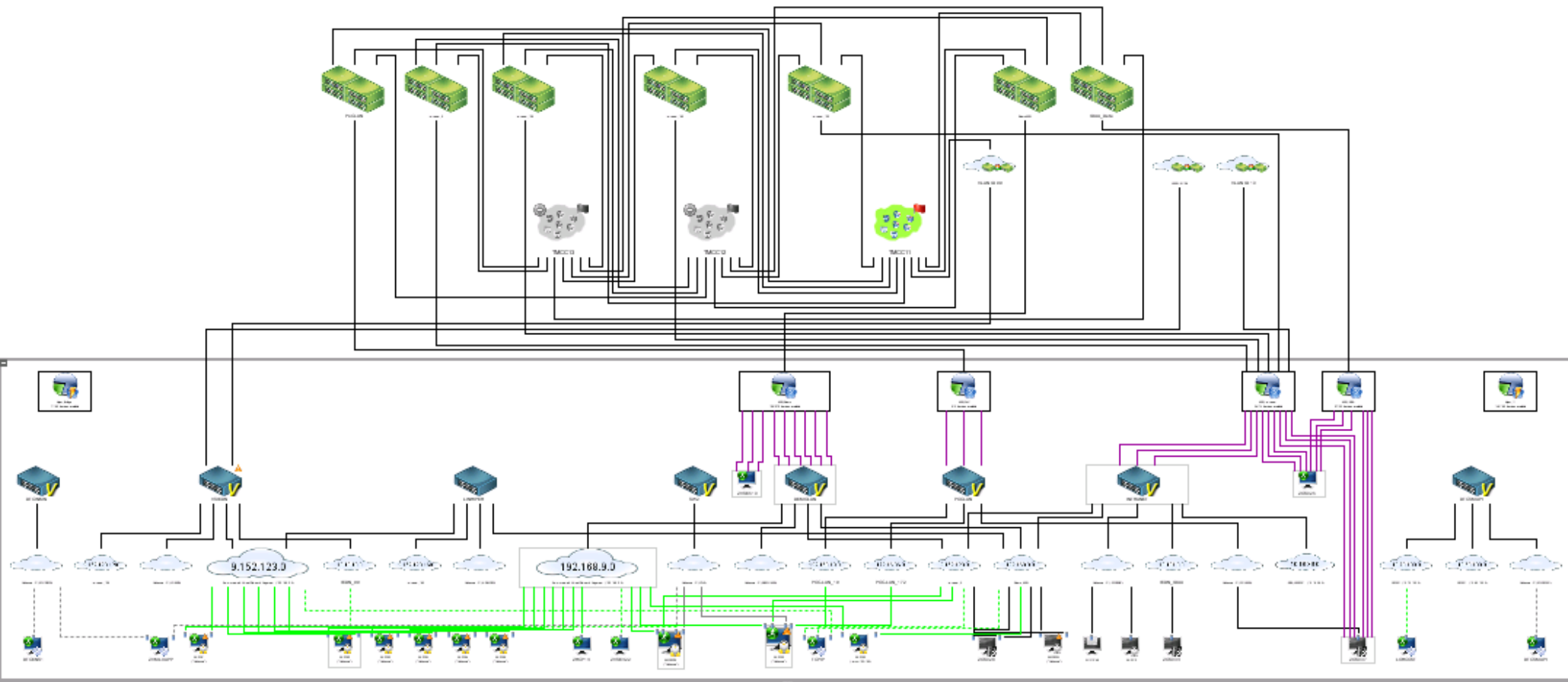
The diagram illustrates the network configuration for system TMCC16. At the top, two device pools are shown: 'New HIPER Device Pool for TMCC16' (0/0 devices available) and 'New OSA Device Pool for TMCC16' (52/64 devices available). Below these are two switches: DEMOLAN and XCATVSW1. DEMOLAN is connected to a virtual network segment with IP 192.168.9.0. XCATVSW1 is connected to a virtual network segment with IP 10.60.100.0. A third switch, DTCSMAPI, is connected to two virtual network segments: one with IP 10.60.100.0 and another with IP 10.70.100.0. The diagram also shows four virtual machines: ZLIN79 (zlin79), XCAT80 (xca80), CSLWAVE ('Unknown'), and ZHCP16 (zhcp16). The CSLWAVE VM is connected to the 192.168.9.0 segment. The XCAT80 and ZHCP16 VMs are connected to the 10.60.100.0 segment. The ZLIN79 VM is connected to the 10.70.100.0 segment. The diagram also shows three 'Unknown IP' segments: 'Unknown IP (DEMOLAN)', 'Unknown IP (XCATVSW1)', and 'Unknown IP (DTCSMAPI)'. The system status at the bottom indicates 'TMCC16 18 Users All Accessible'.

TMCC16  
18 Users  
All Accessible

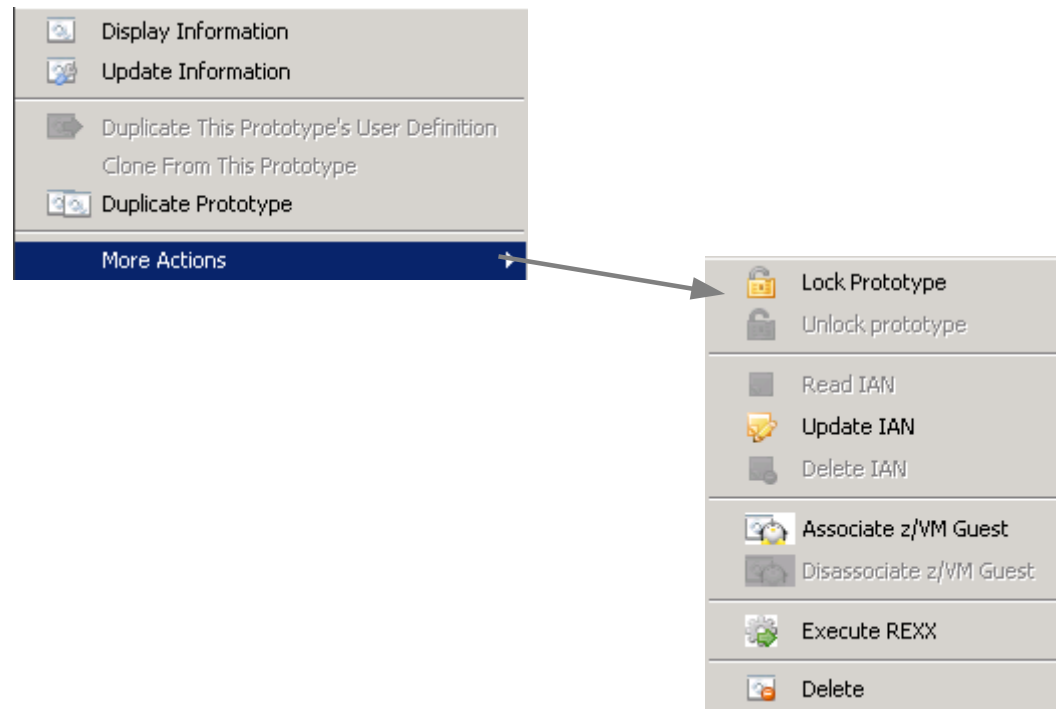
BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Network)



# The WAVE GUI (Hardware Viewer – Prototype Actions)





# The WAVE GUI (Hardware Viewer – Prototypes)

The screenshot shows the CSL-WAVE GUI interface. The main window title is 'CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)'. The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The toolbar contains various icons and a 'Stop Updates' button.

The main content area is titled 'Current System View - "TMCC16"'. It features a navigation bar with tabs: z/VM User Groups, Network, Prototypes, Storage, System Status (highlighted in red), and Session Tasks. Below the navigation bar are icons for navigation and a 'Default Zoom' button. The main area displays a large icon of a gear with the word 'LINUX' below it.

A 'View Prototype CMS' dialog box is open, showing the following information:

- General Information:**
  - z/VM Prototype Name: CMS
  - z/VM System Name: TMCC16
- Data z/VM View:**

```

USER CMS XXXXXXXX
INCLUDE CMSDFLT
MDISK 191 XXXX AUTOG 2 CMSGROUP MR

```

The dialog box has 'Close' and 'IAN' buttons at the bottom. A status bar at the bottom of the dialog box indicates 'Waiting for user input'.

The Windows taskbar at the bottom shows the Start button, several open applications including 'A - zvm\_tmcc16.WS', 'Command Prompt', 'cslwave.z0plex.com - Pu...', 'Launch CSL-WAVE v3.2...', and 'CSL-WAVE 3.2.0 (WAV...'. The system tray includes 'BTS Online', 'waveadm', and system icons.

# The WAVE GUI (Hardware Viewer – Prototypes)

The screenshot displays the CSL-WAVE 3.2.0 interface. The title bar reads "CSL-WAVE Demo" and the address bar shows "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The main window is titled "Current System View - 'TMCC16'" and has tabs for "z/VM User Groups", "Network", "Prototypes", "Storage", "System Status", and "Session Tasks". The "System Status" tab is active. Below the tabs are navigation icons and a "Default Zoom" button. The main area shows three prototype icons, each with a gear icon and a label: "LINUX", "CMS", and "N79". The "N79" icon is highlighted with an orange border, and a context menu is open over it. The context menu includes the following options:

- Display Information
- Update Information
- Duplicate This Prototype's User Definition
- Clone From This Prototype
- Duplicate Prototype
- More Actions
- Lock Prototype
- Unlock prototype
- Read IAN
- Update IAN
- Delete IAN
- Associate z/VM Guest
- Disassociate z/VM Guest
- Execute REXX
- Delete

The Windows taskbar at the bottom shows the Start button, several open applications including "Launch CSL-WAVE v3.2....", "A - zVM\_tmcc16.WS", and "CSL-WAVE 3.2.0 (WAY...)", and system tray icons for "BTS Online" and "waveadm".

# The WAVE GUI (Hardware Viewer – Prototypes)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

**Disassociate z/VM guest From Prototype**

General Information

z/VM Prototype Name: ZLIN79

z/VM System Name: TMCC16

Data z/VM View

General Information

Full Name: ZLIN79

Description: ZLIN79-ptototype

Functionality: N/A (Activation Level 1)

Project: CSL-WAVE Demo

DASD Group: LINUX

Associated z/VM Guest: ZLIN79

Delete Options

Delete Associated z/VM Guest

Change z/VM Guest password

Cancel Disassociate

z/VM System Name: ZLIN79

Property Viewer

TMCC16 ZLIN79 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN72
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.73
Project	CSL-WAVE Demo
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Activate z/VM Guests	waveadm			0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm			48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%
Pause z/VM Guests	waveadm	2013-08-23 10:12:37	2013-08-23 10:12:37	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help


Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View


Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks


Default Zoom Show Filter Panel



LINUX



CMS



ZLIN79

Property Viewer

TMCC16 ZLIN79 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN72
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.73
Project	CSL-WAVE Demo
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Disassociate z/VM Prototype	waveadm	2013-08-23 10:34:10	2013-08-23 10:34:13	3 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 10:30:49	2013-08-23 10:30:49	0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – Prototypes)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

associate z/VM Guest with z/VM Prototype

General Information

z/VM Prototype Name: ZLIN79

z/VM System Name: TMCC16

Data z/VM View

General Information

Full Name: ZLIN79

Description: ZLIN79-ptototype

Functionality: N/A (Activation Level 1)

Project: CSL-WAVE Demo

DASD Group: LINUX

Associated z/VM Guest

Select the z/VM Guest to associate the Prototype with

ZLIN79

Cancel Associate

Property Viewer

Property	Value
Name	ZLIN72
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.73
Project	CSL-WAVE Demo
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

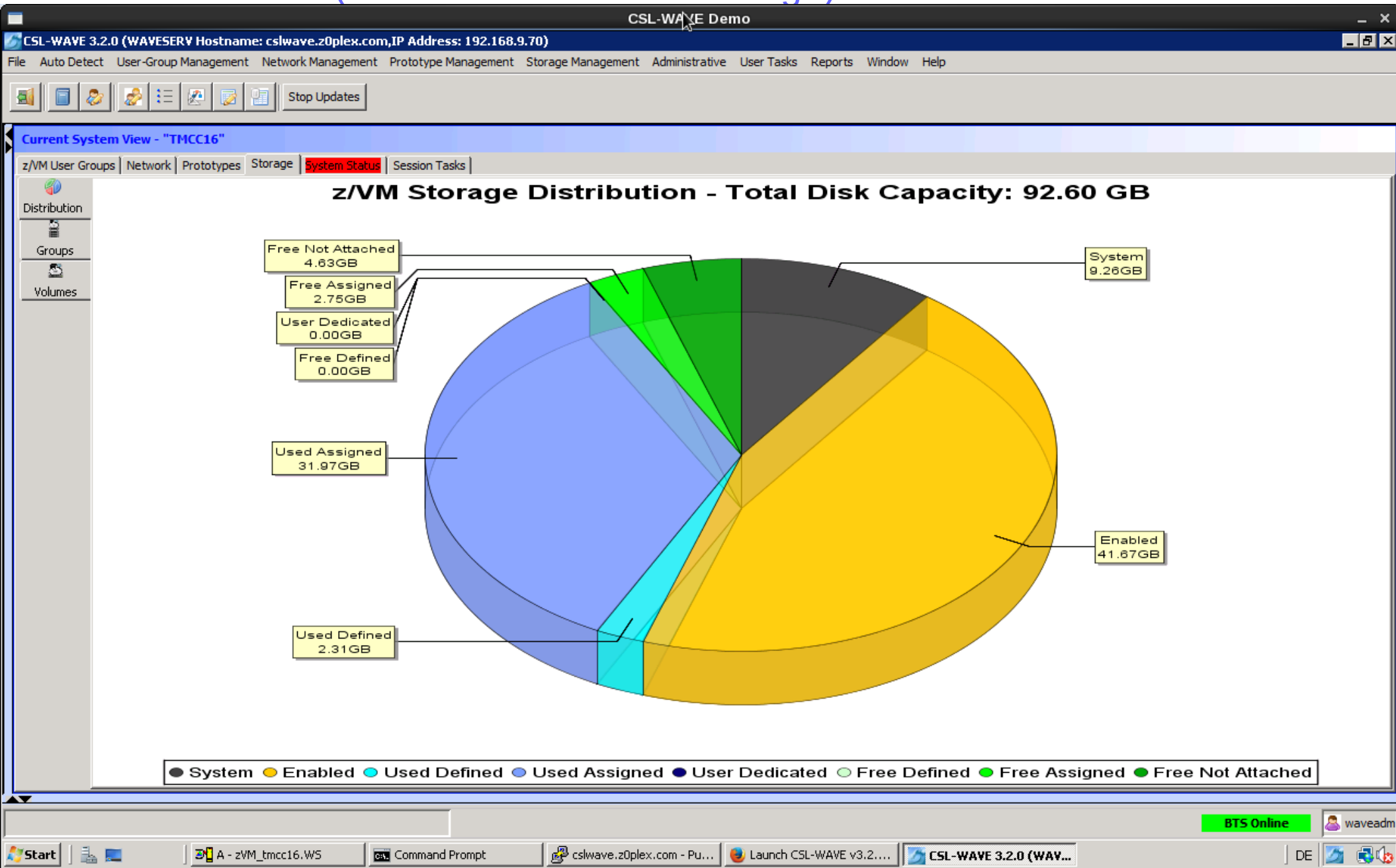
Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Disassociate z/VM Prototype	waveadm			3 seconds	Done	100%
Activate z/VM Guests	waveadm			0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%

Waiting for user input

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Storage)



# The WAVE GUI (Hardware Viewer – Storage)

The screenshot displays the CSL-WAVE GUI interface for a system named "TMCC16". The main view shows two server racks representing storage systems:

- LINUX (7.10/20.83 GB FREE)**: Represented by a server rack icon with a green and red bar chart. A context menu is open over this rack, showing options: "Arrange Items", "Add new DASD Group", "Select All" (highlighted), and "DASD Groups".
- XCAT1 (0.00/13.89 GB FREE)**: Represented by a server rack icon with a red bar chart.

The GUI includes a menu bar with options like "File", "Auto Detect", "User-Group Management", "Network Management", "Prototype Management", "Storage Management", "Administrative", "User Tasks", "Reports", "Window", and "Help". A toolbar contains icons for various actions and a "Stop Updates" button. The left sidebar shows navigation options: "Distribution", "Groups", and "Volumes". The top status bar indicates the host name "cslwave.z0plex.com" and IP address "192.168.9.70". The Windows taskbar at the bottom shows the Start button, several open applications, and system tray icons including "BTS Online" and "waveadm".

# The WAVE GUI (Hardware Viewer – Storage)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Distribution Groups Volumes

Default Zoom

Hide Filter Panel

Storage Unit	Free Space
Z16LXB	Free : 4.71 GB
Z16LXC	Free : 6.94 GB
Z16LXA	Free : N/A

Filter Active S.G. Name = LINUX

S.G. Name = LINUX +

Go Reset

BTS Online waveadm

Start | A - zvm\_tmcc16.W5 | Command Prompt | Launch CSL-WAVE v3.2... | zlin79.z0plex.com - PuTTY | CSL-WAVE 3.2.0 (WAV... | DE



# The WAVE GUI (Hardware Viewer – Storage)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Distribution Groups Volumes

Default Zoom

Hide Filter Panel

CSLVOL	Z16LXB	Z16P01	Z16W02	Z16W0C	Z16W0A	Z16S01	N/A	DEVNO
Free : N/A	Free : 4.71 GB	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A
FR902F	Z16W0E	Z6COM1	Z6REL1	Z6REL2	Z6COM2	Z16W0F	Z16W0D	DEVNO
Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A
DEVNO	N/A	Z16RES	Z16W03	Z16W0B	Z16W01	Z16LXC	Z16LXA	
Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : N/A	Free : 6.94 GB	Free : N/A	

Free GB  
Inconsistent  
Locked  
Real Address  
S.G. Name  
Volume Name  
Volume Status  
Volume Name = \*

Volume Name = \* +

Go  
Reset

BTS Online waveadm

Start A - zVM\_tmcc16.W5 Command Prompt Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – Storage)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Distribution Groups Volumes

Default Zoom

CSLVOL Free : N/A	Z16LXB Free : 4.71 GB	Z16P01 Free : N/A	Z16W02 Free : N/A	Z16W0C Free : N/A	Z16W0A Free : N/A
FR902F Free : N/A	Z16W0E Free : N/A	Z6COM1 Free : N/A	Z6REL1 Free : N/A	Z6REL2 Free : N/A	Z6COM2 Free : N/A
DEVNO Free : N/A	N/A Free : N/A	Z16RES Free : N/A	Z16W03 Free : N/A	Z16W0B Free : N/A	Z16WC Free : N/A

Filter Active Volume Name = \*

Volume Name = \* +

Go Reset

- Lock
- Unlock
- Read IAN
- Update IAN
- Delete IAN
- Remove from DB
- Attach To System
- Detach From System
- Vary DASD Volume online
- Vary DASD Volume offline
- Mark as Page DASD
- Mark as Spool DASD
- Unmark DASD from Page
- Unmark DASD from Spool
- Add To z/VM System As Page DASD
- Add To z/VM System As Spool DASD
- Execute REXX
- Display Information
- Assign Volumes to Group
- Unassign Volumes from DASD Group
- Define Region
- Undefine Region
- More Actions

BTS Online waveadm

Start A - zVM\_tmcc16.WS Command Prompt Launch CSL-WAVE v3.2... zlin79.z0plex.com - PuTTY CSL-WAVE 3.2.0 (WAV... DE

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Distribution Groups Volumes

Default Zoom

Filter Active Volume Name = fr\*

Volume Name = fr\* +

Go Reset

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

- Display Information
- Assign Volumes to Group
  - XCAT1
  - LINUX
- Unassign Volumes from DASD Group
- Define Region
- Undefine Region
- More Actions

FR90  
Free : 2.31 GB

CSL-WAVE Demo


CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Distribution Groups Volumes

Default Zoom



FR902F  
Free : N/A

- Display Information
- Assign Volumes to Group
- Unassign Volumes from DASD Group
- Define Region
- Undefine Region
- More Actions

- Lock
- Unlock
- Read IAN
- Update IAN
- Delete IAN
- Remove from DB
- Attach To System
- Detach From System
- Vary DASD Volume online
- Vary DASD Volume offline
- Mark as Page DASD
- Mark as Spool DASD
- Unmark DASD from Page
- Unmark DASD from Spool
- Add To z/VM System As Page DASD
- Add To z/VM System As Spool DASD
- Execute REXX

Filter Active Volume Name = fr\*

Volume Name = fr\*

Go Reset

BTS Online waveadm

Start Launch CSL-WAVE v3.2... z/VM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Distribution Groups Volumes

Default Zoom

FR902F  
Free : N/A

Filter Active Volume Name = fi\*

Volume Name = fi\* +

Go Reset

Lock  
Unlock  
Read IAN  
Update IAN  
Delete IAN  
Remove from DB  
Attach To System  
Detach From System  
Vary DASD Volume online  
Vary DASD Volume offline  
Mark as Page DASD  
Mark as Spool DASD  
Unmark DASD from Page  
Unmark DASD from Spool  
Add To z/VM System As Page DASD  
Add To z/VM System As Spool DASD  
Execute REXX

Display Information  
Assign Volumes to Group  
Unassign Volumes from DASD Group  
Define Region  
Undefine Region  
More Actions

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAV... | DE

BTS Online waveadm

**CSL-WAVE Demo**

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups | Network | Prototypes | Storage | **System Status** | Session Tasks (1)

Distribution Groups Volumes

Filter Active Volume Name = fr\*

Volume Name = fr\*

**Status Details for Add Page volume to z/VM system**

Task Parameters  
Task Name: Add Page volume to z/VM system

Task Status  
Error - error attaching disk FR902F to SYSTEM  
Error reading allocation record.  
There is an error in the z/VM DASD volume.  
Contact your storage administrator.

Close

CSL-WAVE Log | BTS Work Units | BTS System COR | **BTS Log** | Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Undefine Region from DASD Volumes	waveadm	2013-08-23 11:09:53	2013-08-23 11:09:57	4 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 11:07:27	2013-08-23 11:07:35	8 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 11:05:36	2013-08-23 11:05:54	18 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:37:03	2013-08-23 10:37:04	1 seconds	Done	100%
Disassociate z/VM Prototype	waveadm	2013-08-23 10:34:10	2013-08-23 10:34:13	3 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 10:30:49	2013-08-23 10:30:49	0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%

BTS Online waveadm

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Hardware Viewer – Storage)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

**Current System View - "TMCC16"**

z/VM User Groups Network Prototypes Storage **System**

Distribution Groups Volumes

Filter Active Volume Name = fr\*

Volume Name = fr\*

**Execute REXX (1/1) Selected**

REXX Parameters

REXX Name:

Specify REXX Location

Owning Machine Name:  Minidisk Address:

Name	System	Parameters	Status
<input checked="" type="checkbox"/> FR902F	TMCC16	902F,FR902F	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

REXX Parameters

VOLSER  Device Type  Size (GB)  Free Size (GB)

Real Address  Status  Assigned to Group  Inconsistent

Locked  Online  Modified By  Created By

Hide Cancel Go

Waiting for user input

Progress

100%
100%
100%
100%
100%
100%
100%
100%
100%

Workunit Name

Undefine Region from DASD Volumes

Update z/VM Storage Aspect

Update All z/VM Aspects

Deactivate z/VM Guests

Disassociate z/VM Prototype

Activate z/VM Guests

Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Hardware Viewer – Storage)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View **Current System View - "TMCC16"**

Hardware Viewer

**Display Volume FR902F**

General Information

Volser: FR902F  
 Device Type: 3390-03  
 Size (GB): 2.31  
 Free (GB): N/A  
 Real Address: 902F

Volume Status

Status: SYS  
 Assigned To:   
 Inconsistent  Online  Locked

Update

Created By: WAVE Daemon Updater on 2013-08-23 11:07  
 Last Modified By: waveadm on 2013-08-23 11:40

Property Viewer

CSL-WAVE Log BTS Work Units BTS System CO

Workunit Name
Update z/VM Storage Aspect
Execute REXX on z/VM Objects
Execute REXX on z/VM Objects
Undefine Region from DASD Volumes
Update z/VM Storage Aspect
Update All z/VM Aspects
Deactivate z/VM Guests
Disassociate z/VM Prototype

z-VM tmcc16.WS

```

Ready; T=0.01/0.01 11:44:26
q alloc page
      EXTENT   EXTENT   TOTAL   PAGES   HIGH   %
VOLID  RDEV     START    END     PAGES  IN USE  PAGE  USED
-----
FR902F 902F      1        3338  600840    0        0    0%
Z16P01 9502      1        3338  600840   292     334    1%
SUMMARY
USABLE
      1174K  292    1%
Ready; T=0.01/0.01 11:44:30
    
```

Progress

100%
100%
100%
100%
100%
100%
100%
100%

BTS Online waveadm



# The WAVE GUI (Hardware Viewer – System Status)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:11:48 PM)

Total Storage Utilization

z/VM CPU Utilization

Virtual to Real Ratio

z/VM Page Space Utilization

z/VM Pool Space Utilization

The following object require attention: (11/15 match filter and current z/VM System selection)

Object Type	Object Name	Attention Required Details	User Severity
zVMDASDVol...	9010	Inconsistent, Offline	50
zVMDASDVol...	902F	Inconsistent, Offline	50
zVMDASDVol...	911D	Inconsistent, Offline	50
zVMDASDVol...	911E	Inconsistent, Offline	50
zVMPrototype	CMS	No z/VM User associated, No DASD group Assigned	50
zVMPrototype	LINUX	No z/VM User associated, No DASD group Assigned	50
zVMUser	XCAT80	zipl.conf has parameters lines without "root=" parameter, Not inited for CSL-WAVE Use, CM5FS package status for guest is unknow, VMCP mo...	30
zVMUser	ZHCP16	Not connectable	80
zVMVSwitch	DTCSMAPI	Virtual Network is missing data	70
zVMVSwitch	XCATV5W1	Virtual Network is missing data	70
zVMVSwitch	TESTLAN	Virtual Network is inconsistent	50

Filters

CPCs  
  Systems  
  Guests  
  Prototypes  
  LANs  
 Minimum Severity:

DASD Groups  
  DASD Volumes  
  Real Devices  
  Global  
  Ignore  

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB

BTS Online waveadm

Start Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Hardware Viewer – System Status)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Property Viewer

TMCC16 CMS ZHCP16 (TMCC16)

Property	Value
Name	ZHCP16
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.116
Project	N/A
Functionality	N/A

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:43:34 PM)

Total Storage Utilization

z/VM CPU Utilization

2.0%

Virtual to Real Ratio

202.0%

z/VM Page Space Utilization

1.0%

z/VM Spool Space Utilization

1.0%

The following object require attention: (2/6 match filter and current z/VM System selection)

Object Type	Object Name	Attention Required Details	User Severity
zVMPrototype	CMS	No z/VM User associated	50
zVMPrototype	LINUX	No z/VM User associated	50

Filters

CPCs
  Systems
  Guests
  Prototypes
  LANs
 Minimum Severity:

DASD Groups
  DASD Volumes
  Real Devices
  Global
  Ignore

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – System Status)

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Filter Panel

z10

TMCC16

ZVM63CAT

Property Viewer

TMCC16 CMS ZHCP16 (TMCC16)

Property	Value
Name	ZHCP16
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.116
Project	N/A
Functionality	N/A

LINUX

CMS

Prototype Name: CMS  
Associated z/VM Guest: N/A

**Attention Required!**

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – System Status)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:45:14 PM)

Total Storage Utilization

z/VM CPU Utilization

1.0%

Virtual to Real Ratio

202.0%

z/VM Page Space Utilization

1.0%

z/VM Pool Space Utilization

1.0%

The following object require attention: (2/6 match filter and current z/VM System selection)

Object Type	Object Name	Attention Required Details	User Severity
zVMPrototype	CMS	No z/VM User associated	50
zVMPrototype	LINUX	No z/VM User as	50

- Update user severities
- set objects ignored
- Reset user severities
- Reset ignored objects

Filters

CPCs  
  Systems  
  Guests  
  Prototypes  
  LANs  
 Minimum Severity:

DASD Groups  
  DASD Volumes  
  Real Devices  
  Global  
  Ignore  

BTS Online waveadm

Start Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – Exceptions)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CA

System Name: TMCC16  
 Status: active  
 Description: Demo zVM z10 LPC  
 System Type: Other  
 Error: Virtual to Real Ratio critical (202%)

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:45:14 PM)

Metric	Value
Total Storage Utilization	~45%
z/VM CPU Utilization	1.0%
Virtual to Real Ratio	202.0%
z/VM Page Space Utilization	1.0%
z/VM Pool Space Utilization	1.0%

Object require attention: (0/6 match filter and current z/VM System selection)

Object Name	Attention Required Details	User Severity

Property Viewer

Property	Value
Name	LINUX
Functionality	N/A
Project	CSL-WAVE Demo
Inconsistent	No
Modified By	WAVEinit on 2013-08-20 19:27
Created By	WAVE Daemon Updater on 2013-08-20 ...

Filters

CPCs   
  Systems   
  Guests   
  Prototypes   
  LANs   
 Minimum Severity: 0

DASD Groups   
  DASD Volumes   
  Real Devices   
  Global   
  Ignore   
 Reset

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Hardware Viewer – Session Tasks)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks (1)

Task Name	Starting Time	End Time	Duration (mm:ss)	Progress
Deactivate z/VM Users	Aug 23, 2013 10:...	Aug 23, 2013 10:...	00:03	<div style="width: 100%; height: 10px; background-color: green;"></div>

Property Viewer

TMCC16 ZLIN79 ZLIN71 (TMCC16)

Property	Value
Name	ZLIN72
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.73
Project	CSL-WAVE Demo
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Deactivate z/VM Guests	waveadm	2013-08-23 10:37:03	2013-08-23 10:37:04	1 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Disassociate z/VM Prototype	waveadm	2013-08-23 10:34:10	2013-08-23 10:34:13	3 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Activate z/VM Guests	waveadm	2013-08-23 10:30:49	2013-08-23 10:30:49	0 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Enterprise Viewer)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Enterprise View > Guest Name (zlin\*)

Guests Session Tasks

Default Zoom Group By: z/VM System

Show Filter Panel

ZLIN72 (ZLIN72)      ZLIN79 (zlin 79)      ZLIN71 (ZLIN71)

TMCC16  
3 Users (+1 Hidden)  
All Accessible

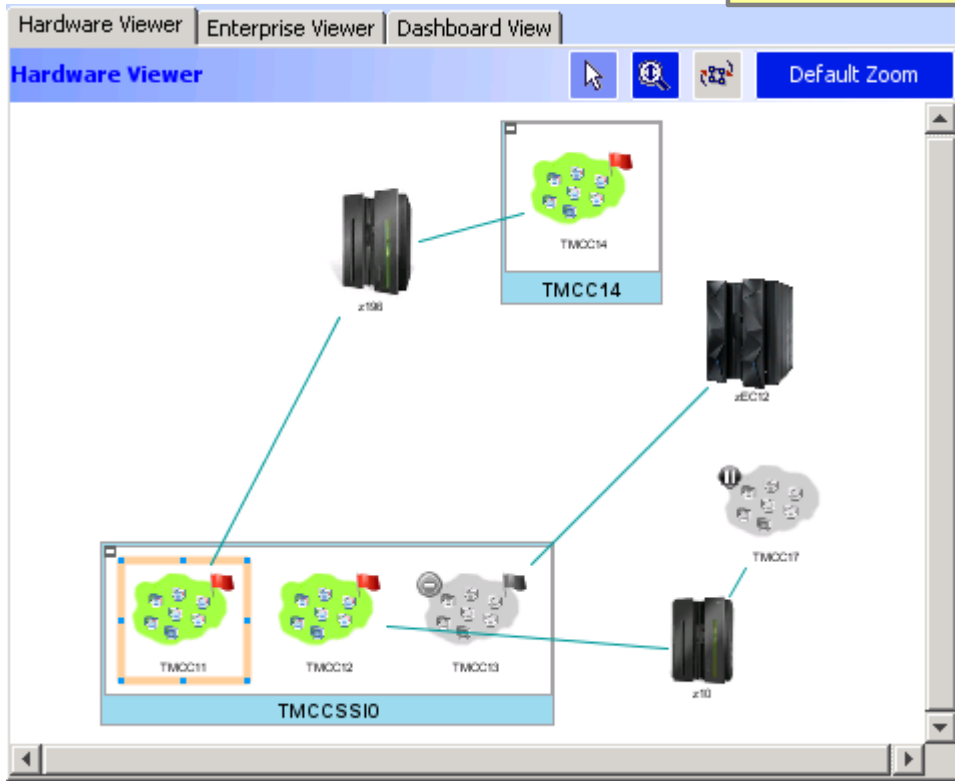
**Group Name:** TMCC16  
**Description:** N/A  
**Users:** 3  
 \* Hidden z/VM Guests are Guests which are associated with z/VM Prototypes  
 \* There are well known IBM machines hidden in the group

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Enterprise Viewer - LGR)

LGR = Live Guest Relocation



Screens from another "multi-system" WAVE installation



# The WAVE GUI (Enterprise View - LGR)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostn...)

File Auto Detect User-Group Manage...

Enterprise View > Project (lgr\*)

Guests Session Tasks

Default Zoom

Display ZLIN119 Details

General Information

z/VM Guest Name: ZLIN119

z/VM System Name: TMCC11

SDG Name: USER-LOCAL

Data z/VM View zLinux View Performance View Custom Attributes

Guest Meta Data

Distribution: SLES10 - 64 Bit Project: LGR-Demo

Functionality: N/A (Activation Level 1) Prototype: N/A

Description: Original Guest: N/A

Default z/VM System: Locker: N/A

z/VM Data

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC13	Inactive	Yes	USER-LOCAL	Yes		1	1024 MB	1024 MB	0.02 GB	G	N/A
TMCC11	Active	Yes	USER-LOCAL	Yes		1	1024 MB	1024 MB	0.02 GB	G	N/A
TMCC12	Inactive	No	USER-LOCAL	Yes		1	1024 MB	1024 MB	0.02 GB	G	N/A

Connection Availability from This Work Station

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.119	Auto-created Virtual Network Segment (192.168.9.0)	DEMOLAN	Unreachable
9.152.123.119	Intranet_0	INTRANET	Reachable

Update

Created By: WAVE Daemon Updater on 2013-01-16 10:29:12

Last Modified By: purit on 2013-08-20 18:30:38

Close IAN

Waiting for user input

The Audio Service is not running.

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

# The WAVE GUI (Enterprise View - LGR)

The screenshot displays the CSL-WAVE GUI Enterprise View interface. At the top, the window title is "CSL-WAVE Demo" and the address bar shows "CSL-WAVE 3.2.0 (WAVESERV Hostname: tmcc-123-24.boeblingen.de.ibm.com, IP Address: 192.168.9.24)". The menu bar includes "File", "Auto Detect", "User-Group Management", "Network Management", "Prototype Management", "Storage Management", "Administrative", "User Tasks", "Reports", "Window", and "Help".

The main area is titled "Enterprise View > Project (lgr\*)" and contains a "Guests" tab. A toolbar at the top of the main area includes "Default Zoom", "Group By: z/VM System", and "Show Filter Panel".

The central workspace shows several z/VM system icons grouped into TMCC clusters:

- TMCC11: 5 Users, All Accessible. Contains ZLIN092 (tmcc-123-92), ZLIN070 (tmcc-123-70), ZLIN107 (tmcc-123-107), ZLIN120 (\*Unknown\*), and ZLIN1 (tmcc-123-1).
- TMCC12: 5 Users, All Accessible. Contains ZLIN119 (tmcc-123-119), ZLIN070 (tmcc-123-70), ZLIN107 (tmcc-123-107), ZLIN120 (\*Unknown\*), and ZLIN092 (tmcc-123-92).
- TMCC13: 2 Users, All Accessible. Contains ZLIN120 (\*Unknown\*) and ZLIN092 (tmcc-123-92).
- TMCC14: 2 Users, All Accessible. Contains ZLIN119 and ZLIN180 (tmcc-123-180).

A context menu is open over the ZLIN120 icon in the TMCC11 cluster. The menu items are:

- Display Information
- Update
- Activate
- Deactivate
- Recycle
- Pause
- Resume
- Execute Script
- Execute REXX
- Access...
- More Actions
- Lock z/VM User
- Unlock z/VM User
- Read IAN
- Update IAN
- Delete IAN
- Relocate to (highlighted)
  - Relocate to TMCC13
  - Relocate to TMCC12
- Generate Disk Storage Map
- Init User for CSL-WAVE use
- Refresh Linux Data
- Run AGC

The Windows taskbar at the bottom shows the Start button, a search bar, and several open applications: "Launch CSL-WAVE v3.2...", "A - zVM\_tmcc16.WS", and "CSL-WAVE 3.2.0 (WAY...". The system tray includes "BTS Online", a user profile "puril", and system icons for "DE", network, and volume.

# The WAVE GUI (Enterprise View - LGR)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: tmcc-123-24.boeblingen.de.ibm.com, IP Address: 192.168.9.24)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Enterprise View > Project (lgr\*)

Guests Session Tasks

Default Zoom Group By: z/VM System

Show Filter Panel

TMCC11  
5 Users  
All Accessible

ZLIN092 (tmcc-123-92) ZLIN070 (tmcc-123-70) ZLIN107 (tmcc-123-107) ZLIN120 ("Unknown")

ZLIN119 (tmcc-123-119) ZLIN070 (tmcc-123-70) ZLIN107 (tmcc-123-107) ZLIN120 ("Unknown") ZLIN092 (tmcc-123-92)

ZLIN119 ZLIN120 (tmcc-123-120) ZLIN107 (tmcc-123-107)

TMCC12  
5 Users  
All Accessible

ZLIN119 (tmcc-123-119) ZLIN070 (tmcc-123-70) ZLIN107 (tmcc-123-107) ZLIN120 ("Unknown") ZLIN092 (tmcc-123-92)

TMCC17  
0 Users

Live Guest Relocation

Cannot relocate guests. Target z/VM System is not a member of the same SSI cluster

OK

BTS Online puril

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Enterprise View - LGR)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: tmcc-123-24.boeblingen.de.ibm.com, IP Address: 192.168.9.24)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Enterprise View > Project (lgr\*)

Guests Session Tasks

Default Zoom Group By: z/VM System

Show Filter Panel

TMCC11  
5 Users  
All Accessible

TMCC13  
5 Users  
0/5 Accessible

TMCC14  
2 Users  
All Accessible

TMCC17  
0 Users

TMCC12  
5 Users  
All Accessible

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

BTS Online puri

# The WAVE GUI (Enterprise View - LGR)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: tmcc-123-24.boeblingen.de.ibm.com, IP Address: 192.168.9.24)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Enterprise View > Project (lgr\*)

Guests Session Tasks (1)

Default Zoom Group By: z/VM System

Stop Updates

z/VM Live Guest Relocation to TMCC12 (1/1) Selected

Relocate the following z/VM Guests:

Name	System	Status
<input checked="" type="checkbox"/> ZLIN119	TMCC11	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

With the Following Options:

Force Options:  Architecture  Domain  Storage

Other Options: Immediate Processing  Max Total Time:  Max Quiesce Time:

Hide Cancel Go

Waiting for user input

TMCC11  
5 Users  
All Accessible

ZLIN052 (tmcc-123-92) ZLIN070 (tmcc-123-70) ZLIN107 (tmcc-123-107) ZLIN120 ("Unknown")

N180 (123-180)

Start Launch CSL-WAVE v3.2... A - z/VM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... BTS Online puri DE

# The WAVE GUI (Dashboard Viewer)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

### Enterprise Status Viewer

Filter selection

CPC = z10 +

Clear Go

### Enterprise Dashboard View

z/VM System Name	CPU Utilization	Virtual to Real Ratio	Page Space Utilization	Spool Space Utilization
TMCC16	0%	204%	1%	1%

Double-click column 'z/VM System Name' -> object will expand/collapse

### Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Class	04 73 CP

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Dashboard Viewer)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

### Enterprise Dashboard View

z/VM System Name	CPU Utilization	Virtual to Real Ratio	Page Space Utilization	Spool Space Utilization
 TMCC16	 z/VM CPU Utilization 5.0%	 Virtual to Real Ratio 204.0%	 z/VM Page Space Utilization 1.0%	 z/VM Spool Space Utilization 1.0%

Double-click on one of the column objects will give more details – see next page

### Enterprise Status Viewer

Filter selection

CPC = z10

Clear Go

### Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Class...	24.73 GB

BTS Online waveadm

Start Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Dashboard Viewer – CPU Utilization)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

**Enterprise Dashboard View**

z/VM System Name  
TMCC16

**Enterprise Status Viewer**

Filter selection  
CPC = z10

Clear Go

**Property Viewer**

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Class...	34 33 CP

**TMCC16 CPU Utilization Statistics**

Update Every: When Changed

Graphical View: 1 Sec, 5 Sec, 10 Sec

Total CPU Utilization: 1%

Individual CPU Utilization

CPU Number	Type	Utilization
00	CP	2%
01	CP	1%
02	CP	1%
03	CP	0%

Paging: 0 Pages/Second

Update Close

Waiting for Update Event from BTS or User Action

BTS Online waveadm

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE



# The WAVE GUI (Dashboard Viewer – CPU Utilization)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Enterprise Status Viewer

Filter selection

CPC = z10

Clear Go

Enterprise Dashboard View

z/VM System Name

TMCC16

TMCC16 CPU Utilization Statistics

Update Every When Changed

Graphical View Textual View Virtual Machines Utilization

FCX100 CPU 2097 SER CB440 Interval 18:47:06 - 18:48:06 Remote Data

PROC	TYPE	%CPU	%CP	%EMU	%WT	%SYS	%SP	%SIC	%LOGLD	%PR	%ENT	Status or ded. User
P00	CP	2	0	1	98	0	0	93	2	0	100	Master
P01	CP	1	0	1	99	0	0	90	1	0	90	Alternate
P02	CP	1	0	0	86	0	0	88	1	13	0	Alternate
P03	CP	0	0	0	0	0	0	...	...	100	0	Parked

Total SSCH/RSCH 24/s Page rate .0/s Priv. instruct. 151/s  
 Virtual I/O rate 25/s XSTORE paging .0/s Diagnose instr. 127/s  
 Total rel. SHARE 250 Tot. abs SHARE 0%

Queue Statistics: Q0 Q1 Q2 Q3 User Status:

VMDBKs in queue	VMDBKs loading	Eligible VMDBKs	El. VMDBKs loading	Tot. WS (pages)	Reserved	85% elapsed time	Q0	Q1	Q2	Q3	# of logged on users	# of dialed users	# of active users	# of in-queue users	% in-Q users in PGWAIT	% in-Q users in IOWAIT	% elig. (resource wait)
0	0	0	0	0	0	2.508	0	1	3	0	41	0	24	4	0	0	0

Transactions Q-Disp trivial non-trv User Extremes:

Average users	Trans. per sec.	Av. time (sec)	UP trans. time	MP trans. time	System ITR (trans. per sec. tot. CPU)	Emul. ITR (trans. per sec. emul. CPU)	Max. CPU % CSLWAVE	Reserved	Max. IO/sec CSLWAVE	Max. PGS/s	Max. RESPG XCAT	Max. MDCIO	Max. XSTORE
.1	1.4	.076	.100	.115	300.2	405.4	1.3		10.0	.....	231810	.....	.....

Update Close

Waiting for Update Event from BTS or User Action

Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Ch...	24.73 GB

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

# The WAVE GUI (Dashboard Viewer – CPU Utilization)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

**Enterprise Status Viewer**

z/VM System Name

TMCC16

Filter selection

CPC = z10

Clear Go

**Property Viewer**

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Class...	24 73 CP

**TMCC16 CPU Utilization Statistics**

Update Every: When Changed

Graphical View Textual View Virtual Machines Utilization

Include IBM Service Machines

Virtual Machines Utilization - Interval Start : 18:47:06 End : 18:48:06

User Name	Share Type	Share Value	# Of CPUs	%CPU
CSLWAVE	RELATIVE	100	2	0%
OPMGRM1	RELATIVE	100	1	0%
OPMGRS1	RELATIVE	100	1	0%
OPMGRS2	RELATIVE	100	1	0%
PURIT	RELATIVE	100	1	0%
WAVEADM	RELATIVE	100	1	0%
WAVEWRKC	RELATIVE	100	1	0%
WAVEWRKL	RELATIVE	100	1	0%
WAVEWRKS	RELATIVE	100	1	0%
XCAT80	RELATIVE	100	2	0%
XYMON	RELATIVE	100	1	0%
ZHCP16	RELATIVE	100	1	0%
ZI TR20	RELATIVE	100	1	0%

User Detailed Information For User : CSLWAVE

CPU Utilization Summary

	Total %Util.	Supervisor %Util.	Emulated %Util
Summary	0%	0%	0%

Shared Details

Share Type : RELATIVE

Share : 100

Max Share Type: N/A

Max Share : N/A

Detailed CPU Utilization

#CPU	Total %Util.	Supervisor %Util.	Emulated %Util
00	0%	0%	0%
01	0%	0%	0%

Storage Details

Defined Storage : 4096MB

Storage < 2GB : 0 Pages

Storage > 2GB : 221334 Pages

Update Close

Waiting for Update Event from BTS or User Action

BTS Online waveadm

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Dashboard Viewer – Virtual to Real Ratio)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

### TMCC16 Virtual to Real Utilization Statistics

Graphical View | Textual View

Current Real and Virtual Memory Values

Type	Size	Ratio Display
Total Real Memory	8192M	8192
Total Virtual Memory	16712M	16712

Virtual to Real Ratio: **204%**

Virtual Memory Utilization for All Guests - Last Updated: 18:51:09 CES TUESDAY 08/20/13

Name	Type	Memory (MB)	VDisks (MB)	Total (MB)	% Used
CSLWAVE	CMS	4096	0	4096	24%
XCAT80	Linux	4096	0	4096	24%
ZHCP16	Linux	1024	0	1024	6%
ZLIN79	Linux	1024	0	1024	6%
PURIT	CMS	256	0	256	1%
XYMON	CMS	8	0	8	0%
WAVEWRKC	CSL-WAVE	32	0	32	0%
WAVEADM	CMS	32	0	32	0%
WAVEWRKL	CSL-WAVE	32	0	32	0%
OPMGRM1	CMS	64	0	64	0%
OPMGRS2	CMS	32	0	32	0%

Include IBM Service Machines

### Virtual Memory Usage Distribution (By Guest)

### Virtual Memory Usage Distribution (By Type)

Update Close

Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy ...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Ch...	34.73 GB

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Dashboard Viewer – Virtual to Real Ratio)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

TMCC16 Virtual to Real Utilization Statistics

Graphical View **Textual View**

Hardware Viewer Enterprise Viewer **Dashboard View**

**Enterprise Status Viewer**

Filter selection

CPC = z10 +

Clear Go

**Property Viewer**

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Class...	24.73 GB

```

TIME: TIME IS 18:51:09 CES TUESDAY 08/20/13
CONNECT= 01:08:20 VIRTCPU= 000:02.49
TOTCPU= 000:03.30

TOTAL REAL STORAGE: 8192M
TOTAL FRAMES: 7920M
TOTAL XSTORAGE: 4M
TOTAL VDISK: 0B
USERS START
ZHCP16 1024M NONCMS 0100
XYMON 8M CMS CMS
PERFSVM 128M CMS CMS
OPMGRS2 32M CMS CMS
OPMGRS1 32M CMS CMS
OPMGRM1 64M CMS CMS
XCAT 2048M NONCMS 000C
ZHCP 1024M NONCMS 000C
LOHCOST 768M NONCMS 000C
VSMEVSRV 128M CMS CMS
VSMREQIU 128M CMS CMS
VSMREQI6 128M CMS CMS
VSMREQIN 128M CMS CMS
OPERATNS 128M CMS 0190
DTCSMAPI 32M CMS CMS
PERSMAPI 128M CMS CMS
VSMWORK3 128M CMS CMS
VSMWORK2 128M CMS CMS
VSMWORK1 128M CMS CMS
VSMGUARD 128M CMS CMS
DIRMAINT 128M CMS CMS
FTPSEVSE 32M CMS CMS
TCP/IP 128M CMS CMS
DTCVSW2 32M CMS CMS
DTCVSW1 32M CMS CMS
VMSERVP 64M CMS 0190
    
```

Update Close

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (Dashboard Viewer – Page Space Utilization)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Update

TMCC16 Page Space Utilization Statistics

Graphical View | Textual View

Disk Usage

VOLSER	Real Device	Start Ext.	End Ext.	Total Pages	Pages in Use	High Page	Status	% Used
Z16P01	9502	1	3338	600840	102	114	Active	1%

Utilization

Summary

● Unusable Pages ● Usable Pages ● Used Pages

Update Close

Enterprise Status Viewer

Filter selection

CPC = z10

Clear Go

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Class...	34.73 GB

Pool Space Utilization

1%

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...

DE

# The WAVE GUI (Dashboard Viewer – Page Space Utilization)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Update

Hardware Viewer Enterprise Viewer Dashboard View

### Enterprise Status Viewer

Filter selection

CPC = z10

Clear Go

### Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Class...	34.73 GB

### TMCC16 Page Space Utilization Statistics

Graphical View Textual View

VOLID	RDEV	EXTENT START	EXTENT END	TOTAL PAGES	PAGES IN USE	HIGH PAGE	% USED
Z16P01	9502	1	3338	600840	102	114	1%
SUMMARY				600840	102		1%
USABLE				600840	102		1%

Update Close

Pool Space Utilization

1%

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...

DE

# The WAVE GUI (Dashboard Viewer – Spool Space)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

**TMCC16 Spool Space Utilization Statistics**

Graphical View | Textual View

Disk Usage

VOLSER	Real Device	Start Ext.	End Ext.	Total Pages	Pages in Use	High Page	Status	% Used
Z16501	9501	1	3338	600840	11633	150377	Active	1%

Utilization

**Summary**

● Unusable Pages ● Usable Pages ● Used Pages

Update Close

Enterprise Status Viewer

Filter selection

CPC = z10

Clear Go

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
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DASD Free St...	4.65 GB
DASD Ch...	34.73 GB

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV... DE

# The WAVE GUI (Dashboard Viewer – Spool Space)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

**TMCC16 Spool Space Utilization Statistics**

Graphical View **Textual View**

VOLID	RDEV	EXTENT START	EXTENT END	TOTAL PAGES	PAGES IN USE	HIGH PAGE	% USED
Z16S01	9501	1	3338	600840	11633	150377	1%
SUMMARY				600840	11633		1%
USABLE				600840	11633		1%

Update Close

Enterprise Status Viewer

Filter selection

CPC = z10

Clear Go

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Ch...	34.73 GB

Spool Space Utilization

1%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE



# The WAVE GUI (Log Viewer)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESRV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

CSL-WAVE Log Display: 359 records (Total log records 359)

File Actions

Save Log As...

User: \* Date/Time From: \* To: \*

System: \* Type

All  Information  Warning  Error  Severe

WAVESRV Time	User	System	Code	Type	Message
2013-08-20 19:04:57	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 19:02:29	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged off from tmcc-123-88(192.168.9.88).
2013-08-20 19:01:19	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 19:01:15		WAVE	WAVSEC...	E	Error logging-in WAVE user waveadm , user already logged on from tmcc-123-88(192.168.9.88).
2013-08-20 18:59:45	waveadm	WAVE	WAVREP...	I	Global WAVE report " zvm_users_2013_08_20 " created successfully (report type is: z/VM User Repo...
2013-08-20 18:20:51	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 18:20:45		WAVE	WAVSEC...	E	Error logging-in WAVE user waveadm , user already logged on from tmcc-123-88(192.168.9.88).
2013-08-20 18:13:31	waveadm	TMCC16	WAVGEN...	I	IAN for zVMDASDVolume Z6REL1 was updated successfully.
2013-08-20 18:13:21	waveadm	TMCC16	WAVGEN...	I	IAN for zVMDASDVolume Z6COM2 was updated successfully.
2013-08-20 18:13:10	waveadm	TMCC16	WAVGEN...	I	IAN for zVMDASDVolume Z16W02 was updated successfully.
2013-08-20 17:58:05	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 17:57:59		WAVE	WAVSEC...	E	Error logging-in WAVE user waveadm , user already logged on from tmcc-123-88(192.168.9.88).
2013-08-20 17:56:55	waveadm	WAVE	WAVWIN...	I	Update scheduled for All Aspects.
2013-08-20 17:55:59	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateConnectabl...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateSystemRes...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateSystemStat...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateLicense was...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateCPUNumber...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestCheckServiceMachi...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestSearchAPIUsers w...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateActiveUsers...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestSearchAPIUsers w...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestCheckServiceMachi...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateActiveUsers...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateConnectabl...

Waiting for user input

Refresh

Go Reset

Hide Filter Panel

Progress

100% 100% 100% 100% 100% 100% 100% 100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (Log Viewer – BTS Workunit Logs)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

CSL-WAVE BTS Manager (Last Update received on 2013-08-20 19:10:14.7, BTS connection queue size is 0)

BTS Statistics

General Information

BTS Version 3.2.0

General Information | Scheduling | **Internal BTS Requests statistics** | BTS Log

Type	Parameters	# of Runs (Stats)	# of Errors (Stats)	# of Runs (Saved)	# of Errors (Saved)	Last Run	Last Error	Last Reset
Update Resource Utilization for z/VM System	z/VM System: TMCC16	1238	476	1238	476	2013-08-...	2013-08-20 19...	2013-08-20 08...
Update Status for z/VM System	z/VM System: TMCC16	1237	26	1237	26	2013-08-...	2013-08-20 17...	2013-08-20 08...
Clean BTS Workunits		5	0	2	0	2013-08-...	No Errors Found	N/A
Update CSL-WAVE Server Status		5546	0	2565	0	2013-08-...	No Errors Found	N/A
Update CSL-WAVE User Status		93	0	44	0	2013-08-...	No Errors Found	N/A
Check License for z/VM CPC	CPC: z10	230	0	233	0	2013-08-...	No Errors Found	2013-08-19 17...
Update Guest status for z/VM System	z/VM System: TMCC16	1238	0	1238	0	2013-08-...	No Errors Found	2013-08-20 08...
Update Connectable Guests for z/VM System	z/VM System: TMCC16	1238	0	1238	0	2013-08-...	No Errors Found	2013-08-20 08...
Update License for z/VM System	z/VM System: TMCC16	120	0	120	0	2013-08-...	No Errors Found	2013-08-20 08...
Update CPU Count for z/VM System	z/VM System: TMCC16	120	0	120	0	2013-08-...	No Errors Found	2013-08-20 08...
Check CSL-WAVE Service Machine for z/VM System	z/VM System: TMCC16	826	0	826	0	2013-08-...	No Errors Found	2013-08-20 08...
Check TVP API Status for z/VM System	z/VM System: TMCC16	798	0	798	0	2013-08-...	No Errors Found	2013-08-20 08...
Update Guest Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-...	No Errors Found	2013-08-20 11...
Update Prototype Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-...	No Errors Found	2013-08-20 11...
Update Network Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-...	No Errors Found	2013-08-20 11...
Update Storage Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-...	No Errors Found	2013-08-20 11...

Legend

No Errors Reported Since Last Reset  Errors Reported  Temporarily Ignored  Permanently Ignored

Create New DASD Partition	waveadm	2013-08-20 17:04:40	2013-08-20 17:05:02	22 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 16:56:37	2013-08-20 16:56:37	0 seconds	Done	100%

BTS Online waveadm

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE

# The WAVE GUI (User Tasks – Show Changes Log)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Property Viewer

TMCC16 USER-LOCAL (TMCC16)

Property	Value
Name	USER-LOCAL
Modified By	WAVE Daemon Updater on 2013-08-28 ...
Create By	WAVE Daemon Updater on 2013-08-28 ...

Current System View - "TMCC16"

z/VM User Groups Network

ACS Log (0 currently in queue)

Objects changes

Change #	Object Type	Object ID	Change Type
0	z/VM Guest	ZLIN79 (TMCC16)	Update
1	z/VM System	TMCC16	Update
2	z/VM Guest	ZLIN79 (TMCC16)	Update
3	z/VM Guest	ZLIN79 (TMCC16)	Update
4	z/VM System	TMCC16	Update
5	z/VM Guest	ZLIN79 (TMCC16)	Update
6	z/VM System	TMCC16	Update
7	z/VM Guest	XYMON (TMCC16)	Update
8	z/VM Guest	ZLIN79 (TMCC16)	Update
9	z/VM Guest	XYMON (TMCC16)	Update
10	z/VM Guest	ZLIN79 (TMCC16)	Update
11	z/VM Guest	ZLIN79 (TMCC16)	Update
12	z/VM Guest	ZLIN79 (TMCC16)	Update
13	z/VM Guest	PURIT (TMCC16)	Update
14	z/VM Guest	ZLIN79 (TMCC16)	Update
15	Virtual Network Connection	Network connection (TMCC16.TCPIP to DEMOLAN) (TMCC16)	Update
16	Virtual Network Segment	DEMOLAN	Update
17	z/VM Guest	BACKUPVM (TMCC16)	Update
18	z/VM Guest	BACKUPVM (TMCC16)	Update
19	Virtual Network Connection	Network connection (TMCC16.TCPIP to DEMOLAN) (TMCC16)	Delete

Changes statistics

Object Type	Change Type	Count
zVMUser	Add	0
zVMUser	Delete	0
zVMUser	Update	14
VNS	Add	0
VNS	Delete	0
VNS	Update	1

Close

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator
Activate z/VM Guests	waveadm
Delete CSL-WAVE Managed Entity	waveadm
Delete CSL-WAVE Managed Entity	waveadm
Delete CSL-WAVE Managed Entity	waveadm
Update All z/VM Aspects	waveadm
Delete Device Pool	waveadm
Delete Device Pool	waveadm
Update All z/VM Aspects	waveadm

BTS Online waveadm

Start Command Prompt Launch CSL-WAVE v3.2... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Reporting)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Hide Filter Panel

**Manage Saved Reports**

File

- All Reports
- z/VM CPC Report
- z/VM System Report
- z/VM User Report
- z/VM GLAN/VSWITCH Report

Available Reports

Report Name	Created By	Created At	Last Modified By	Last Modifi...	Global	Locked	IAN
(Empty table body)							

Show Private Reports  Show Global Reports

Cancel

Free GB > [ ] +

Go Reset

Property Viewer

TMCC16

Property	
Name	TMCC16
IP Address	192.168.9
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Ch...	24.73 GB

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

BTS Online

# The WAVE GUI (Reporting)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

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**Manage Saved Reports**

File

- All Reports
- z/VM CPC Report
- z/VM System Report
- z/VM User Report **New z/VM User Report**
- z/VM GLAN/VSWITCH Report

Available Reports

Report Name	Created By	Created At	Last Modified By	Last Modifi...	Global	Locked	IAN
(Empty table)							

Show Private Reports  Show Global Reports

Cancel

Free GB > [ ] +

Go Reset

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TMCC16

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Name	TMCC16
IP Address	192.168.9...
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Total Virtual ...	4
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Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

BTS Online

# The WAVE GUI (Reporting)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-G...

CSL-WAVE Report Generator - z/VM User Report

File

Print... Save Save As...

Project: System: Distribution: Group:

z\* And \* - - - -

Status:  Active  Inactive

Type:  Linux Only

Generate

Report Results (7 Records Shown)

Name	z/VM Sy...	Group	Status	Project	Description	Distribut...	Function...	Prototype	HCP	ZIPL	CPUs	Created By	Created...	Modified...	Modified...
ZVMLXAPP	TMCC16	IBM-UTIL	Inactive			UNASSIG...	N/A		false	false	1	WAVE Da...	2013-08-...	WAVE Da...	2013-08-...
ZVMND	TMCC16	USER-LO...	Inactive			z/VM	N/A		false	false	2	WAVE Da...	2013-08-...	WAVE Da...	2013-08-...
ZHCP	TMCC16	IBM-UTIL	Active			UNASSIG...	N/A		false	false	2	WAVE Da...	2013-08-...	WAVE Da...	2013-08-...
ZVMLXTS	TMCC16	IBM-UTIL	Inactive			UNASSIG...	N/A		false	false	1	WAVE Da...	2013-08-...	WAVE Da...	2013-08-...
ZHCP16	TMCC16	USER-LO...	Active			SLES11-...	N/A		false	false	1	WAVE Da...	2013-08-...	WAVEInit	2013-08-...
ZVMMAPLX	TMCC16	IBM-UTIL	Inactive			UNASSIG...	N/A		false	false	1	WAVE Da...	2013-08-...	WAVE Da...	2013-08-...
ZLIN79	TMCC16	DEMO LI...	Active			SLES11-...	N/A		false	false	1	WAVE Da...	2013-08-...	WAVEInit	2013-08-...

Table Fields

Name  z/VM System  Group  Status  Project  Description  Distribution  Functionality

Prototype  HCP  ZIPL  CPUs  Created By  Created On  Modified By  Modified On

Filter Panel

Go Reset

TMCC16

ZVM63CA

Property Viewer

Property	
Name	TMCC16
IP Address	192.168.9
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Ch...	34.73 GB

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...

DE

# The WAVE GUI (Reporting)

xCAT Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

z/VM User Report - Print Preview

Report View

20-Aug-2013 07:02:49 Printed By: wavadm

## IBM-Germany

### CSL-WAVE - z/VM User Report

Name	z/VM System	Group	Status	Project	Description	Distribution	Functionality	Prototype	HCP	ZIPL	CPUs
Created By	Created On	Modified By	Modified On								
ZVMLXAPP	TMCC16	IBM-UTL	Inactive	-		UNASSIGNED	N/A	-	false	false	1
WAVE Database Updater	2013-08-20 11:57:24	WAVE Database Updater	2013-08-20 11:57:24								
ZVMND	TMCC16	USER-LOCAL	Inactive	-	z/VM	N/A	-	-	false	false	2
WAVE Database Updater	2013-08-20 11:57:24	WAVE Database Updater	2013-08-20 12:01:12								
ZHCP	TMCC16	IBM-UTL	Active	-		UNASSIGNED	N/A	-	false	false	2
WAVE Database Updater	2013-08-20 11:57:24	WAVE Database Updater	2013-08-20 11:57:24								
ZVMLXTS	TMCC16	IBM-UTL	Inactive	-		UNASSIGNED	N/A	-	false	false	1
WAVE Database Updater	2013-08-20 11:57:24	WAVE Database Updater	2013-08-20 11:57:24								
ZHCP16	TMCC16	USER-LOCAL	Active	-		SLES11-64b	N/A	-	false	false	1
WAVE Database Updater	2013-08-20 11:57:24	WAVE Database Updater	2013-08-20 17:16:07								
ZVMMAFLX	TMCC16	IBM-UTL	Inactive	-		UNASSIGNED	N/A	-	false	false	1
WAVE Database Updater	2013-08-20 11:57:24	WAVE Database Updater	2013-08-20 11:57:24								
ZLIN79	TMCC16	DEMO LINUX	Active	-		SLES11-64b	N/A	-	false	false	1
WAVE Database Updater	2013-08-20 13:50:33	WAVE Database Updater	2013-08-20 13:52:49								

1 / 1

Hardware Viewer Enterprise Hardware Viewer

Property Viewer

TMCC16

Property	
Name	TMCC16
IP Address	192.168.9
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB

CSL-WAVE Log BTS Work

Execute REXX on z/VM Obj

Update All z/VM Aspects

Delete z/VM Guests

Update All z/VM Aspects

Activate z/VM Guests

Deactivate z/VM Guests

Create New DASD Partition

Update Distribution to z/VM

Filter Panel

Generate

Filtered...

Go

Reset

Progress

100%

100%

100%

100%

100%

100%

100%

100%

100%

100%

BTS Online wavadm

Start

Launch CSL-WAVE v3.2....

CSL-WAVE 3.2.0 (WAV...

DE

# The WAVE GUI (Reporting)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Hide Filter Panel

**Manage Saved Reports**

File

- All Reports
- z/VM CPC Report
- z/VM System Report
- z/VM User Report
- z/VM GLAN/VSWITCH Report

Available Reports

Report Name	Created By	Created At	Last Modified By	Last Modified At	Global	Locked	IAN
zvm_users_2013_08_20	waveadm	2013-08-20...	waveadm	2013-08-20...	Yes		

Show Private Reports  Show Global Reports

Cancel

Free GB > [ ] +

Go Reset

Property Viewer

TMCC16

Property	Value
Name	TMCC16
IP Address	192.168.9...
Status	ACTIVE
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DASD Ch...	24.73 GB

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...



# The WAVE GUI (z/VM Administration)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CA

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:48:14 PM)

Metric	Value
Total Storage Utilization	1.0%
z/VM CPU Utilization	202.0%
Virtual to Real Ratio	1.0%
z/VM Page Space Utilization	1.0%
z/VM Spool Space Utilization	1.0%

Lock z/VM System  
Unlock z/VM system  
Read IAN  
Update IAN  
Delete IAN  
Remove System  
Activate Default Guests  
Purge spool  
Add Page  
Add Spool  
Shutdown System

Property Viewer

Property	Value
Name	New Directory for TMCC16
Modified By	WAVEinit on 2013-08-20 11:52:18
Create By	WAVEinit on 2013-08-20 11:52:18

Filters

CPCs  Systems  Guests  Prototypes  LANs  Ignore

DASD Groups  DASD Volumes  Real Devices  Global

Minimum Severity: 0

Reset

BTS Online waveadm

Start Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (z/VM Administration)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:48:14 PM)

Total Storage Utilization z/VM CPU Utilization Virtual to Real Ratio z/VM Page Space Utilization z/VM Spool Space Utilization

Spool Purger z/VM System TMCC16

General Information

System Name TMCC16

CPC Name z10

System Status active

Purge Spool Type

Run

Force

SOS

Run Options

Display Full Output

The following object require attention

Object Type	Object Name	Attention Required Details	User Severity

Waiting for user input

Filters

CPCs  Systems  Guests  Prototypes  LANs  Ignore

DASD Groups  DASD Volumes  Real Devices  Global

Minimum Severity: 0

Reset

Property Viewer

Property	Value
Name	New Directory for TMCC16
Modified By	WAVEinit on 2013-08-20 11:52:18
Create By	WAVEinit on 2013-08-20 11:52:18

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... CSL-WAVE 3.2.0 (WAV...

# The WAVE GUI (z/VM Administration)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:48:14 PM)

Total Storage Utilization z/VM CPU Utilization Virtual to Real Ratio z/VM Page Space Utilization z/VM Pool Space Utilization

SFPURGER Run Results

```

DMSYS2469I SFPURGER OPTIONS file processed ...
DMSYS2452I SFPURGER starting at 19:49:27 on 20 Aug 2013.
DMSYS2453I Running in FORCE mode - RUN13232.
DMSYS2470I Using SFPURGER MODULE with SFPURGER CONTROL file.
DMSYS2456I Erasing old output files till 2013229.

DMSYS2496I Cont
DMSYS2459I Exam
DMSYS2462I Spoc
DMSYS2482I Exec
DMSYS2482I Exec
DMSYS2482I Executing: CP CHANGE DATAMOVE PRT 0145 HOLD
DMSYS2482I Executing: CP CHANGE DIRMAINT PRT 1549 HOLD
DMSYS2482I Executing: CP CHANGE DIRMAINT PRT 1645 HOLD
DMSYS2482I Executing: CP CHANGE DIRMAINT PRT 1649 HOLD
DMSYS2482I Executing: CP CHANGE DIRMAINT PRT 1653 HOLD
    
```

Spool Purger

Finished running spool purger, rc= 0

OK

Close

The following

Object Ty

Filters

CPCs  Systems  Guests  Prototypes  LANs  Ignore

DASD Groups  DASD Volumes  Real Devices  Global

Minimum Severity: 0

Reset

Property Viewer

Property	Value
Name	New Directory for TMCC16
Modified By	WAVEinit on 2013-08-20 11:52:18
Create By	WAVEinit on 2013-08-20 11:52:18

z/VM Page Space Utilization: 1.0%

z/VM Pool Space Utilization: 1.0%

Start | Launch CSL-WAVE v3.2.... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

# The WAVE GUI (z/VM Administration)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status

Total Storage Utilization z/VM CPU Utilization Virtual to Real Ratio z/VM Page Space Utilization z/VM Pool Space Utilization

Shutdown z/VM System TMCC16

General Information

System Name TMCC16

CPC Name z10

System Status active

Shutdown options

Within (Sec) 65535

Re-IPL The System after shutdown

Cancel Shutdown

The following object require attention

Object Type	Object Name	Attention Required Details	User Severity
Waiting for user input			

Filters

CPCs  Systems  Guests  Prototypes  LANs  Ignore

DASD Groups  DASD Volumes  Real Devices  Global

Minimum Severity: 0

Reset

Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	3
Total Prototy...	2
Total Volumes	22
Total Volume ...	2
DASD Free St...	4.65 GB

Start

Launch CSL-WAVE v3.2....

CSL-WAVE 3.2.0 (WAV...

BTS Online waveadm

DE

# The WAVE GUI (Administration – Device Pools)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

**Enterprise Dashboard View**

Enterprise Status Viewer

Filter selection  
CPC = z10 +

z/VM System Name CPU Utilization Virtual to Real Ratio Page Space Utilization Spool Space Utilization

z/VM CPU Utilization Virtual to Real Ratio z/VM Page Space Utilization z/VM Spool Space Utilization

3.0%

**Device Pool Manager**

Existing Device Pools

Name	Type	Description	Devices	Free Devices (Unique)	IAN
New OSA Device Pool for TMCC16	OSA	New Device Pool for OSA devices for z/VM System T...	64	52	
New FCP Device Pool for TMCC16	FCP	New Device Pool for FCP devices for z/VM System TM...	50	50	
New DASD Device Pool for TMCC16	DASD	New Device Pool for DASD devices for z/VM System T...	26	3	
New HIPER Device Pool for TMCC16	HIPER	New Device Pool for HIPER devices for z/VM System ...	0	0	

Create New Device Pool Close

Clear Go

**Property Viewer**

SLVOL FR902F

Property Value

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Device Pools)

**Create New Device Pool**

General Information

Device Pool Name:  Created By:

Type:  Modified By:

Descriptive | Devices | Connected CSL-WAVE Resources

Descriptive Information

Default Virtual Device:

Description:

Cancel Create

**Device Pool Manager**

Existing Device Pools

Name	Type	Description	Devices	Free Devices (Unique)	IAN
New OSA Device Pool for TMCC16	OSA	New Device Pool for OSA devices for z/VM System T...	64	52	
New FCP Device Pool for TMCC16	FCP	New Device Pool for FCP devices for z/VM System TM...	50	50	
New DASD Device Pool for TMCC16	DASD	New Device Pool for DASD devices for z/VM System T...	26	3	
New HIPER Device Pool for TMCC16	HIPER	New Device Pool for HIPER devices for z/VM System ...	0	0	
DEMOLAN	OSA		0	0	

Create New Device Pool Close

# The WAVE GUI (Administration – Device Pools)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

**Enterprise Dashboard View**

**Enterprise Status Viewer**

Filter selection  
CPC = z10 +

z/VM System Name CPU Utilization Virtual to Real Ratio Page Space Utilization Spool Space Utilization

z/VM CPU Utilization Virtual to Real Ratio z/VM Page Space Utilization z/VM Spool Space Utilization

**Device Pool Manager**

Existing Device Pools

Name	Type	Description	Devices	Free Devices (Unique)	IAN
New OSA Device Pool for TMCC16	OSA	New Device Pool for OSA devices for z/VM System T...	64	52	
New FCP Device Pool for TMCC16	FCP	New Device Pool for FCP devices for z/VM System TM...	50	50	
New DASD Device Pool for TMCC16	DASD	New Device Pool for DASD devices for z/VM System T...	26	3	
New HIPER Device Pool for TMCC16	HIPER	New Device Pool for HIPER devices for z/VM System ...	0	0	
DEMOLAN	OSA		0	0	

Display Details  
Update Details  
Update Details

Create New Device Pool Close

Property Viewer  
SLVOL | FR902F

Property Value

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Device Pools)

**Update Device Pool "DEMOLAN"**

General Information

Device Pool Name: DEMOLAN Created By: WAVEinit on 2013-08-23 12:00:28

Type: OSA Modified By: WAVEinit on 2013-08-23 12:00:28

Descriptive | Devices | Connected CSL-WAVE Resources

Descriptive Information

Default Virtual Device: EA00

Description: OSA Pool for Demo-LAN z10, z196, zEC12

Waiting for user input

Descriptive | Devices | Connected CSL-WAVE Resources

Associated z/VM Systems

Real Devices

**Associate z/vm System with Device Pool**

z/VM System selection

Select z/VM System to associate: TMCC16

Cancel Go

Associate System Cancel

Waiting for user input



# The WAVE GUI (Administration – Device Pools)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View **Enterprise Dashboard View**

**Enterprise Status Viewer**

Filter selection: CPC = z10

z/VM System Name	CPU Utilization	Virtual to Real Ratio	Page Space Utilization	Spool Space Utilization
	<b>z/VM CPU Utilization</b>	<b>Virtual to Real Ratio</b>	<b>z/VM Page Space Utilization</b>	<b>z/VM Spool Space Utilization</b>

**Update Device Pool "New OSA Device Pool for TMCC16"**

General Information

Device Pool Name: New OSA Device Pool for TMCC16 Created By: WAVEinit on 2013-08-19 18:13:17

Type: OSA Modified By: WAVEinit on 2013-08-19 18:13:17

Descriptive Devices Connected CSL-WAVE Resources

Associated z/VM Systems

System Name
TMCC16

Real Devices

Address	Online Status	Dedicate Status	Details	...	Locked	IAN
EB17	ONLINE	FREE				
EB18	ONLINE	FREE				
EB19	ONLINE	FREE				
EB1A	ONLINE	FREE				
EB1B	ONLINE	FREE				
EB1C	ONLINE	FREE				
EB1D	ONLINE	FREE				
EB1E	ONLINE	FREE				
EB1F	ONLINE	FREE				

Transfer to ► DEMOLAN

Associate System Cancel

Waiting for user input

(Unique)	IAN

Close

3.0%

Property Viewer

SLVOL FR902F

Property	Value

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE | waveadm

BTS Online

# The WAVE GUI (Administration – Device Pools)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

**Enterprise Dashboard View**

Enterprise Status Viewer

Filter selection: CPC = z10

z/VM System Name	CPU Utilization	Virtual to Real Ratio	Page Space Utilization	Spool Space Utilization
z/VM CPU Utilization	Virtual to Real Ratio	z/VM Page Space Utilization	z/VM Spool Space Utilization	3.0%

**Device Pool Manager**

Existing Device Pools

Name	Type	Description	Devices	Free Devices (Unique)	IAN
DEMOSAN	FCP		50	50	
DEMOLAN	OSA		64	52	
DEMODISK	DASD		26	3	

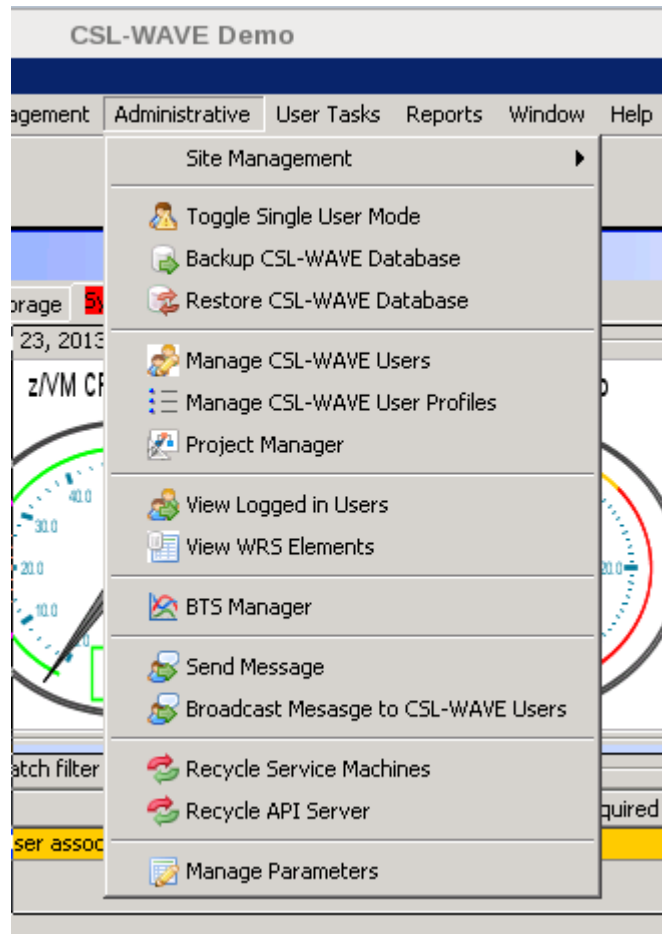
Property Viewer: 5LVOL | FR902F

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE | waveadm | BTS Online

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## The WAVE GUI (Administration – FCP Administration – to be done ...)

# The WAVE GUI (Administration)



# The WAVE GUI (Administration – Backup CSL-WAVE Repository)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z10

TMCC16

ZVM63CAT

**CSL-WAVE Database Backup**

CSL-WAVE Database was successfully backed up into backup file /usr/wave/DBBackup/CSL-WAVE-DB-Backup-Fri-Aug-23-12-42-48-CEST-2013

OK

Property Viewer

TMCC16

Property Value

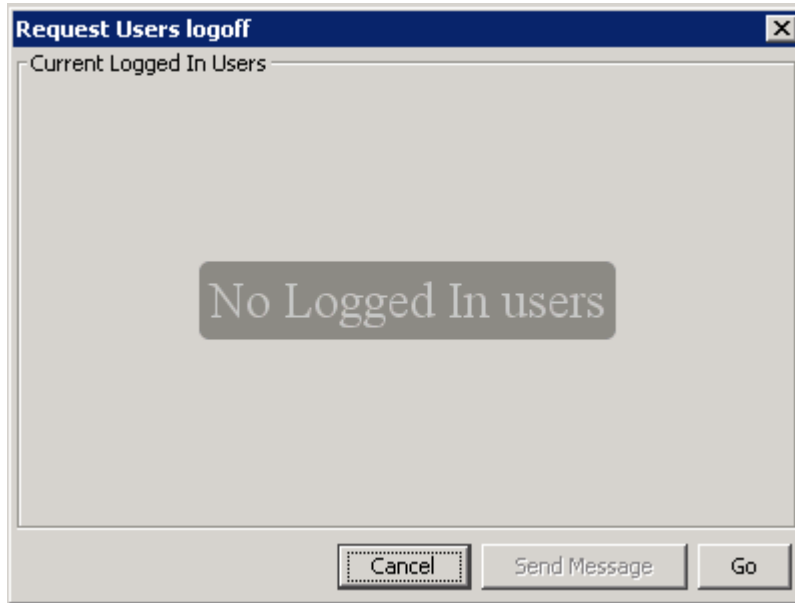
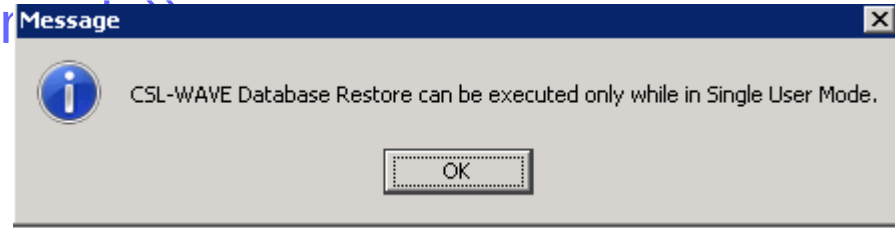
CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Toggle Single User Mode (maintenance



# The WAVE GUI (Administration – Restore Backup)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) Single User Mode!!!

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Restore the CSL-WAVE Database

Specify Parameters

Full path of CSL-WAVE database backup file: /usr/wave/DBBackup/C

Go

Waiting for database...

Tasks Exist

Property Viewer

TMCC16

Property Value

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Offline waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Restore Backup)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

CSL-WAVE Database Restore

CSL-WAVE Database was successfully restored from file /usr/wave/DBBackup/CSL-WAVE-DB-Backup-Fri-Aug-23-12-42-48-CEST-2013

The application will now shutdown.

OK

Property Viewer

TMCC16

Property Value

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE



# The WAVE GUI (Administration – Recycle CSL-WAVE Service Machines)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

No Session Tasks Exist

Recycle CSL-WAVE Service Machines

Waiting for Service Machines to load...

Property Viewer

TMCC16

Property Value

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Recycle API Servers) - don't do it!!!

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage

z/VM System Status (Last updated on Fri, Aug 23, 2013)

Total Storage Utilization

z/VM Page Space Utilization

z/VM Pool Space Utilization

1.0%

3.0%

The following object require attention: (1/6 match filter)

Object Type	Object Name	Details	User Severity
zVMPrototype	ZLIN79	No z/VM User assoc	50

Recycle API Server

Filters

CPCs  Systems  Guests  Prototypes  LANs  Ignore

DASD Groups  DASD Volumes  Real Devices  Global

Minimum Severity: 0

Reset

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Recycle API Servers) - don't do it!!!

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Select A System from the Hardware View panel on the left

Property Viewer

No Object Selected

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Recycle API Servers) - back again!!!

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Property Viewer

TMCC16

Property Value

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

z/VM System Status (Last updated on Fri, Aug 23, 2013 at 12:58:31 PM)

Total Storage Utilization

z/VM CPU Utilization

Virtual to Real Ratio

z/VM Page Space Utilization

z/VM Pool Space Utilization

The following object require attention: (1/6 match filter and current z/VM System selection)

Object Type	Object Name	Attention Required Details	User Severity
zVMPrototype	ZLIN79	No z/VM User associated	50

Filters

CPCs  
  Systems  
  Guests  
  Prototypes  
  LANs  
 Minimum Severity:

DASD Groups  
  DASD Volumes  
  Real Devices  
  Global  
  Ignore  

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start | Launch CSL-WAVE v3.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAY... | DE

# The WAVE GUI (Administration – Unmanage a z/VM System)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com)

File Auto Detect User-Group Management Network Management

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM U...  
z/VM S...  
z/VM U...  
z/VM S...

z10

TMCC16

ZVM63CAT

Property Viewer

TMCC16

Property Value

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention

Workunit Name

Update All z/VM Aspects  
Update z/VM Storage Aspect  
Delete Device Pool  
Disassociate z/VM System from Device Pool  
Transfer z/VM Real Devices  
Delete Device Pool  
Delete Device Pool  
Disassociate z/VM System from Device Pool

**Update z/VM System TMCC16**

General Information

System Name TMCC16  
CPC Name z10  
System Status active

Version Information

z/VM Version VM63  
API Port no 44444  
z/VM Service Level 0  
z/VM Architecture 64  
z/VM name TMCC16

Site Information

System Type Other  
Description Demo zVM z10 LPC  
3270 connection Port 23  
 Use TLS/SSL tunnel for 3270  
Associate Directory New Directory for TMCC16

CPC Information

No. of CPUs 20  
No. of Licensed CPUs 20  
CPU Serial 07B440

CSL-WAVE Service Machine Information

Service Machine IP 192.168.9.16  
 Service Machine Port 1952  
Short Service Machine WAVEWRKS  
Long Service Machine WAVEWRKL  
CSC Service Machine WAVEWRKC  
Performance Machine PERFSVM

Directory Manager Options

Directory Manager DIRMAINT  
API User Name WAVEADM  
API User Password \*\*\*\*\*  
DASD Dummy Region Name DUMMY  
DASD Dummy Region VOLID CSLVOL

Update

Created By: waveadm on 2013-08-20 8:30  
Last Modified By: WAVEinit on 2013-08-20 8:30

Cancel IAN Update

VM Page Space Utilization 1.0%

z/VM Pool Space Utilization 3.0%

	User Severity
	50

Status	Progress
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Unmanage a z/VM System)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM6

**System Name:** TMCC16  
**Status:** suspend  
**Description:** Demo zVM z10 LPC  
**System Type:** Other  
**Error:** Virtual to Real Ratio critical (232%)  
**Warning:** Some z/VM Objects require attention

No Object Selected

Select A System from the Hardware View panel on the left

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2.... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (Administration – Unmanage a z/VM System)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CA1

Display Details

Update Details

Reconnect

Disconnect

More Actions

- Lock z/VM System
- Unlock z/VM system
- Read IAN
- Update IAN
- Delete IAN
- Remove System**
- Activate Default Guest
- Purge spool
- Add Page
- Add Spool
- Shutdown System

Property Viewer

TMCC16 New Directory for TMCC16

Property	Value

CSL-WAVE Log BTS Work Units BTS System COR

Workunit Name	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

System is suspended, No data may be displayed

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY...

# The WAVE GUI (Administration – Unmanage a z/VM System)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

TMCC16

ZVM63CAT

Property Viewer

TMCC16 New Directory for TMCC16

Property Value

**Remove z/VM system "TMCC16" from CSL-WAVE management**

This will completely erase the selected z/VM System (TMCC16) from the CSL-WAVE Knowledgebase. All relevant data including Guests, Virtual Networks, Prototypes and Storage will be permanently erased from the Knowledgebase.

NOTE: In no way will this action delete actual z/VM entries. Only the CSL-WAVE meta-data will be erased.

Are you sure you want to continue?

Yes No

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE



# The WAVE GUI (Administration – Unmanage a z/VM System)

CSL-WAVE Demo

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Select A System from the Hardware View panel on the left

z/VM System TMCC16 deleted successfully.

OK

Property Viewer

TMCC16 New Directory for TMCC16

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAY... DE

# The WAVE GUI (reconnect)

The screenshot shows a Firefox browser window titled "CSL-WAVE Demo" at the URL "cslwave.z0plex.com". The main page features a blue background with a large image of a wave and the text "By CSL International". A login form is centered on the page, containing the following fields and options:

- User Name:
- Password:
- Forgot Password:
- Authentication options:
  - AD Authentication using domain:
  - DB Authentication
  - Force Login
- Advanced Options:
- Buttons: Cancel, Log In

An error dialog box titled "Force Login ENQ error" is overlaid on the login form. It contains the following text:

CSL-WAVE user waveadm is already logged in from tmcc-123-88(192.168.9.88).  
Please login using other credentials or select the force login check box to force logoff the other instance.

Buttons: OK

Below the login form, there are three large blue buttons with white text:

- Launch z/VM API Testing Application
- View CSL-WAVE User Guide
- View CSL-WAVE Administration Guide

The Windows taskbar at the bottom shows the Start button, taskbar icons for "Launch CSL-WAVE v3.2....", "zlin79.z0plex.com - PuTTY", "A - zVM\_tmcc16.W5", and "CSL-WAVE 3.2.0 Login". The system tray shows "DE" and system icons.

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# **z/VM Guest management with CSL-WAVE**

## **Live Demonstration**

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30.09.13

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## Storyboard

The demo runs in a Windows remote-desktop session. This desktop assists you to connect to the live system environment, start the live demo and run the different use cases.

The demo doesn't start from "scratch" - when it is started, there is already available a "managed" z/VM system - called TMCC16 - which has some Linux guests as "managed" objects - called ZLIN7#:

- ZLIN79 is enabled to be fully managed by CSL-WAVE.

The initial setup of a CSL-WAVE installation as well as the "discovery" of a managed z/VM environment is documented via detailed screen captures in the provided PDF document.

### **How to access a managed z Linux guest (like ZLIN79):**

- either via a putty SSH client or 3270 session
- from outside or inside the CSL-WAVE Generalized User Interface (GUI).
- CSL-WAVE GUI user id is WAVEADM with password CSLINT
- same user id/password can be used to access z/VM in 3270 session
- You can log-on to user id WAVEADM or log-on to the Linux guest with LOGONBY (for example LOGON ZLIN71 BY WAVEADM).
- The root password in both Linux guests is also cslint.

### **How to create new Linux guests:**

- Created from "scratch" - please use naming conventions for guest-names, host-names and ip-addresses as follows:
  - ZLIN7#, zlin7#.z0plex.com, 192.168.7.7# (where #=1,2,3,4,5,6,7)After the creation you can start the Bare-Metal-Installation with a predefined repository.
- Created via cloning - clones can be taken a prototype called ZLIN79
  - you only need to over-type the fields with the names and addresses before starting the cloning.

For all new guests please use the predefined disk pool LINUX. Clones out of a prototype will be auto-configured during first boot.  
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## Storyboard – 1

- **WAVE graphical user interface**
  - Workspace
  - Tabs
  - Context sensitiv interaction
  - User Manager
  - Project Manager
  - Managed Parameters
  - Site Management
  - BMI – repository management
- **Hardware Viewer**
  - Add CPC
  - Add Entity
  - Add z/VM
  - Discovery (auto detection for a “managed” z/VM) (available as screenshots)
  - Using z/VM user groups
    - Group: USER LOCAL
    - Switch views
    - Filters
    - Search guest
    - Create group
- **Guest Details** (Hardware Viewer)
  - Select guest zlin71
  - Show status (w or w/o agent)
  - Options
  - Guest Start/Stop

## Storyboard – 2

- **Guest Details** (Hardware Viewer)
  - Create new:
    - Create VM user
    - Install Linux
  - Clone
    - based on existing guest definition
    - based on prototype
  - (Add new filesystem to Linux guest)
  - Show status (w or w/o agent)
  - Options
  - Guest Start/Stop
- **Automation** (scripting)
  - Linux (Shell/Bash)
    - Execute Bash script
    - User Script Manager
  - z/VM (REXX)
    - Execute REXX scripts
    - Edit and maintain REXX scripts via z/VM WAVEWRKS server
- **Network**
  - System view
  - Show Network (run through all Tabs)
  - (Add new network to z/VM and Linux guest)
- **(Enterprise Viewer)**  
30.09.13 point to LGR demo – here we only have one managed system)



## Storyboard – 3

- **Dashboard Viewer** (run through all Tabs)
  - CPU utilization
    - Graphical View
    - Textual View
    - VM Utilization
  - Virtual to Real Ratio
- **Reporting**
  - Printing
- (Accounting)
- **General z/VM administration tasks**
  - Manage Page space
  - Manage Pool space
  - Manage DISK pools
  - Recycle service machines (SMAPI or WAVE workers)
  - Shutdown and re-IPL z/VM
  - disconnect/reconnect from management
  - Refresh data (user, network, disk...)
- (Backup / Restore of CSL repository database)
- Un-manage a z/VM system, a CPC

30.09.13

Let's start the demo ...

The following screenshots don't cover all the CSL-WAVE functionality but at least some ...

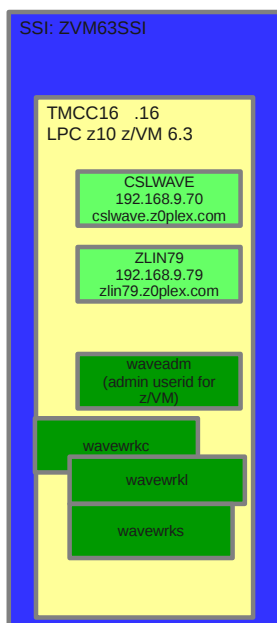
30.09.13

---

## Demo Credentials

- WAVE and z/VM: waveadm / cslint
- Use “logon by” to reach the Linux guests

## Demo Infrastructure



CSL installed can discover and manage all

Managing/Provisioning of linux guests  
ZLIN71, ZLIN72, ZLIN73--- ZLIN79

Subnet 192.168.9.0/255.255.255.0  
Diskpool LINUX

Guestnames: ZLIN7# (#=1,2,3,...,9)  
IP addresses : 192.168.9.7# (#=1,2,3,...,9)  
Hostnames: zlin7#.z0plex.com (#=1,2,3,...,9)

30.09.13

## The WAVE Installation

```

login as: root
Using keyboard-interactive authentication.
Password:
Last login: Fri Aug 16 22:09:00 2013 from 192.168.9.88
cslwave:~ # cd /install
cslwave:/install # rpm -i CSL-WAVE-3.10-SLES11.s390x.rpm
ibm java detected.
Initializing DB...
Shutting down httpd2 (waiting for all children to terminate)      done
Shutting down service MySQL                                     done
starting MySQL...
Starting service MySQL                                          done
Creating and populating DB Tables...
Creating DB User user...
Setting password for user...
Aging information not changed.
Aging information changed.
Adding CSL-WAVE user to sudoers...
Setting up priveleges...
Installing and configuring default apache2 web server...
Establishing links for boot...
inserv: Service network is missed in the runlevels 4 6 to use service apache
inserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
inserv: Service network is missed in the runlevels 4 6 to use service apache
inserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
inserv: Service network is missed in the runlevels 4 6 to use service apache
inserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
inserv: Service network is missed in the runlevels 4 6 to use service apache
inserv: Service portmap is missed in the runlevels 4 6 to use service nfsserver
Changing IP parameter in jnlp file to 192.168.9.70...
Changing ownership of files...
Creating log directory...
Starting applications...
Starting httpd2 (prefork)                                       done

```

CSL-WAVE server code installation is done by installing the provided RPM.

In our case, we first install the v3.10 RPM in a s390x SLES11 server

and later upgrade towards newer version v3.20.

Prerequisites for the CSL-WAVE server installation:

- Apache, MySql, nfsserver and JAVA SE Version 6 must be installed - further details are in the CSL-WAVE v3.2.0 Administration and Customization, page 94ff

Installation phases:

-Phase I

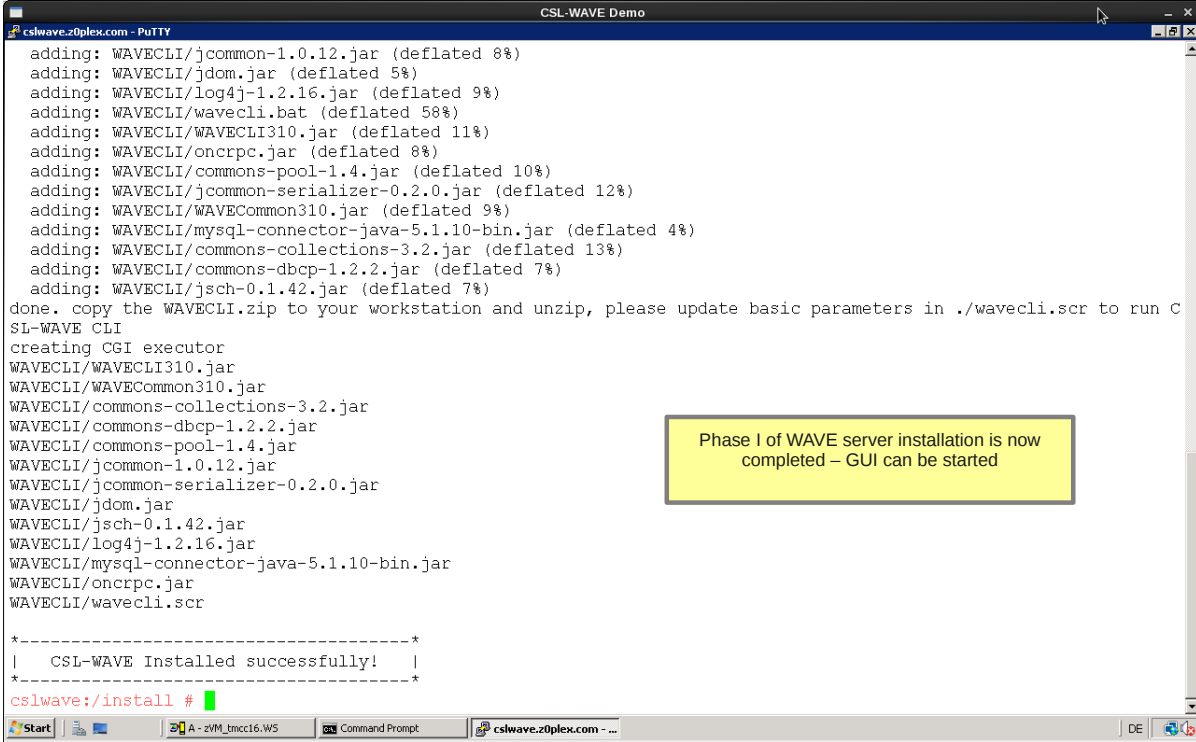
- WAVESRV installation (CSL-WAVE server is being installed)

-Phase II

- Establish access to the GUI client
- Define an initial user
- License CPCs and z/VM systems.

Further details follow on next pages.

## The WAVE Installation - (cont.)



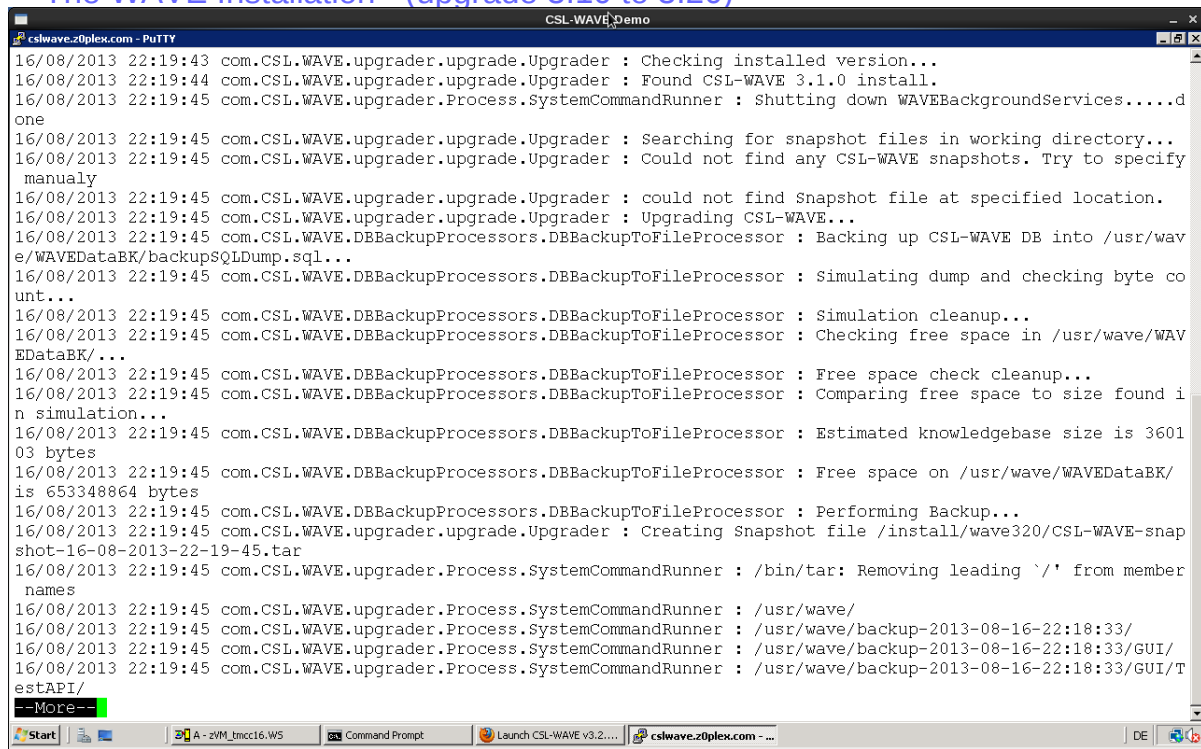
```
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
adding: WAVECLI/jcommon-1.0.12.jar (deflated 8%)
adding: WAVECLI/jdom.jar (deflated 5%)
adding: WAVECLI/log4j-1.2.16.jar (deflated 9%)
adding: WAVECLI/wavecli.bat (deflated 58%)
adding: WAVECLI/WAVECLI310.jar (deflated 11%)
adding: WAVECLI/oncrpc.jar (deflated 8%)
adding: WAVECLI/commons-pool-1.4.jar (deflated 10%)
adding: WAVECLI/jcommon-serializer-0.2.0.jar (deflated 12%)
adding: WAVECLI/WAVECommon310.jar (deflated 9%)
adding: WAVECLI/mysql-connector-java-5.1.10-bin.jar (deflated 4%)
adding: WAVECLI/commons-collections-3.2.jar (deflated 13%)
adding: WAVECLI/commons-dbc-1.2.2.jar (deflated 7%)
adding: WAVECLI/jsch-0.1.42.jar (deflated 7%)
done. copy the WAVECLI.zip to your workstation and unzip, please update basic parameters in ./wavecli.scr to run C
SL-WAVE CLI
creating CGI executor
WAVECLI/WAVECLI310.jar
WAVECLI/WAVECommon310.jar
WAVECLI/commons-collections-3.2.jar
WAVECLI/commons-dbc-1.2.2.jar
WAVECLI/commons-pool-1.4.jar
WAVECLI/jcommon-1.0.12.jar
WAVECLI/jcommon-serializer-0.2.0.jar
WAVECLI/jdom.jar
WAVECLI/jsch-0.1.42.jar
WAVECLI/log4j-1.2.16.jar
WAVECLI/mysql-connector-java-5.1.10-bin.jar
WAVECLI/oncrpc.jar
WAVECLI/wavecli.scr

*-----*
|  CSL-WAVE Installed successfully!  |
*-----*
cslwave:/install #
```

Phase I of WAVE server installation is now completed – GUI can be started

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - ... | DE |

## The WAVE Installation - (upgrade 3.10 to 3.20)



```
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
16/08/2013 22:19:43 com.CSL.WAVE.upgrader.upgrade.Upgrader : Checking installed version...
16/08/2013 22:19:44 com.CSL.WAVE.upgrader.upgrade.Upgrader : Found CSL-WAVE 3.1.0 install.
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : Shutting down WAVEBackgroundServices.....done
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Searching for snapshot files in working directory...
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Could not find any CSL-WAVE snapshots. Try to specify manually
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : could not find Snapshot file at specified location.
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Upgrading CSL-WAVE...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Backing up CSL-WAVE DB into /usr/wave/WAVEDataBK/backupSQLDump.sql...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Simulating dump and checking byte count...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Simulation cleanup...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Checking free space in /usr/wave/WAVEDataBK/...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Free space check cleanup...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Comparing free space to size found in simulation...
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Estimated knowledgebase size is 360103 bytes
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Free space on /usr/wave/WAVEDataBK/ is 653348864 bytes
16/08/2013 22:19:45 com.CSL.WAVE.DBBackupProcessors.DBBackupToFileProcessor : Performing Backup...
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.upgrade.Upgrader : Creating Snapshot file /install/wave320/CSL-WAVE-snapshot-16-08-2013-22-19-45.tar
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /bin/tar: Removing leading '/' from member names
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/backup-2013-08-16-22:18:33/
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/backup-2013-08-16-22:18:33/GUI/
16/08/2013 22:19:45 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : /usr/wave/backup-2013-08-16-22:18:33/GUI/TestAPI/
--More--
```

Upgrade of CSL-WAVE v3.10 towards v3.20 is started with the `./upgrade.sh` script delivered part of the support package.

This will backup the existing CSL-WAVE repository and upgrade everything, including existing managed z/VM systems.

## The WAVE Installation - (upgrade 3.10 to 3.20 cont.)

```

16/08/2013 22:20:54 SQL : Executing SQL: SELECT t1.Message_ID,t1.CALL_ID,t2.Message as 'Short_Message',t3.Message
as 'Detailed_Message' FROM WAVE_External_Call_Messages AS t1, WAVE_External_Resource_Messages_Short_US AS t2, WAV
E_External_Resource_Messages_Detailed_US AS t3 WHERE (Class_Name = ? )&& (CALL_ID = ? || CALL_ID = ? ) && t1.RC =
? && t1.RS = ? && (t1.Short_Message = t2.Message_Idx) && (t1.Detailed_Message = t3.Message_Idx);
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLUpgrade : Committing results...
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : DB URL is: 127.0.0.1, Using SSH tunneling: false
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : Attempting to connect to DB: jdbc:mysql://127.0.0.1/WA
VEOLD?useJvmCharsetConverters=true&autoReconnect=true&noDatetimeStringSync=true
16/08/2013 22:20:54 SQL : Executing SQL: SELECT WAVE_User_Name,WAVE_User_Password,WAVE_User_Type,WAVE_User_Status,
WAVE_User_Description,WAVE_User_Animation,WAVE_User_Create_User,WAVE_User_Create_TimeStamp,WAVE_User_Update_User,W
AVE_User_Update_TimeStamp,WAVE_User_Question,WAVE_User_Answer,WAVE_User_Locker,WAVE_User_Ian,WAVE_User_Is_Change_P
ass,WAVE_User_Last_Login FROM WAVE_User_Table;
16/08/2013 22:20:54 SQL : Executing SQL: SELECT t1.Message_ID,t1.CALL_ID,t2.Message as 'Short_Message',t3.Message
as 'Detailed_Message' FROM WAVE_External_Call_Messages AS t1, WAVE_External_Resource_Messages_Short_US AS t2, WAV
E_External_Resource_Messages_Detailed_US AS t3 WHERE (Class_Name = ? )&& (CALL_ID = ? || CALL_ID = ? ) && t1.RC =
? && t1.RS = ? && (t1.Short_Message = t2.Message_Idx) && (t1.Detailed_Message = t3.Message_Idx);
No Message could be found for class connectionToSQLOLD, call ID getAllWaveUsersDetails, RC 0, S 0
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Restoring data...(3/4)
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : DB URL is: 127.0.0.1, Using SSH tunneling: false
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Restoring data...(4/4)
16/08/2013 22:20:54 com.CSL.WAVE.DB.SQL.connectionToSQLOLD : DB URL is: 127.0.0.1, Using SSH tunneling: false
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Restoring scripts...
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : usr/wave/scripts/
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Old knowledgebase data cleanup...
16/08/2013 22:20:54 SQL : Executing SQL: DROP DATABASE WAVEOLD
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Updating CSL-WAVE service machine...
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Updating CSL-WAVE service machines.
16/08/2013 22:20:54 com.CSL.WAVE.upgrader.upgrade.Upgrader : Enter z/VM IP address ( enter "end" to exit ):
end
16/08/2013 22:20:57 com.CSL.WAVE.upgrader.upgrade.Upgrader : Starting BTS...
16/08/2013 22:20:57 com.CSL.WAVE.upgrader.Process.SystemCommandRunner : Starting WAVEBackgroundServices.....done
16/08/2013 22:20:57 com.CSL.WAVE.upgrader.upgrade.Upgrader : Upgrade Complete.
cslwave:/install/wave320 #

```

After successful upgrade towards v3.20, the CSL-Wave GUI can be started.

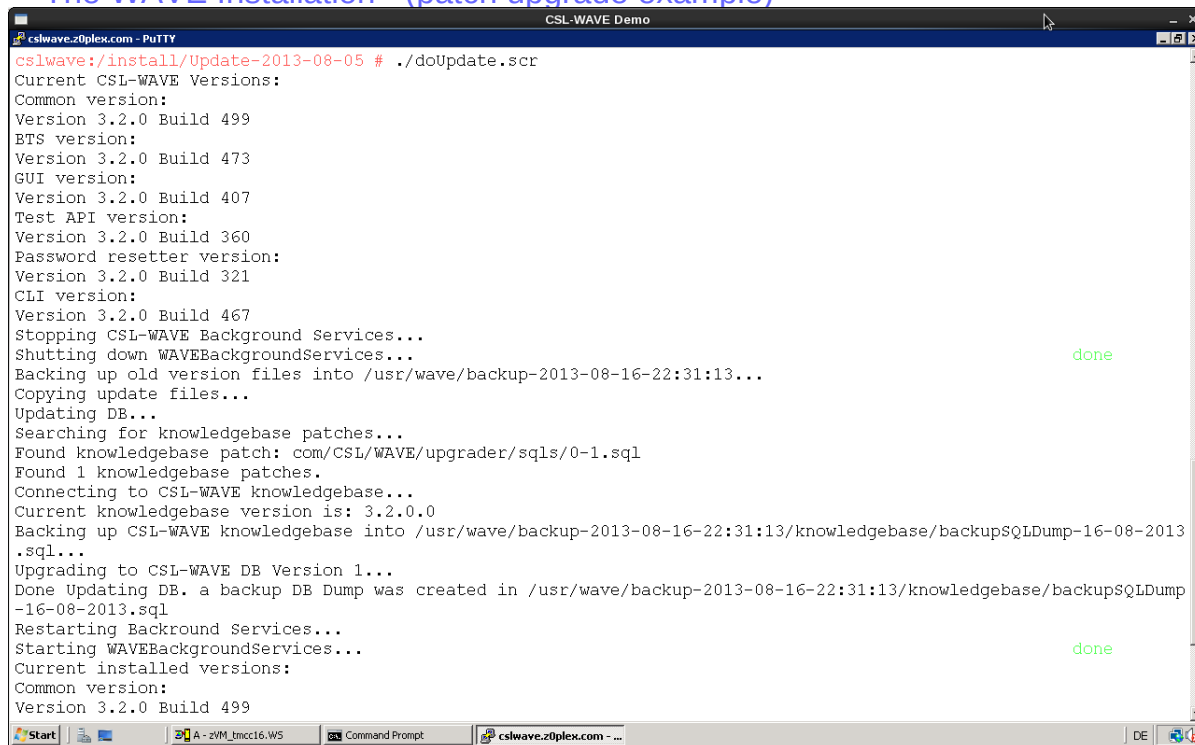
Check out the actual version level at this GUI!

In this example we skip the upgrading of z/VM systems because this is an initial installation where we don't have any managed systems yet.

During the “discovery” run - which is done to add z/VM systems as new CSL-Wave managed systems - the upgrade to the latest code level is automatically be done.



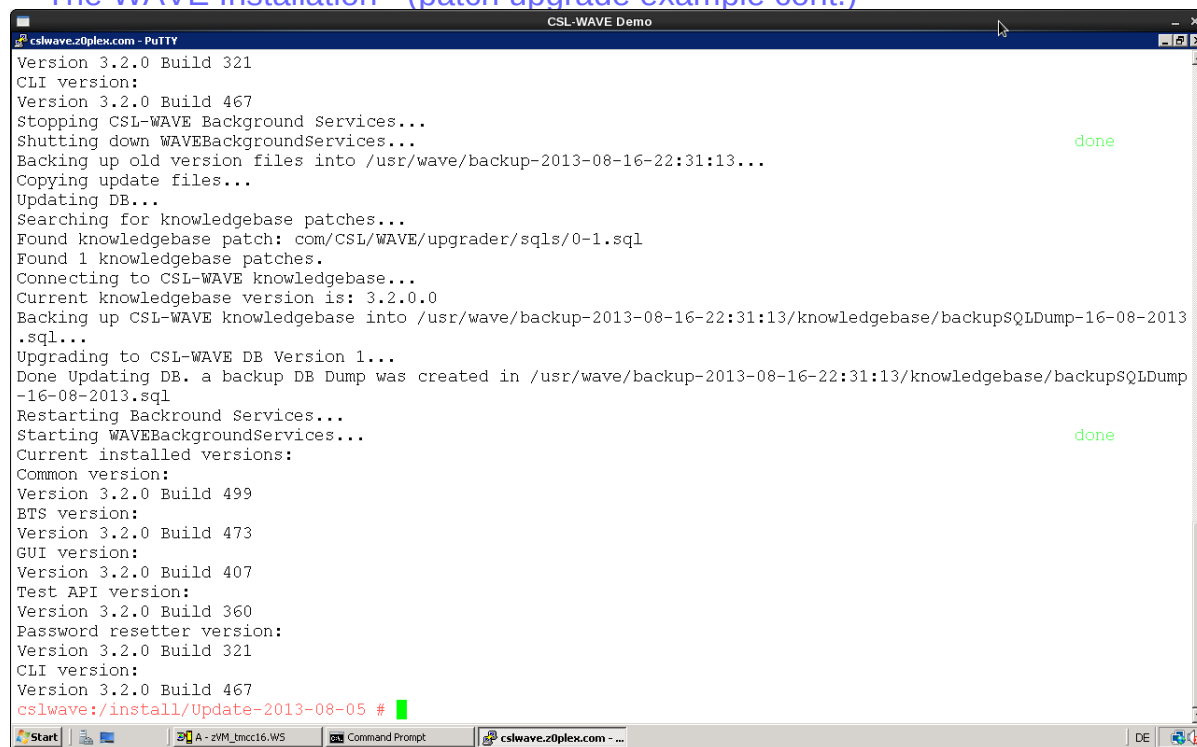
## The WAVE Installation - (patch upgrade example)



```
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
cslwave:/install/Update-2013-08-05 # ./doUpdate.scr
Current CSL-WAVE Versions:
Common version:
Version 3.2.0 Build 499
BTS version:
Version 3.2.0 Build 473
GUI version:
Version 3.2.0 Build 407
Test API version:
Version 3.2.0 Build 360
Password resetter version:
Version 3.2.0 Build 321
CLI version:
Version 3.2.0 Build 467
Stopping CSL-WAVE Background Services...
Shutting down WAVEBackgroundServices... done
Backing up old version files into /usr/wave/backup-2013-08-16-22:31:13...
Copying update files...
Updating DB...
Searching for knowledgebase patches...
Found knowledgebase patch: com/CSL/WAVE/upgrader/sqls/0-1.sql
Found 1 knowledgebase patches.
Connecting to CSL-WAVE knowledgebase...
Current knowledgebase version is: 3.2.0.0
Backing up CSL-WAVE knowledgebase into /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupsQLDump-16-08-2013.sql...
Upgrading to CSL-WAVE DB Version 1...
Done Updating DB. a backup DB Dump was created in /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupsQLDump-16-08-2013.sql
Restarting Background Services...
Starting WAVEBackgroundServices... done
Current installed versions:
Common version:
Version 3.2.0 Build 499
```

Example of an code patch install, actions similar to the upgrade done in the previous steps

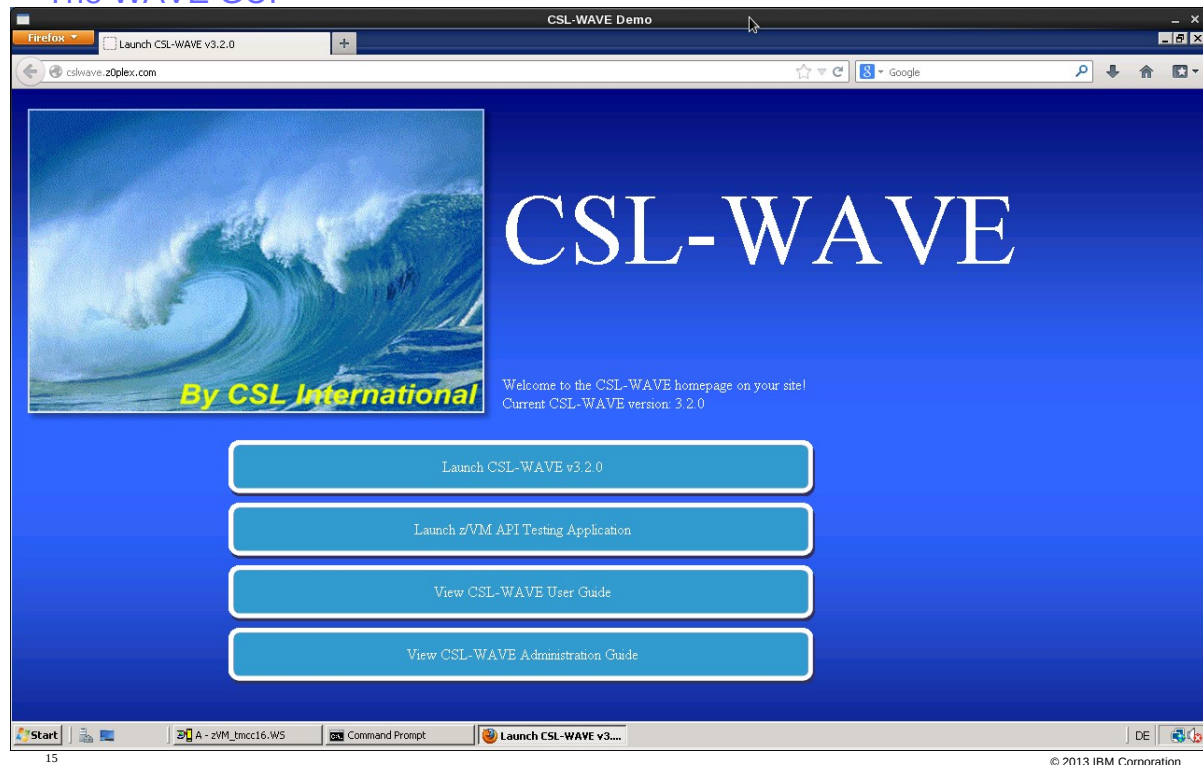
## The WAVE Installation - (patch upgrade example cont.)



```
CSL-WAVE Demo
cslwave.z0plex.com - PuTTY
Version 3.2.0 Build 321
CLI version:
Version 3.2.0 Build 467
Stopping CSL-WAVE Background Services...
Shutting down WAVEBackgroundServices...
Backing up old version files into /usr/wave/backup-2013-08-16-22:31:13...
Copying update files...
Updating DB...
Searching for knowledgebase patches...
Found knowledgebase patch: com/CSL/WAVE/upgrader/sqls/0-1.sql
Found 1 knowledgebase patches.
Connecting to CSL-WAVE knowledgebase...
Current knowledgebase version is: 3.2.0.0
Backing up CSL-WAVE knowledgebase into /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupSQLDump-16-08-2013.sql...
Upgrading to CSL-WAVE DB Version 1...
Done Updating DB. a backup DB Dump was created in /usr/wave/backup-2013-08-16-22:31:13/knowledgebase/backupSQLDump-16-08-2013.sql
Restarting Background Services...
Starting WAVEBackgroundServices...
Current installed versions:
Common version:
Version 3.2.0 Build 499
BTS version:
Version 3.2.0 Build 473
GUI version:
Version 3.2.0 Build 407
Test API version:
Version 3.2.0 Build 360
Password resetter version:
Version 3.2.0 Build 321
CLI version:
Version 3.2.0 Build 467
cslwave:/install/Update-2013-08-05 #
```

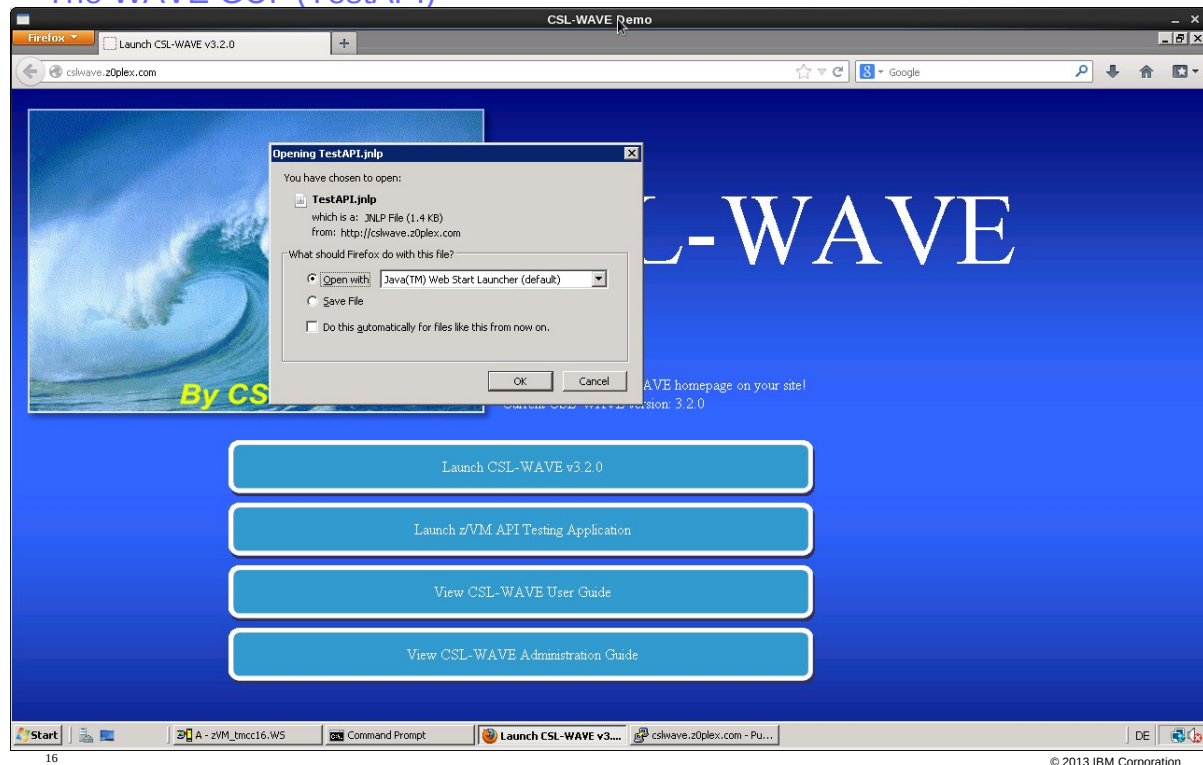
Now we start the GUI

## The WAVE GUI



The GUI can be started on an server with a java-capable browser which has network connectivity to the CSL-WAVE server.

## The WAVE GUI (TestAPI)

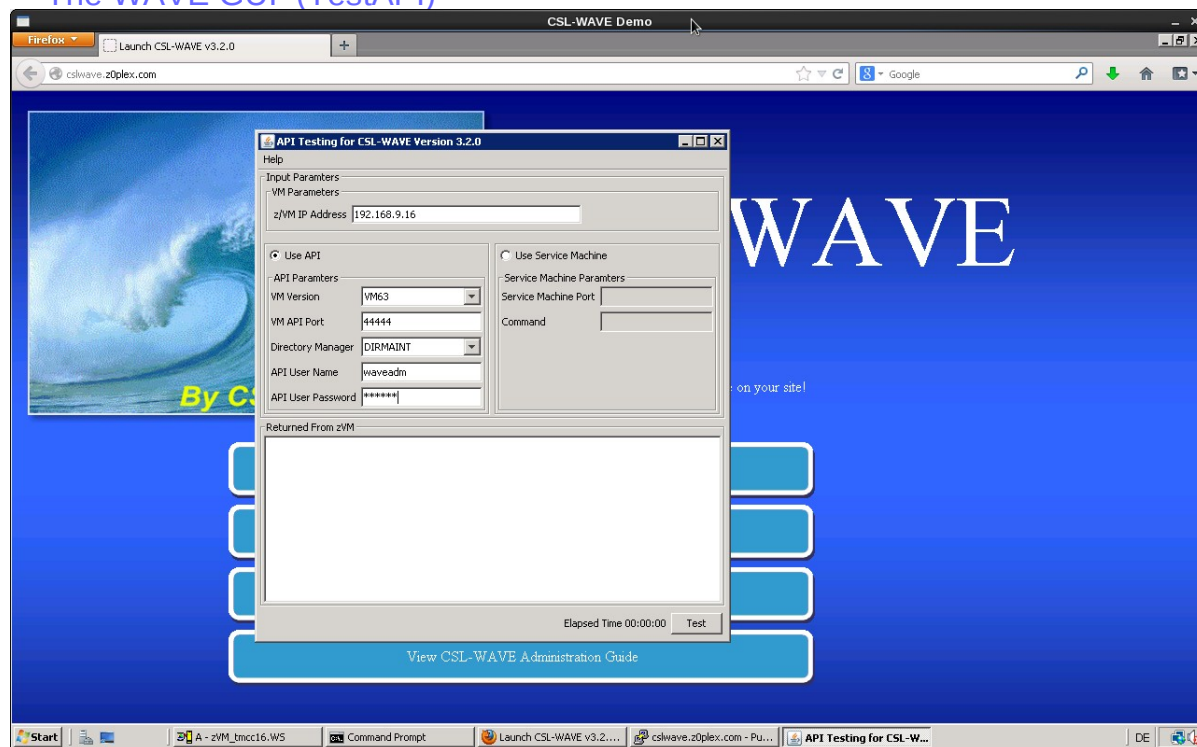


CSL-WAVE is a Java Web start application downloaded to the workstation through the CSL-WAVE Web server.

Two applications are being provided:

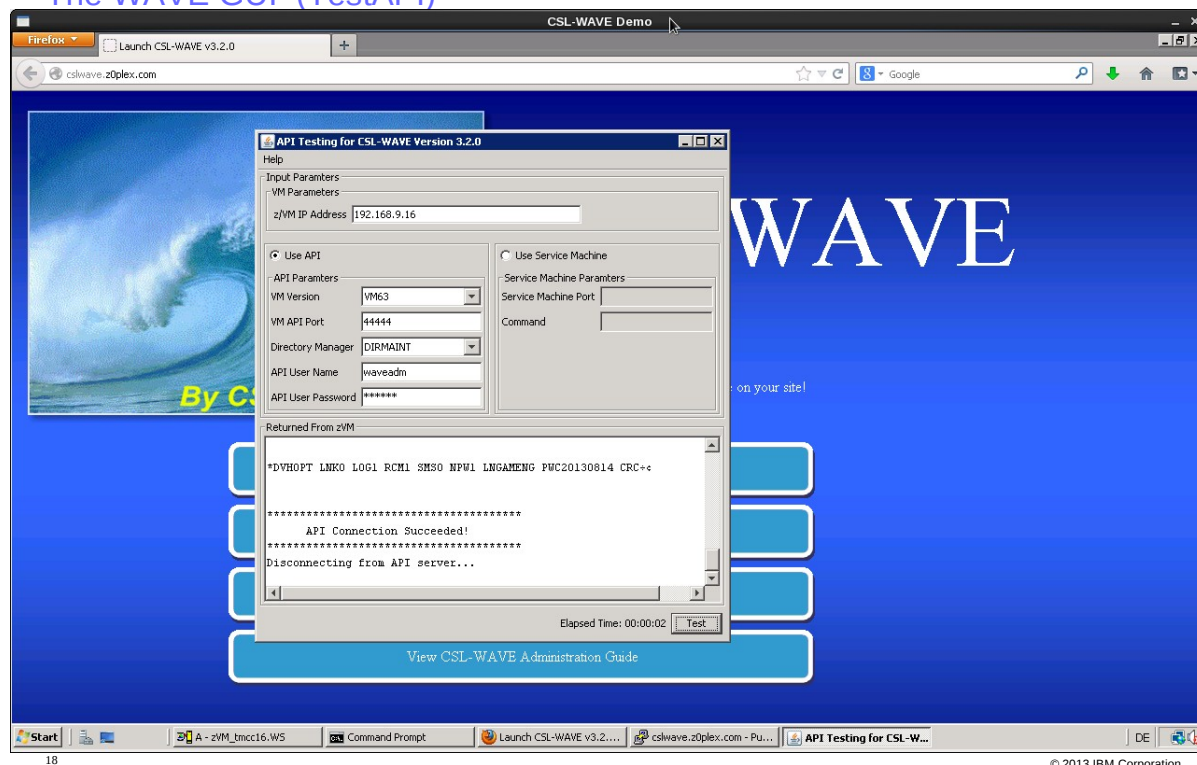
- the CSL-WAVE server by itself
- a small TestSMAPI application. z/VM systems need to be enabled for management through an external management product like CSL-Wave. This is done by configuring DIRMAINT and the SMAPI (System Management API) service machines. With help of the TestSMAPI application you can check out whether this configuration is working correctly.

## The WAVE GUI (TestAPI)



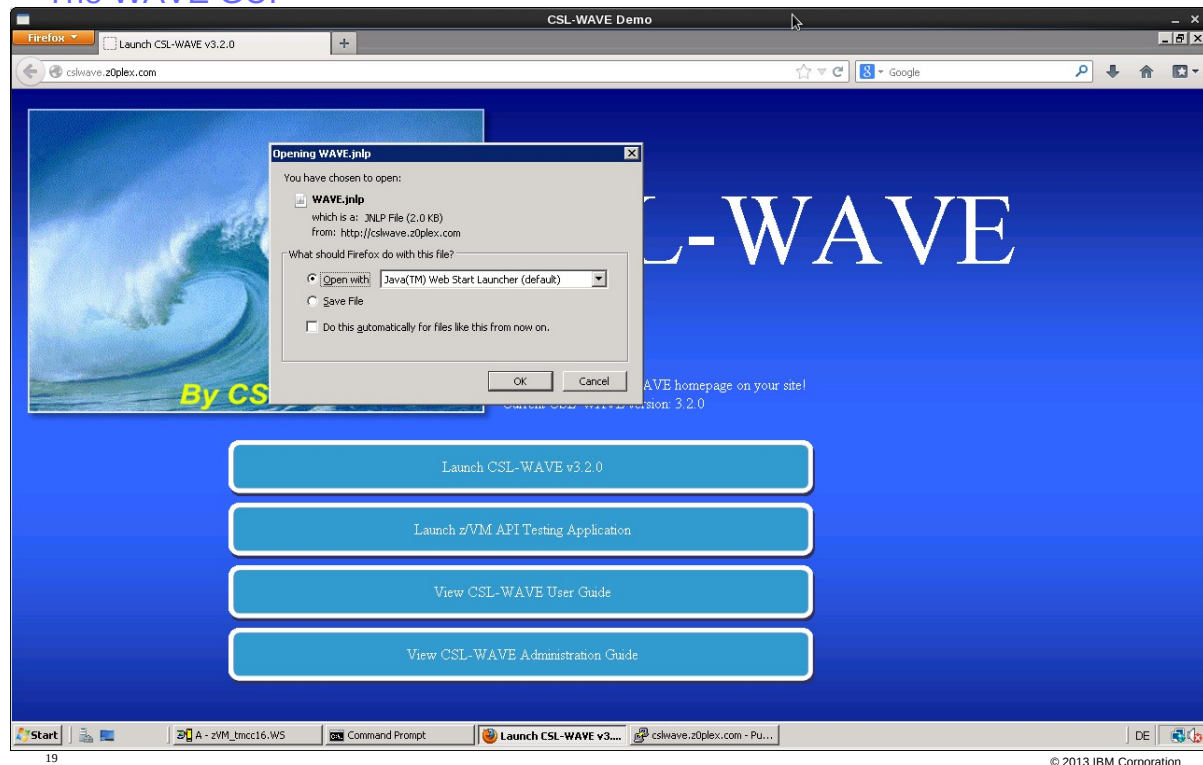
Start testing the SMAPI connectivity on z/VM called tmcc16 – you have to enter the ip-address and an authorized userid which can call SMAPI in this z/VM

## The WAVE GUI (TestAPI)



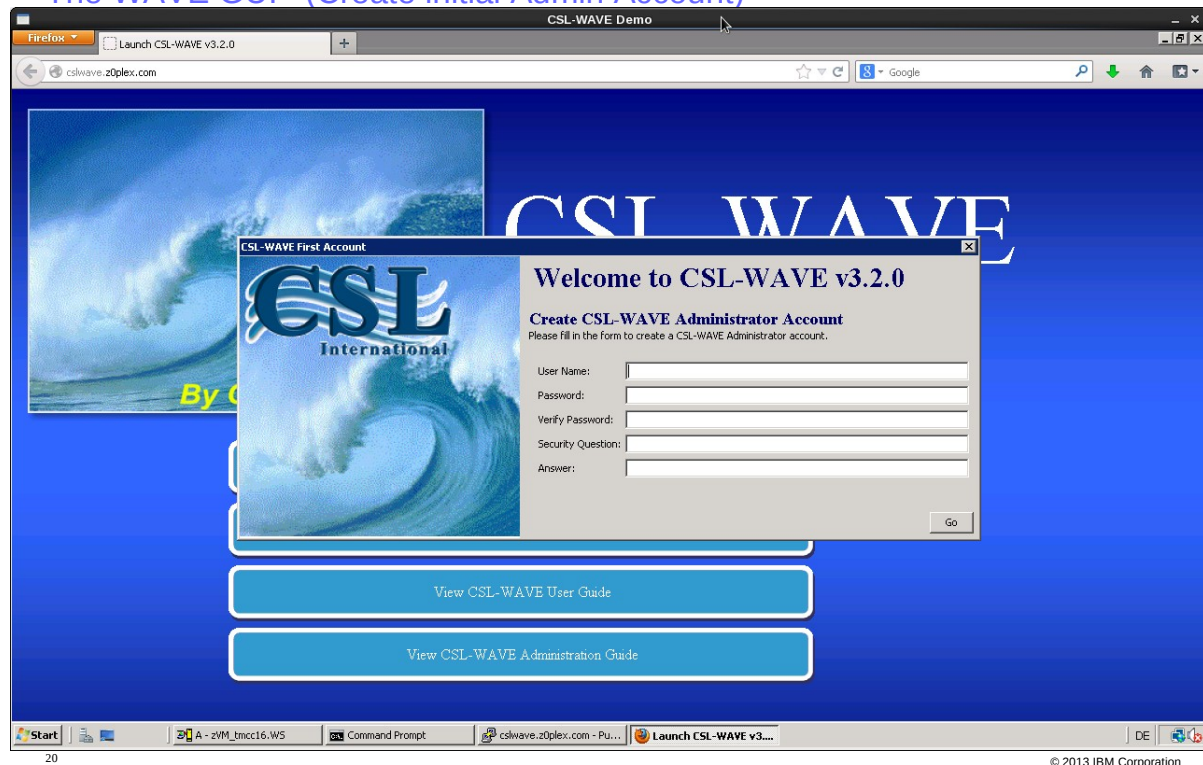
Returned 'API Connection Succeeded' -> the z/VM system 'TMCC16' SMAPI is configured to access the z/VM user directory via DIRMAINT. This is a requirement to discover 'TMCC16' as CSL-WAVE manageable z/VM system.

## The WAVE GUI



Now start the WAVE application

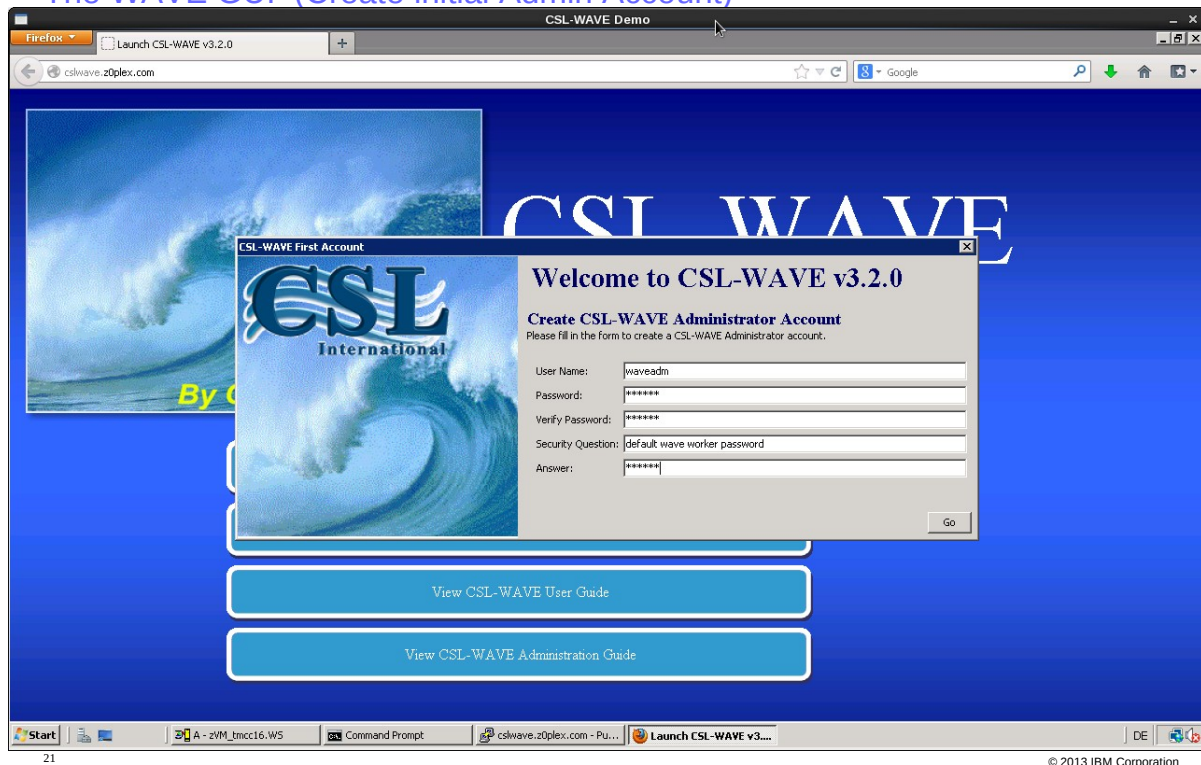
## The WAVE GUI (Create initial Admin Account)



At the first start of CSL-WAVE GUI, you're requested to create an initial CSL-WAVE Administration Account.

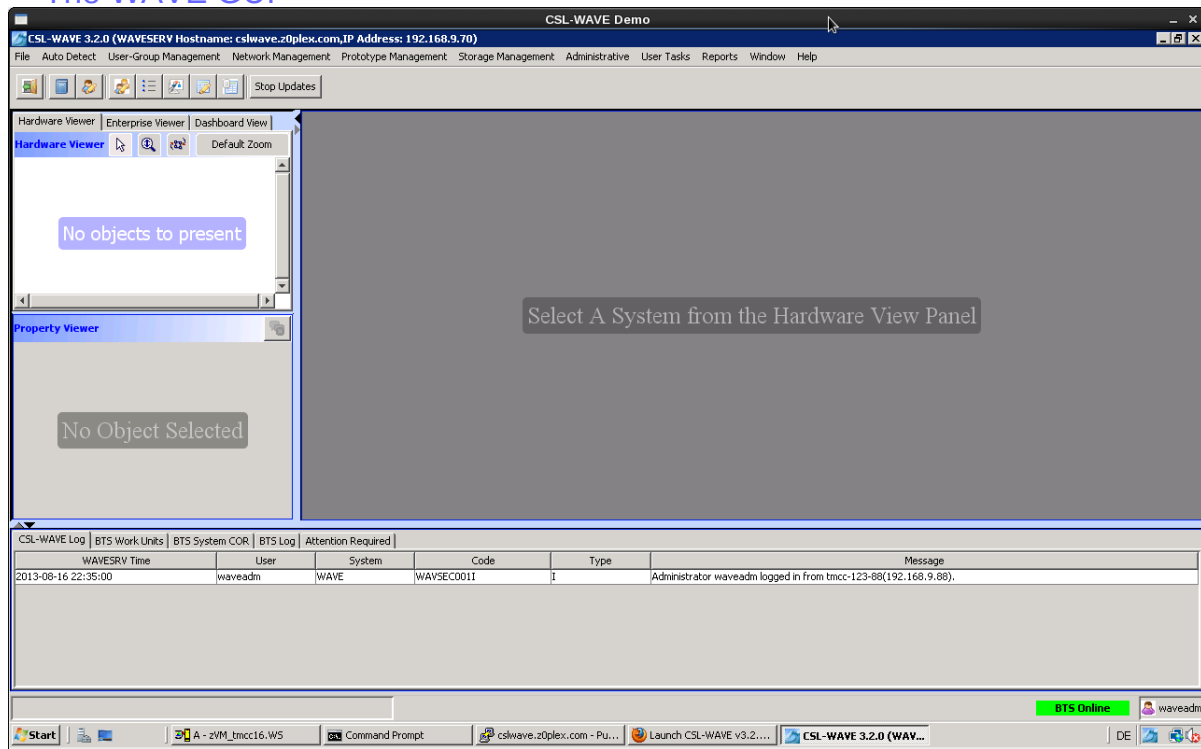


## The WAVE GUI (Create initial Admin Account)



Additional Admin Accounts can be added later

## The WAVE GUI



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It starts with an empty workspace.

Here explain the layout of the CSL-WAVE GUI, the “navigation” as well as the context sensitive behavior:

- **Active graphical views of all managed objects**
- **Graphical views may be flipped to list mode**
- **Allows Point’n’click and Drag’n’drop techniques**
- **Advanced filters, tagging, layouts and layers selection for every display**
- **Multiple objects may be selected (via groups, filters or simply with random mouse clicks) for any action.**

## The WAVE GUI (Add New CPC)

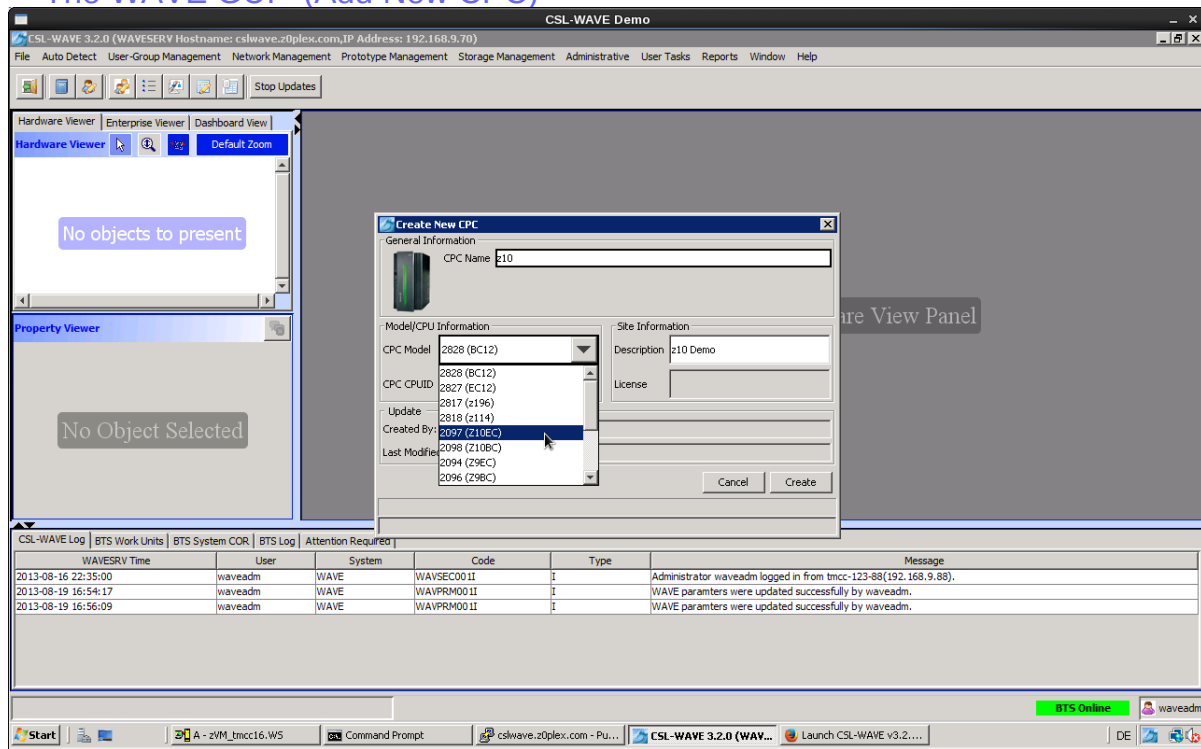
The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "CSL-WAVE Demo" and shows the "Hardware Viewer" panel on the left. The "Hardware Viewer" panel contains a message "No objects to present" and a button labeled "Add New CPC". Below this panel is the "Property Viewer" panel, which displays "No Object Selected". The main central area of the GUI is a large grey rectangle with the text "Select A System from the Hardware View Panel". At the bottom of the GUI, there is a log table with the following data:

WAVESRV Time	User	System	Code	Type	Message
2013-08-16 22:35:00	waveadm	WAVE	WAVSEC00 II	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-19 16:54:17	waveadm	WAVE	WAVPRM00 II	I	WAVE paramters were updated successfully by waveadm.
2013-08-19 16:56:09	waveadm	WAVE	WAVPRM00 II	I	WAVE paramters were updated successfully by waveadm.

The Windows taskbar at the bottom shows the Start button, several open applications including "A - zVM\_tmcc16.W5", "Command Prompt", "cslwave.z0plex.com - Pu...", "CSL-WAVE 3.2.0 (WAV...", and "Launch CSL-WAVE v3.2....". The system tray includes "BTS Online" and "waveadm".

Add first CPC as anchor for managed systems

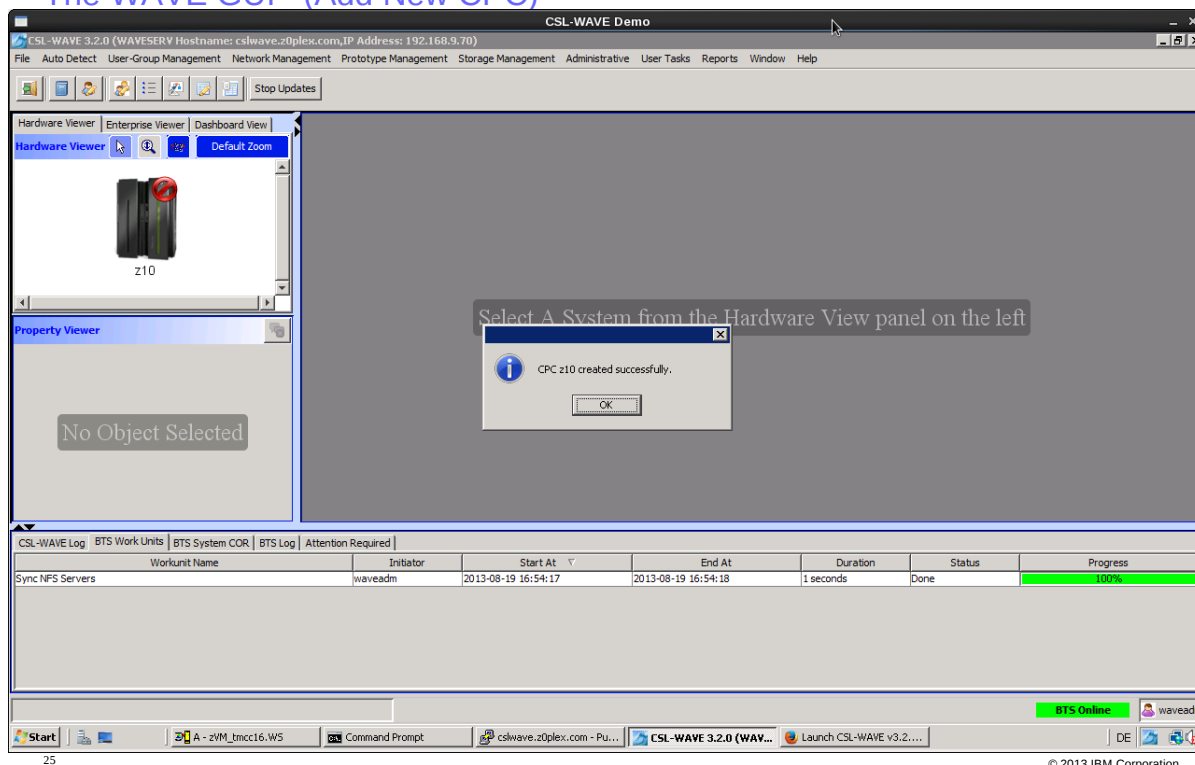
## The WAVE GUI (Add New CPC)



Several types of System z machines are selectable - for the demo we use easy names like z10, zEC12,...

Be aware: CSL-WAVE will not “manage” the CPC by itself – this action 'Create a new CPC' is only creating an ICON for the connected z/VM system in the 'HardWare Viewer' section of the CSL-WAVE GUI.

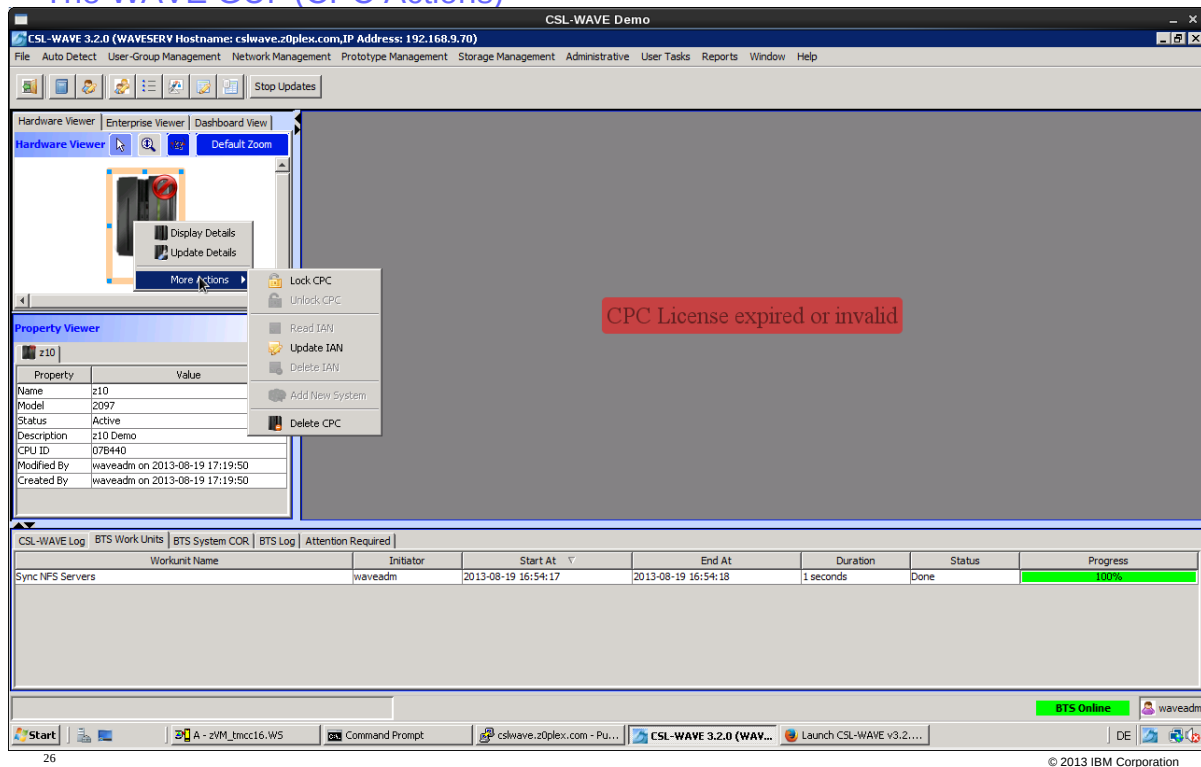
## The WAVE GUI (Add New CPC)



A 'z10' icon is shown up in 'HardWare Viewer' section.

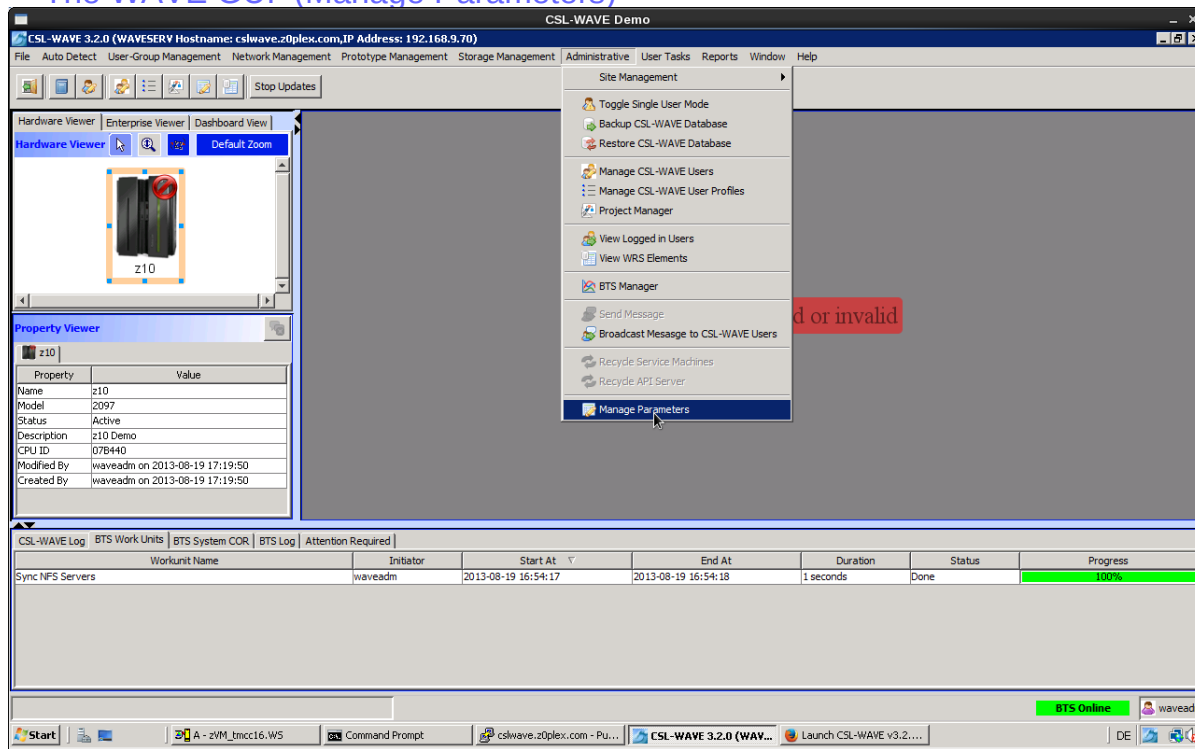
A red marker at the icon requests attention: move your mouse pointer over this object -> on next slide you'll see: 'CPC License expired or invalid' as explanation.

## The WAVE GUI (CPC Actions)



A context sensitive window shows up all the possible actions to handle this situation: in this case nothing can be done than 'Delete' until a valid license has been provided to the system. How to provide the license information is shown at slide 30ff.

## The WAVE GUI (Manage Parameters)



Overview of CLS-WAVE provided z/VM “Administation” tasks - show task “Manage Parameters”.

## The WAVE GUI (Manage Parameters)

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z10

Property Viewer

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

CSL-WAVE Log BTS Work Units BTS System COR BTS Log Attent

Workunit Name

Sync NFS Servers

CSL-WAVE Parameters

Threshold GUI BTS Functionality NFS Attention Required Definitions Security License

Storage Thresholds

Default Storage for z/VM User (MB) 1024

Maximum Storage for z/VM User (MB) 1024

Default z/VM User MAX Storage (MB) 1024

Maximum z/VM User MAX Storage (MB) 1024

CPU Thresholds

Default CPUs for z/VM User 1

Maximum CPUs for z/VM User 2

Disk Space Thresholds

Default disk Space for z/VM User (MB) 2048

Maximum disk Space for z/VM User (MB) 3072

Page/Spool Thresholds

Spool Utilization Warning Threshold 90

Spool Utilization Error Threshold 90

Page Utilization Warning Threshold 90

Page Utilization Error Threshold 90

Linux Thresholds

Linux FS Utilization Warning Threshold 70

Linux FS Utilization Error Threshold 90

Virtual to real Thresholds

Virtual to Real Utilization Warning Threshold 90

Virtual to Real Utilization Error Threshold 100

Virtual to Real Utilization Max display 150

Close Update

Status	Progress
Done	100%

Start A - z/VM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAV... Launch CSL-WAVE v3.2....

BTS Online waveadm

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Start a walk through the selectable tabs – for example change the threshold values for monitoring.

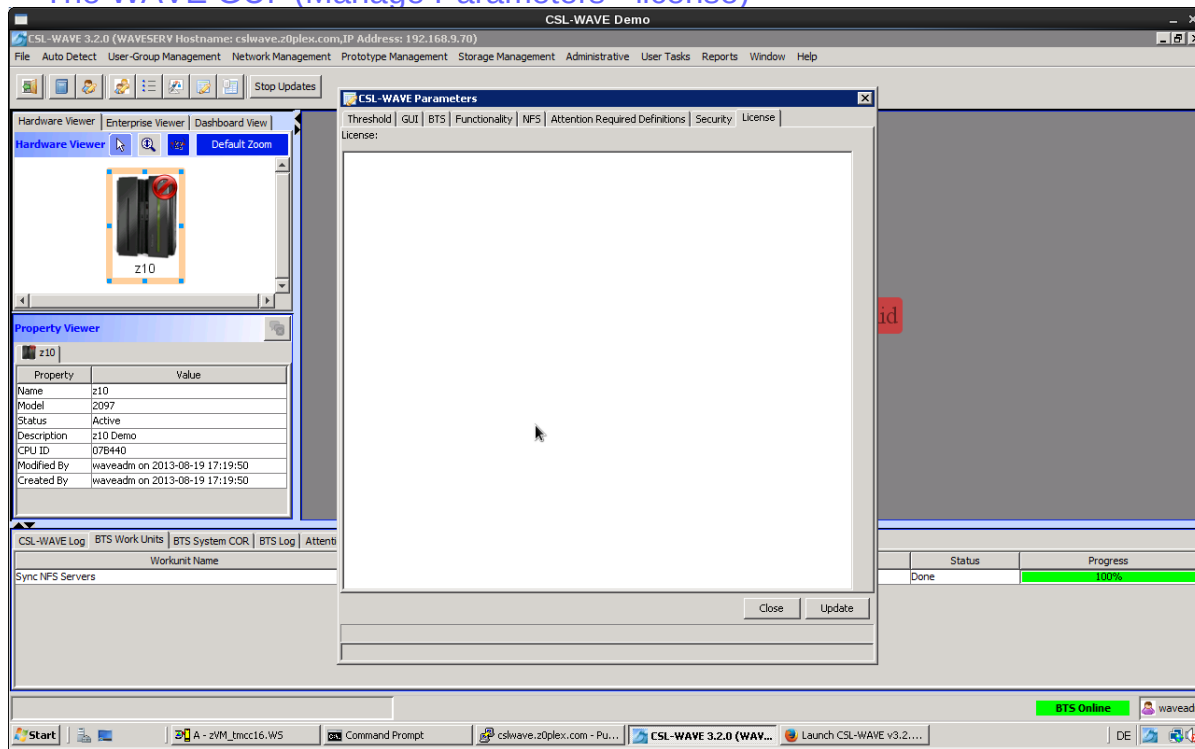


## The WAVE GUI (Manage Parameters)

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows a configuration page for a z10 system. A central dialog box, "CSL-WAVE Parameter Update", reports successful updates for WAVE\_RESOURCE\_CHECK\_ACTIVATION and WAVE\_DYNAMIC\_GRANT. The background window has several tabs: Threshold, GUI, BTS, Functionality, NFS, Attention Required Definitions, Security, and License. The "Functionality" tab is active, showing a table for "Functionality and Activation Levels" with one entry: "N/A" with an activation level of "1". Other sections include "VM Connections Options", "SSH Options", "Scripts Options", and "Automatic Guest Classification". A progress bar at the bottom right shows "Done" with 100% completion.

Don't forget to press "Update"

## The WAVE GUI (Manage Parameters - license)



Empty license – get a valid license based on CPC serial number and number of managed z/VM CPs or IFLs

## The WAVE GUI (Manage Parameters - license)

The screenshot shows the CSL-WAVE GUI interface. The main window is titled 'CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)'. The 'License' tab is selected in the 'CSL-WAVE Parameters' window. A dialog box titled 'CSL-WAVE Parameter Update' is open, displaying the message: 'The following CSL-WAVE Parameters were updated successfully: license'. The dialog has 'Close' and 'Update' buttons. The background shows the hardware viewer with a server rack labeled 'z10' and a property viewer table.

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Enter the license – in the moment the “Update” is pressed and the license matches the CPC S/N the red marker disappears

## The WAVE GUI (Manage CSL-WAVE users)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main menu is open, showing the 'Manage CSL-WAVE Users' option highlighted. The left sidebar contains a 'Hardware Viewer' showing a server rack labeled 'z10' and a 'Property Viewer' with the following details:

Property	Value
Name	z10
Model	z097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

At the bottom of the GUI, there is a log table with the following data:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

## Overview of CSL-WAVE user id administration tasks

## The WAVE GUI (Manage CSL-WAVE users)

CSL-WAVE User Manager

CSL-WAVE user waveadm is an active super user

Name	WA	SLA	NA	Status	Description	Created By	Created On	Modified By	Modified On	Locked	IAN
CLIUser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
WAVE Daemon Updater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active		WAVEInit	2000-01-01 00:0...	WAVEInit	2007-09-23 13:1...		
waveadm	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Active		WAVEInit	2013-08-16 22:3...	WAVEInit	2013-08-16 22:3...		
waveadmin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Dummy User for active dir...	WAVEInit	2007-12-13 13:1...	WAVEInit	2007-12-24 14:3...		
WAVEBTSABReq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Initial WAE user for the A...	WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
WAVEBTSMsgListen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Initial WAE user for the M...	WAVEInit	2007-12-13 13:1...	WAVEInit	2012-01-23 08:3...		
WAVEBTS Scheduler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	Initial WAE user for the sc...	WAVEInit	2007-12-13 13:1...	WAVEInit	2007-12-13 22:1...		
WAVEInit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Active	temp user to initiate the cr...	WAVEInit	2000-01-01 00:0...	WAVEInit	2007-09-23 13:1...		

Filter

Active    Regular Users    Site Level Administrators

Suspended    CSL-WAVE Administrators    Network Administrators

Buttons: Review Scopes and Permissions, Add New CSL-WAVE User, Close

Progress: 100%

List of userids – now start showing the different authorization levels of userids based on the different object types

# The WAVE GUI (Manage CSL-WAVE users)

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

CSL-WAVE User Manager

Some of the active CSL-WAVE Users are super users

Name	WA	SLA	NA	Status	Description	Created By	Created On	Modified By	Modified On	Locked	IAN
CLIUser				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
WAVE Daemon Updater				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
waveadm				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
waveadmin				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
WAVEBTSABReq				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
WAVEBTSMsgListen				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
WAVEBTScheduler				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
WAVEInit				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		
demour				Active		WAVEInit	2007-12-13 13:1...	WAVEInit	2009-09-03 21:5...		

Update CSL-WAVE User demour

General Details | User Type | Scope and Permissions

Current Permissions

System	Permission Type	Entry Value	Permissions
*	Project	*	All
*	DASDGroup	*	All
*	DevicePool	*	All
*	System	*	All

Filter

Active  Regular Users

Suspended  CSL-WAVE Admi

Delete Permission Add Permission

Update Close

and Permissions Add New CSL-WAVE User Close

Progress 100%

Start A - zVM\_tmcc16.WS Command Prompt cslwave.z0plex.com - Pu... CSL-WAVE 3.2.0 (WAV... Launch CSL-WAVE v3.2...

BTS Online waveadm

## The WAVE GUI (Project Management)

The screenshot displays the CSL-WAVE 3.2.0 GUI with the following components:

- Hardware Viewer:** Shows a z10 hardware component.
- Property Viewer:** Lists properties for the z10, such as Name, Model, Status, Description, CPU ID, Modified By, and Created By.
- Project Manager:** A table listing existing projects.
 

Name	Description
CSL-WAVE Demo	CSL-WAVE demo environment
- Add New Project Dialog:** A form for creating a new project with fields for Name, Description, Contact Information (Name, Phone, Email), Organizational Information (Team, Department), and CSL-WAVE Information (Created By, Last Modified By).
- CSL-WAVE Log:** A table showing workunit execution details.
 

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

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Optional:  
Project Management to be able to define and later group the managed objects to your needs

## The WAVE GUI (Site Management)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The 'Site Management' menu is open, showing the following options:

- External Entities Manager
  - Manage Device Pools
  - Manage CSL-WAVE Virtual Network Segment
  - Custom Attribute Manager
  - z/VM Directory Manager
  - z/VM Account Manager
  - AGC Manager
  - Manage FCP Information
  - CSL-WAVE Linux Repository Manager
  - Add New CPC
  - Delete CPC
  - Tools
- Toggle Single User Mode
- Backup CSL-WAVE Database
- Restore CSL-WAVE Database
- Manage CSL-WAVE Users
- Manage CSL-WAVE User Profiles
- Project Manager
- View Logged in Users
- View WRS Elements
- BTS Manager
- Send Message
- Broadcast Message to CSL-WAVE Users
- Recycle Service Machines
- Recycle API Server
- Manage Parameters

The main interface shows a hardware viewer for 'z10' and a property viewer table:

Property	Value
Name	z10
Model	z097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

At the bottom, a table shows the progress of a task:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

Show Site Management where the z/VM objects, Network Objects and Device Pools can be pre-defined



## The WAVE GUI (Site Management – Create z/VM Entity)

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled 'CSL-WAVE Demo' and shows a navigation pane on the left with 'Hardware Viewer', 'Enterprise Viewer', and 'Dashboard View'. The 'Enterprise Viewer' is active, showing a 'z10' entity. The 'Property Viewer' below it lists properties for 'z10':

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

The 'Create New CSL-WAVE External Entity' dialog box is open, showing the following fields:

- Name: TMCC16
- Type: z/VM
- Description: Demo z/VM TMCC16

The 'Associated Objects' section is empty, displaying 'No Objects Associated'. The 'Existing CSL-WAVE Managed Entities' table is also empty.

The 'CSL-WAVE Log' table at the bottom shows a completed task:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

The task 'Sync NFS Servers' is shown as completed with a progress bar at 100%.

Create a z/VM entity – this is the root of z/VM system to be managed later – the details of the z/VM systems will be “autodiscovered” later

## The WAVE GUI (Site Management – Entities Manager)

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled 'CSL-WAVE Demo' and shows a hardware viewer on the left with a z10 server icon. A 'Create New CSL-WAVE External Entity' dialog box is open in the center, with the following details:

- General Information:**
  - Name: [Empty]
  - Type: z/VM
  - Description: z/OS
- Associated Objects:**
  - Storage Controller
  - Router

A message 'No Objects Associated' is displayed in the dialog. The background shows a property viewer for the z10 server with the following details:

Property	Value
Name	z10
Model	z097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

At the bottom of the GUI, there is a 'CSL-WAVE Log' table showing recent activities:

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

Other types can also be added

## The WAVE GUI (Site Management – manage LAN segment)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The main window is titled "Site Management" and contains a menu with various administrative tasks. The "Manage CSL-WAVE Virtual Network Segment" option is highlighted. The interface also shows a hardware viewer for a z10 system, a property viewer, and a log table at the bottom.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

Optional – you can pre-define the network segments (subnets) in use – not necessary – they will be discovered later automatically and will get generated names – here is the possibility to use your own pre-defined names

## The WAVE GUI (Site Management – manage LAN segment)

**Update Virtual Network Segment**

General Information

Name: TESTLAN  
 Description: private Demo LAN 172.16.47.0  
 Created By: waveadm on 2013-08-19 17:41:57  
 Last Modified By: waveadm on 2013-08-19 17:41:57

IP Information | Connected Virtual Networks | Connected CSL-WAVE Resources

IP Information

Network: 172.16.47.0 Default GW: 172.16.47.1  
 Netmask: 255.255.255.0  
 Broadcast: 172.16.47.255 VLAN ID:

Update Cancel

Virtual Network Segment Manager

Existing Virtual Network Segments:

Name	Network	Netmask	Broa
DEMOLAN	192.168.9.0	255.255.255.0	192.168.9.

Filters

Show Unknown IP VNS

Create New Virtual Network Segment Close

CSL-WAVE Log | BTS Work Units | BTS System COR | BTS Log | Attention Required

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

Property Viewer

z10

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 17:19:50
Created By	waveadm on 2013-08-19 17:19:50

Start | A - zVM\_tmcc16.WS | Command Prompt | cslwave.z0plex.com - Pu... | CSL-WAVE 3.2.0 (WAV... | Launch CSL-WAVE v3.2.... | DE | 40

BTS Online waveadm

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We add a TESTLAN which can be later added to guests

## The WAVE GUI (Site Management – manage BMI repository)

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "CSL-WAVE Demo" and shows a "Site Management" menu with various options. The "CSL-WAVE Linux Repository Manager" option is highlighted. The interface also includes a "Hardware Viewer" showing a server rack labeled "z10", a "Property Viewer" with details for the server, and a "Workunit Log" table at the bottom.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

Manage the Installation Repositories for BMI (Bare-Metal-Installation) of new Linux guests

## The WAVE GUI (Site Management – manage BMI repository)

Workunit Name	Ir	Start Time	End Time	Duration	Status	Progress
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:38:31	2013-08-19 17:38:31	0 seconds	Done	100%
Sync NFS Servers	waveadm	2013-08-19 16:54:17	2013-08-19 16:54:18	1 seconds	Done	100%

Repository can be any valid FTP installation repository which can be reached from a CSL-WAVE server ( and the guests to be installed).

# The WAVE GUI (Site Management – manage BMI repository)

**CSL-WAVE Linux Repository Manager**

Existing CSL-WAVE Linux Repositories

Name	IP Address	Media Location	Distribution	Version	SP	Architecture	Description	Status
sles11sp2	192.168.9.80	sles11sp2/s390x/1/	SUSE	11	2	s390x	sles11 sp2 install server	OK
sles11sp3	192.168.9.80	sles11sp3/s390x/1/	SUSE	11	3	s390x	sles11 sp3 install server	OK
rhel6u4	192.168.9.80	rhel6u4/s390x/	REDHAT	6	4	s390x	rhel 6.4 install server	OK

Buttons: Create CSL-WAVE Linux Repository, Close

---

**CSL-WAVE Log**

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

Buttons: BTS Online, waveadm

## The WAVE GUI (Site Management – manage BMI repository)

The screenshot displays the CSL-WAVE 3.2.0 GUI. A 'CSL-WAVE Linux Repository Manager' dialog box is open, showing a table of existing repositories. A context menu is open over the 'sles11sp3' entry, with options for 'Display Details', 'Update Details', and 'Remove'. The background shows a hardware viewer and a log window.

Name	IP Address	Media Location	Distribution	Version	SP	Architecture	Description	Status
sles11sp2		sles11sp2/s390x/1/	SUSE	11	2	s390x	sles11 sp2 install server	OK
sles11sp3		sles11sp3/s390x/1/	SUSE	11	3	s390x	sles11 sp3 install server	OK
rhel6u4		rhel6u4/s390x/	REDHAT	6	4	s390x	rhel 6.4 install server	OK

The BMI (Bare Metal Install) repository information can be changed - for example in case the FTP user id has changed



## The WAVE GUI (User Tasks – User Preferences)

The screenshot shows the CSL-WAVE 3.2.0 GUI interface. The 'User Tasks' menu is open, and 'Change CSL-WAVE user Preferences' is selected. The interface includes a hardware viewer on the left showing a server rack labeled 'z10', a property viewer with details for 'z10', and a central workspace with the text 'Select A System'. At the bottom, there is a log table and a task bar.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

## Some User Preferences

## The WAVE GUI (User Tasks – User Preferences)

on the left

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

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Specify the location of the SSH client which later is being used by the CSL-WAVE GUI to establish connection to Linux guests. Since the CSL-WAVE GUI can run either on Windows and/or Linux, this definition has to be done individually.

BTS = Background Task Scheduler

## The WAVE GUI (User Tasks – Script Manager)

The screenshot shows the CSL-WAVE 3.2.0 GUI. The 'User Tasks' menu is open, with 'CSL-WAVE User Script Manager' selected. The main window displays a hardware viewer for system 'z10' and a property viewer. Below the main window is a task log table.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

You can create Linux scripts which can later be executed in the managed Linux guest systems

## The WAVE GUI (User Tasks – Script Manager)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled 'CSL-WAVE Demo' and shows a hardware view of a z10 system. A 'Create CSL-WAVE User Script' dialog is open, showing the following details:

- Script Name: testscript
- Script Category: Linux scripts
- Script Description: simple bash script to test execution
- Global Script:

The script content is as follows:

```
#!/bin/sh
echo "test script called via WAVE - will show userid, hostname and IP address"
echo $USER
hostname
ip addr
```

A message box indicates: "WAVE user script testscript saved successfully." The background shows a log table with the following data:

Workunit Name	User	Start Time	End Time	Duration	Status	Progress
Add New Linux Repository	waveadm	2013-08-19 17:49:30				100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59				100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03				100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:26	2013-08-19 17:39:27	1 seconds	Done	100%

Private or global scripts  
 Global = available to all GUI users

## The WAVE GUI (Hardware Viewer)

The screenshot displays the CSL-WAVE 3.2.0 GUI (Hardware Viewer) interface. The main window shows a hardware view of a z10 CPC. A tooltip is visible over the CPC, displaying the following information:

- CPC Name: z10
- CPC Model: 2097
- CPC Status: Active
- CPC License: License Valid
- CPC Description: z10 Demo

Below the hardware view, the Property Viewer shows the following details for the z10 CPC:

Property	Value
Name	z10
Model	2097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

An Intelligent-Active-Notes (IAN) notification is displayed, indicating a system relocation and an upcoming outage:

**IAN:**  
 waveadm 08-19-2013 18:05:53  
 machine will be relocated in the next week - expected outage end august

The bottom of the GUI shows a log table with the following columns: Workunit Name, Initiator, Start At, End At, Duration, Status, and Progress. The log entries are as follows:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update Intelligent Active Note	waveadm	2013-08-19 18:04:48	2013-08-19 18:04:49	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%

The bottom of the GUI shows the Start button, the system name (A - zVM\_tmcc16.W5), the Command Prompt, and the CSL-WAVE 3.2.0 (WAV...) application. The status bar indicates "BTS Online" and "waveadm".

- Now we start managing the z/VM environment:
- you see an IAN (Intelligent-Active-Notes) already added to the z10 CPC.
  - this is a notice to all users which has to be acknowledged for further actions.
- In our case users are informed about an upcoming relocation of the system and an outage at end of August.

## The WAVE GUI (Hardware Viewer – Add New System)

The screenshot shows the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The Hardware Viewer panel on the left displays a system named 'z10'. A context menu is open over this system, with 'Add New System' highlighted. The Property Viewer below the Hardware Viewer shows details for 'z10':

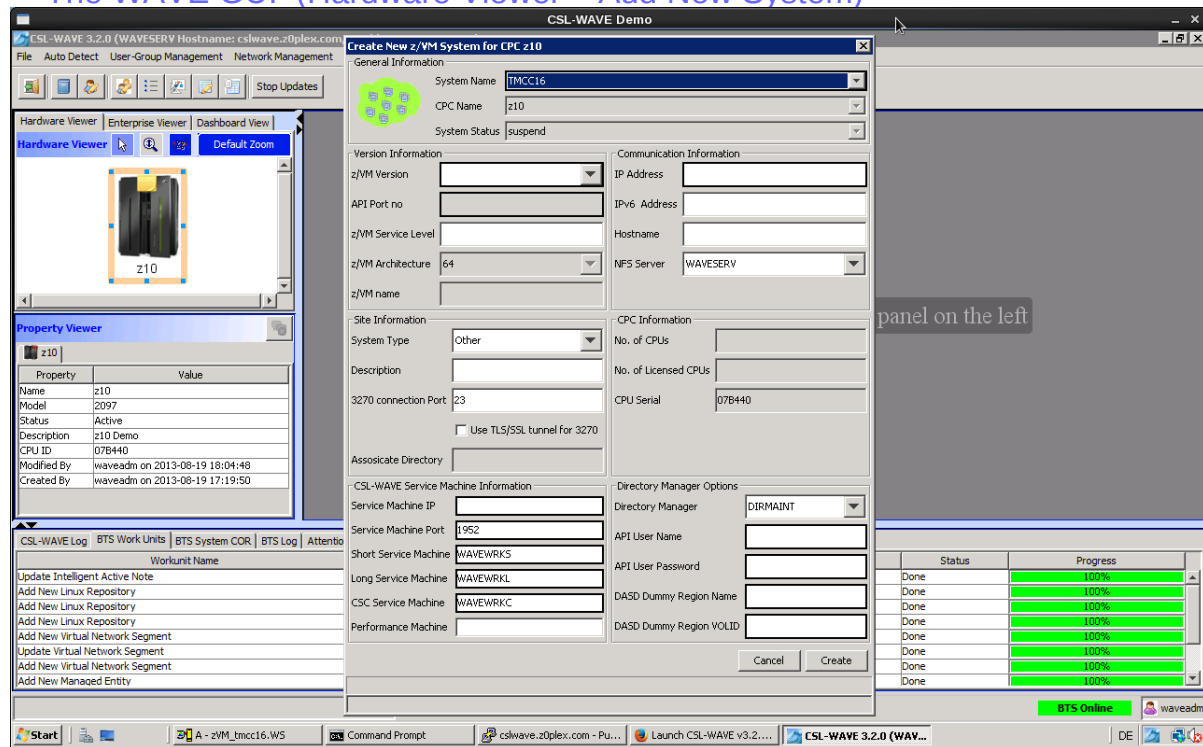
Property	Value
Name	z10
Model	z097
Status	Active
Description	z10 Demo
CPU ID	07B440
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

The bottom of the window features a log table with the following data:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update Intelligent Active Note	waveadm	2013-08-19 18:04:48	2013-08-19 18:04:49	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Update Virtual Network Segment	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Managed Entity	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%

Add the first z/VM system which can be managed by CSL-WAVE.

## The WAVE GUI (Hardware Viewer – Add New System)



A new z/VM named 'TMCC16' is defined on the z10 CPC:

- Fill out the required fields: basically you need to provide the network information and authorized user id to access the z/VM SMAPI (Service Machine interface) of 'TMCC16'.

## The WAVE GUI (Hardware Viewer – Add New System)

General Information

System Name: TMCC16  
CPC Name: z10  
System Status: suspend

Version Information

z/VM Version: VM63  
API Port no: VM53  
z/VM Service Level: VM54  
z/VM Architecture: VM61  
z/VM name: VM62

Communication Information

IP Address: 192.168.9.16  
IPv6 Address:   
Hostname: tmcc16.z0plex.com  
NFS Server: WAVESERV

Site Information

System Type: Prod  
Description: demo zVM 6.3 z10 LPC  
3270 connection Port: z3  
 Use TLS/SSL tunnel for 3270

Directory Manager Options

Directory Manager: DIRMAINT  
API User Name: WAVEADM  
API User Password: \*\*\*\*\*  
DASD Dummy Region Name: dummy  
DASD Dummy Region VOLID: cslvol

CSL-WAVE Service Machine Information

Service Machine IP: 192.168.9.16  
Service Machine Port: 1952  
Short Service Machine: WAVEWRKS  
Long Service Machine: WAVEWRKL  
CSC Service Machine: WAVEWRKC  
Performance Machine: PERFSVM

Status	Progress
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

Password cannot be copied – can be updated later if the z/VM userids password changes



## The WAVE GUI (Hardware Viewer – Add New System)

CSL-WAVE Auto-Detect Wizard for z/VM System TMCC16

CSL-WAVE will now begin the auto-detect process for the newly created z/VM System.

Auto-Detection is comprised of the following steps:

- \* Define the CSL-WAVE Service Machines.
- \* Update various Directory Manager parameters.
- \* Scan the z/VM System for Virtual Machines, Virtual LANs, DASD Volumes and DASD Groups.
- \* Create a list of site-specific virtual machines for OS classification.

Press "Next" to continue, or "Cancel" to abort this action.

Waiting for user input

Task	Start Time	End Time	Duration	Status	Progress
Add New Linux Repository	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Linux Repository	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Add New Virtual Network Segment	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Virtual Network Segment	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Virtual Network Segment	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%

After this the “autodiscovery” of the z/VM will start

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled "CSL-WAVE Demo" and shows a "Hardware Viewer" on the left with a tree view of the system "z10". A "Property Viewer" is open, showing details for the selected system. The central area is dominated by the "CSL-WAVE Auto-Detect Wizard for z/VM System TMCC16". The wizard prompts the user to fill in mandatory fields:

- Directory Manager Information: Directory manager command interface machine name:
- CSL-WAVE Service Machines Information: DASH Group / Volume name:  (Radio buttons for DASH Group and Volume)
- TCP/IP PROFILE information: Virtual machine name:  Virtual address of disk where PROFILE resides:
- Update Autolog machine:  Update Autolog machine Autolog machine name:
- Device Pool Information:
  - New Device Pool For DASD Devices:
  - New Device Pool For OSA Devices:
  - New Device Pool For HIPER Devices:
  - New Device Pool For FCP Devices:

At the bottom, a log window shows the progress of various tasks, all of which are completed with 100% progress. The tasks include adding Linux repositories, virtual network segments, and managed entities.

Task	User	Start Time	End Time	Duration	Status	Progress
Update Intelligent Active Note	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:44:35	2013-08-19 17:44:36	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:44:11	2013-08-19 17:44:11	0 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:41:57	2013-08-19 17:41:58	1 seconds	Done	100%
Add New Virtual Network Segment	waveadm	2013-08-19 17:39:44	2013-08-19 17:39:44	0 seconds	Done	100%
Add New Virtual Network Segment	waveadm					
Add New Managed Entity	waveadm					

If you have pre-defined device pools you can select them otherwise autogenerated pools will be shown later

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

**CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16**

**CSL-WAVE Auto-Detect Wizard**

Trying to connect to z/VM system API  
 Checking Directory Manager  
 Searching for active CSL-WAVE Short service machine from previous installation  
 Searching for active CSL-WAVE Long service machine from previous installation  
 Searching for active CSL-WAVE CSC service machine from previous installation

**Creating CSL-WAVE Short service machine**  
 Adding CSL-WAVE Short service machine disk 191  
 Adding CSL-WAVE Short service machine disk 0399  
 Creating CSL-WAVE Long service machine  
 Adding CSL-WAVE Long service machine disk 191  
 Adding CSL-WAVE Long service machine disk 0399  
 Creating CSL-WAVE CSC service machine  
 Adding CSL-WAVE CSC service machine disk 191  
 Adding CSL-WAVE CSC service machine disk 0399  
 Populating CSL-WAVE Short service machine disks  
 Starting the CSL-WAVE Service Machines  
 Checking CSL-WAVE Service Machine level  
 Checking the z/VM System Version  
 Checking the z/VM System CP language  
 Checking z/VM Hardware information  
 get System information

Task	User	Start Time	End Time	Duration	Status	Progress
Create and Associate Device Pool with z/VM System	waveadm	2013-08-19 18:13:17	2013-08-19 18:13:18	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-19 18:04:48	2013-08-19 18:04:49	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-19 17:49:30	2013-08-19 17:49:31	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-19 17:48:59	2013-08-19 17:49:00	1 seconds	Done	100%
Add New Linux Repository	waveadm	2013-08-19 17:48:03	2013-08-19 17:48:04	1 seconds	Done	100%

Elapsed Time: 00:00:21 - WAVE Service Machine (Short)...

Progress: 100%

You can watch the progress of discovery

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows the "Hardware Viewer" tab. A "CSL-WAVE Auto-Detect Wizard" dialog box is open, displaying the following steps:

- Trying to connect to z/VM system API: OK
- Checking Directory Manager: OK
- Searching for active CSL-WAVE Short service machine from previous installation: Not Found
- Searching for active CSL-WAVE Long service machine from previous installation: Not Found
- Searching for active CSL-WAVE CSC service machine from previous installation: Not Found
- Creating CSL-WAVE Short service machine: OK
- Adding CSL-WAVE Short service machine disk 191: Running
- Adding CSL-WAVE Short service machine disk 0399: Running
- Creating CSL-WAVE Long service machine: Running

An "Invalid password for CSL-WAVE service machine" error dialog is also visible, stating: "CSL-WAVE could not access the service machine using the default password. Refer to the Installation chapter in the CSL-WAVE User Manual and make sure the pre-requisites for the service machine security profile are met. Press 'OK' to have CSL-WAVE retry to access the service machine, or 'Cancel' to cancel the action."

Below the wizard, a progress table shows the status of service machine installation:

Workunit Name	Progress
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%

The bottom of the screen shows the Windows taskbar with the Start button, system tray, and several open applications including "A - z/VM\_tmcc16.WS", "Command Prompt", "cslwave.z0plex.com - Pu...", "Launch CSL-WAVE v3.2...", and "CSL-WAVE 3.2.0 (WAV...".

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The discovery will auto-install the required service machines in the z/VM which should be managed by CSL-WAVE:

- these are three CMS guest systems needing 200 cylinders of disk space in total (can also use SFS)
- the default names of the service machines are WAVEWRKS, WAVEWRKC, WAVEWRKL
- best is to prepare DIRMAINT and the needed authorization for these service machines first - details can be found in the CSL-WAVE product documentation.

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

The screenshot shows the CSL-WAVE 3.2.0 GUI with the 'Auto-Detect Wizard for z/VM System TMCC16' open. The wizard is performing various tasks to discover and create service machines. The tasks and their statuses are as follows:

Task	Status
Searching for active CSL-WAVE Long service machine from previous installation	Not Found
Searching for active CSL-WAVE CSC service machine from previous installation	Not Found
Creating CSL-WAVE Short service machine	OK
Adding CSL-WAVE Short service machine disk 191	OK
Adding CSL-WAVE Short service machine disk 0399	OK
Creating CSL-WAVE Long service machine	OK
Adding CSL-WAVE Long service machine disk 191	OK
Adding CSL-WAVE Long service machine disk 0399	OK
Creating CSL-WAVE CSC service machine	OK
Adding CSL-WAVE CSC service machine disk 191	OK
Adding CSL-WAVE CSC service machine disk 0399	OK
Populating CSL-WAVE Short service machine disks	OK
Starting the CSL-WAVE Service Machines	Running
<b>Checking CSL-WAVE Service Machine level</b>	
Checking the z/VM System Version	
Checking the z/VM System CP language	
Checking z/VM Hardware information	
get System information	
Building CSL-WAVE Dummy Region	
Building AUTOLOG	
Adding CSL-WAVE Service Machines to AUTOLOG	

Below the wizard, a progress bar indicates the overall progress of the discovery process. The progress bar shows that the discovery is 100% complete. The status bar at the bottom of the GUI shows 'BTS Online' and 'waveadm'.

The server machines will be auto-started. As soon as their TCP ports show “Listen” the discovery will continue.

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

The screenshot shows the CSL-WAVE 3.2.0 GUI. A dialog box titled "CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16" is open, displaying the error "CSL-WAVE Auto-Detection Aborted!". The error message states: "CSL-WAVE Auto Detect failed! Error getting the CSL-WAVE Service Machine level. Could not get CSL-WAVE Service Machines level. Verify that the CSL-WAVE service machines are up".

The background interface includes a "Hardware Viewer" on the left with a tree view showing "TMCC16" and "z/VM". Below it is a "Property Viewer" with the text "No Object Selected". At the bottom, a "Log" window shows a table of operations:

Workunit Name	Start Time	End Time	Duration	Status	Progress
Create and Associate Device Pool with z/VM System					100%
Create and Associate Device Pool with z/VM System					100%
Create and Associate Device Pool with z/VM System					100%
Create and Associate Device Pool with z/VM System					100%
Create and Associate Device Pool with z/VM System					100%
Create and Associate Device Pool with z/VM System					100%
Create and Associate Device Pool with z/VM System					100%
Create and Associate Device Pool with z/VM System					100%
Elapsed Time: 00:02:36 - WAVE service Machines level...					
	2013-08-20 11:47:58	2013-08-20 11:47:58	0 seconds	Done	100%
	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%
	2013-08-20 11:34:06	2013-08-20 11:34:06	0 seconds	Done	100%

In case the service machines don't start properly or another problem occurs the discovery will stop. It can be restarted.

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled 'CSL-WAVE Demo' and shows a 'Hardware Viewer' on the left with a tree view containing 'TMCC16'. Below it is a 'Property Viewer' for 'TMCC16' with the following details:

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	suspend
Modified By	waveadm on 2013-08-20 8:30
Created By	waveadm on 2013-08-20 8:30

The main pane shows a terminal window with the following output:

```

netstat -co
VM TCP/IP Netstat Level 630      TCP/IP Server Name: TCP/IP

Active IPv4 Transmission Blocks:

User Id  Conn  Local Socket      Foreign Socket    State
-----  ---  -
FTPSEVE  1030  *..FTP-C         *..*              Listen
INTCLIEN 1026  *..TELNET        *..*              Listen
INTCLIEN 1051  TMCC16..TELNET   TMCC14..47969    Established
VSMREQIN 1038  *..44444        *..*              Listen
VSMREQIN 1047  TMCC16..44444    192.168.9.70..60633 Established
VSMRESRV 1006  *..55555        *..*              Listen
PERFSVM  1005  *..81           *..*              Listen
WAVEWRK  1025  *..1953        *..*              Listen
WAVEWRK  1001  *..1954        *..*              Listen

Active IPv6 Transmission Blocks:

User Id  Conn  State
-----  ---  -
VSMREQIN 1002  Listen
Local Socket: *..44445
Foreign Socket: *..*

Ready; T=0.01/0.01 11:52:41
    
```

The bottom status bar shows 'RUNNING TMCC16 642/001' and the user 'waveadm'.

Directly check in z/VM 'TMCC16' what the status shows for the service machines....and the status shows 'Listen' for all 3 service machines.

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

**CSL-WAVE Auto-Detect Wizard for z/VM System TMCC16**

Task	Status
Creating CSL-WAVE Long service machine	Skipped
Adding CSL-WAVE Long service machine disk 191	Skipped
Adding CSL-WAVE Long service machine disk 0399	Skipped
Creating CSL-WAVE CSC service machine	Skipped
Adding CSL-WAVE CSC service machine disk 191	Skipped
Adding CSL-WAVE CSC service machine disk 0399	Skipped
Populating CSL-WAVE Short service machine disks	Skipped
Starting the CSL-WAVE Service Machines	Skipped
Checking CSL-WAVE Service Machine level	OK
Checking the z/VM System Version	OK
Checking the z/VM System CP language	OK
Checking z/VM Hardware information	OK
get System information	OK
Building CSL-WAVE Dummy Region	Skipped
Building AUTOLOG	Skipped
Adding CSL-WAVE Service Machines to AUTOLOG	Skipped
Updating Directory for z/VM System	OK
Updating z/VM Guest information	OK
Updating z/VM Network information	OK
Updating z/VM Prototype information	OK
Updating z/VM Storage information	OK

Task	User	Start Time	End Time	Duration	Status	Progress
Update z/VM Storage Aspect for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done	100%
Update z/VM Prototype Aspect for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done	100%
Update z/VM Network Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Update z/VM Guest Aspect for z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%

After a restart of the discovery the process continues ...



## The WAVE GUI (Hardware Viewer – z/VM Discovery)

**Step 4/5 - User-Defined Classifications**

CSL-WAVE has found the following site-specific z/VM Guests (Virtual machines). Optionally, you can specify the type of Operating System for these virtual machines now by **RIGHT-CLICKING** the desirable Guest, or press "Next" to continue to the next step.

Guest Name	OS Distribution
ZHCP16	UNASSIGNED
PURIT	UNASSIGNED
569710C	UNASSIGNED
ZVMND	UNASSIGNED
XVMON	UNASSIGNED
WAVEADM	UNASSIGNED
CSLWAVE	UNASSIGNED
LINUX390	UNASSIGNED
CFCONSOL	UNASSIGNED
CF2	UNASSIGNED
ELIZA	UNASSIGNED
CF1	UNASSIGNED
OPMGRS2	UNASSIGNED
MVSMOINT	UNASSIGNED
OPMGRM	UNASSIGNED

All except the wellknown IBM z/VM service machines are shown in a list – can be sorted – classification can also be done later as guest update action

Progress: 100% 100% 100% 100% 100% 100%

Workunit Name: Update z/VM Storage Aspect for z/VM System, Update z/VM Prototype Aspect for z/VM System, Update z/VM Network Aspect for z/VM System, Update z/VM Guest Aspect for z/VM System, Assign Directory for z/VM System, Create and Associate Device Pool with z/VM System, Create and Associate Device Pool with z/VM System

Elapsed Time: 00:07:18 - Waiting for user input

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- After successful completion of the discovery run:
- the z/VM symbol in the 'Hardware Viewer' changes from grey to green
  - a list of the guest systems is presented
    - these guests are taken out of the z/VM user directory, but are unknown to CSL-WAVE
    - you can assign the OS distribution via right click to the guests - see next slides
  - all other guests are automatically assigned to pre-defined internal groups
    - CSL-WAVE understands the typical z/VM infrastructure incl. the services machines: these are automatically grouped into "locked" IBM groups.

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

**Step 4/5 - User-Defined Classifications**

CSL-WAVE has found the following site-specific z/VM Guests (Virtual machines). Optionally, you can specify the type of Operating System for these virtual machines now by **RIGHT-CLICKING** the desirable Guest, or press "Next" to continue to the next step.

Guest Name	OS Distribution
CF2	UNASSIGNED
CFCONSOL	UNASSIGNED
CSLWAVE	UNASSIGNED
ELIZA	UNASSIGNED
LINUX390	UNASSIGNED
MYSMAINT	UNASSIGNED
OPMGRM1	UNASSIGNED
OPMGRS1	UNASSIGNED
OPMGRS2	UNASSIGNED
PURIT	UNASSIGNED
WAVEADM	UNASSIGNED
XCAT80	UNASSIGNED
XYMOM	UNASSIGNED
ZHCP16	UNASSIGNED

Assign appropriate OS to the guest – so that WAVE knows how to "interact" with the guest

Progress:

Task	Progress
Update z/VM Storage Aspect for z/VM System	100%
Update z/VM Prototype Aspect for z/VM System	100%
Update z/VM Network Aspect for z/VM System	100%
Update z/VM Guest Aspect for z/VM System	100%
Assign Directory for z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%

CSL-WAVE needs to know the OS level of the Linux systems to be managed later.

## The WAVE GUI (Hardware Viewer – z/VM Discovery)

The screenshot displays the CSL-WAVE 3.2.0 interface. A central dialog box titled "CSL-WAVE Auto-Detection Wizard for z/VM System TMCC16" is open, showing "Step 5/5 - CSL-WAVE Auto-Detection Done!". The dialog contains a green cloud icon and text stating: "CSL-WAVE has completed the necessary steps to configure the z/VM System TMCC16. Press 'Finish' to close this window." Below the dialog, a yellow box contains the text: "If GUI animation is enabled in the background you will now see the discovered objects".

The background interface shows a "Hardware Viewer" pane on the left with a "No Object Selected" message. At the bottom, a progress table is visible:

Task	Progress
Update z/VM Storage Aspect for z/VM System	100%
Update z/VM Prototype Aspect for z/VM System	100%
Update z/VM Network Aspect for z/VM System	100%
Update z/VM Guest Aspect for z/VM System	100%
Assign Directory for z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%
Create and Associate Device Pool with z/VM System	100%

The task table below the progress bar shows the following details:

Task	User	Start Time	End Time	Duration	Status
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done

In the background you will see moving objects

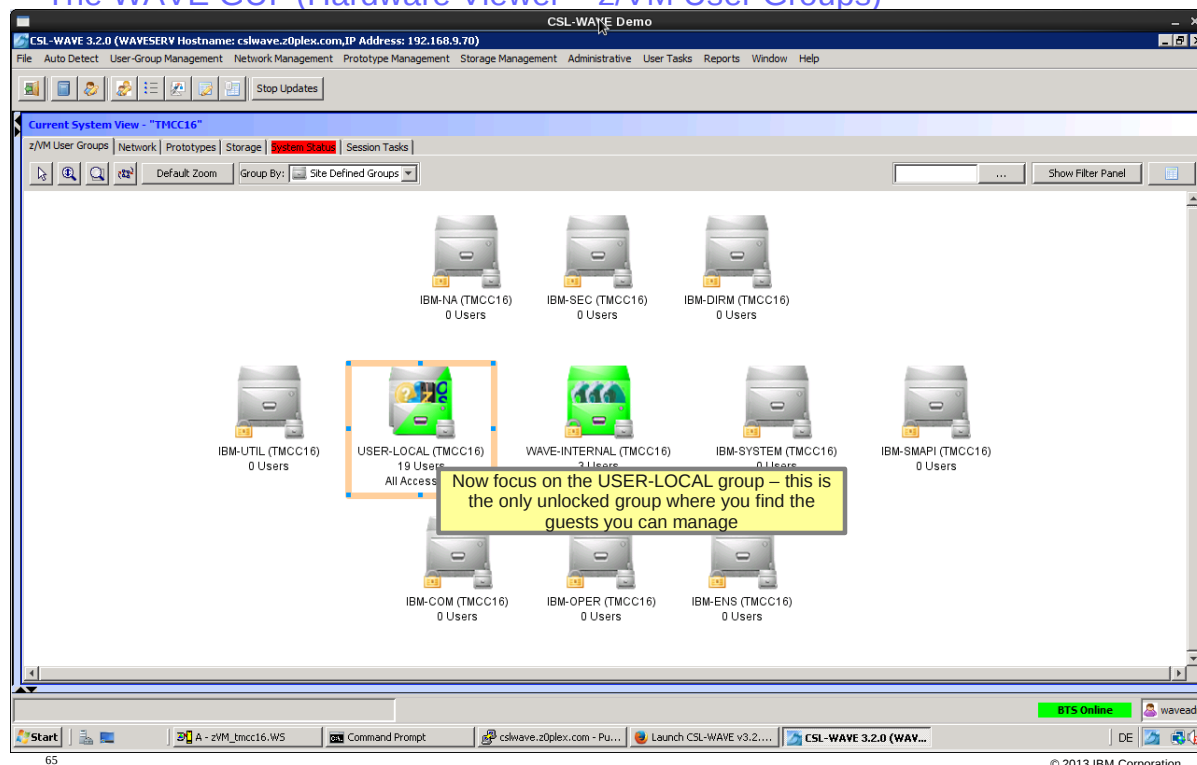
## The WAVE GUI (Hardware Viewer)

The screenshot displays the CSL-WAVE 3.2.0 GUI in the Hardware Viewer mode. The main window shows a grid of z/VM User Groups, including IBM-NA, IBM-SEC, IBM-ORM, IBM-UTL, USER-LOCAL, WAVE-INTERNAL, IBM-SYSTEM, IBM-SMAP, IBM-COM, IBM-OPER, and IBM-ENS. Each group is represented by an icon and a user count. A Property Viewer on the left provides details for the selected system (TMCC16), such as IP Address (192.168.9.16) and Total Users (139). At the bottom, a log table shows recent system updates.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update z/VM Storage Aspect for z/VM System	waveadm	2013-08-20 11:52:35	2013-08-20 11:52:45	10 seconds	Done	100%
Update z/VM Prototype Aspect for z/VM System	waveadm	2013-08-20 11:52:33	2013-08-20 11:52:35	2 seconds	Done	100%
Update z/VM Network Aspect for z/VM System	waveadm	2013-08-20 11:52:28	2013-08-20 11:52:32	4 seconds	Done	100%
Update z/VM Guest Aspect for z/VM System	waveadm	2013-08-20 11:52:20	2013-08-20 11:52:25	5 seconds	Done	100%
Assign Directory for z/VM System	waveadm	2013-08-20 11:52:18	2013-08-20 11:52:18	0 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%
Create and Associate Device Pool with z/VM System	waveadm	2013-08-20 11:52:13	2013-08-20 11:52:14	1 seconds	Done	100%

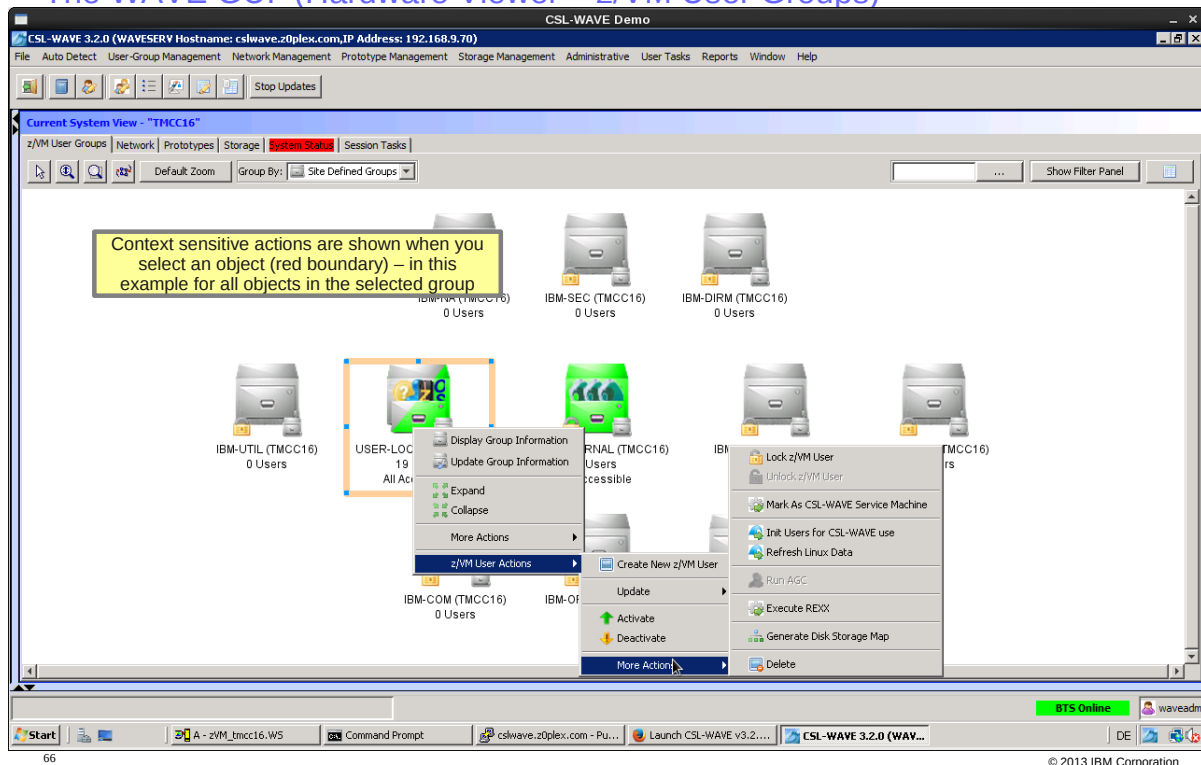
Now the different tabs are filled out with manageable objects  
 First show the z/VM User Groups tab.  
 Explain navigation

## The WAVE GUI (Hardware Viewer – z/VM User Groups)



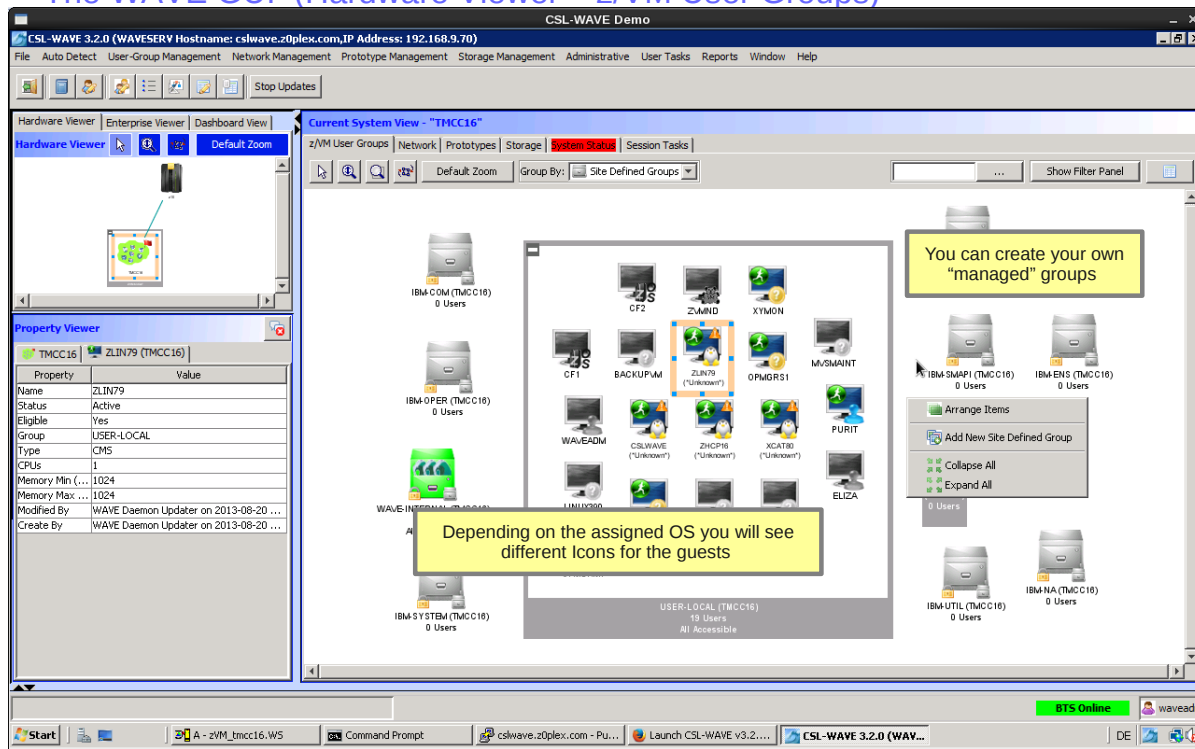
Focus on USER-LOCAL – here you find the guests classified earlier

## The WAVE GUI (Hardware Viewer – z/VM User Groups)



Show actions

## The WAVE GUI (Hardware Viewer – z/VM User Groups)



Can define own groups and move one or multiple guest into it by drag&drop

# The WAVE GUI (Hardware Viewer – z/VM User Groups)

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "Current System View - 'TMCC16'" and shows a grid of system icons representing various z/VM user groups. A central dialog box displays the message: "Site defined group DEMO LINUX updated successfully." with an "OK" button. On the left, the "Property Viewer" shows details for the selected system (TMCC16):

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	3
Total Prototy...	2
Total Volume ...	26
Total Volume ...	2
DASD Free St...	4.75 GB
DASD Storag...	34.72 GB
DASD Storag...	92.60 GB
Modified By	waveadm on 2013-08-20 8:30
Created By	waveadm on 2013-08-20 8:30

The taskbar at the bottom shows the Start button, a taskbar with "A - z/VM\_tmcc16.W5", "Command Prompt", "cslwave.z0plex.com - Pu...", "Launch CSL-WAVE v3.2....", and "CSL-WAVE 3.2.0 (WAV...". The system tray includes "BTS Online" and "waveadm".



## The WAVE GUI (Hardware Viewer – z/VM User Groups)

Searching one or multiple guests with names starting with Z\* -> all groups covering such guests are being expanded + mapping guests are shown (red boundaries)

The screenshot shows the WAVE GUI interface with the following components:

- Hardware Viewer:** Shows a physical server icon.
- Property Viewer:** Displays details for the selected guest (ELIZA (TMCC16)).
- z/VM User Groups:** A grid of virtual machines. A search filter 'Z\*' is applied, and several groups are expanded to show their internal components. Red boundaries highlight the expanded groups.

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A
Total Disk Sp...	2.00
Inconsistent	No
Connectable	Yes
Prototype	N/A
CPU(s)	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	waveadm on 2013-08-20 13:52:19
Create By	WAVE Daemon Updater on 2013-08-20 ...

Searching of guests by name

## The WAVE GUI (Hardware Viewer – z/VM User Groups)

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage

Filtering can be used to reduce the number of shown objects

Group By: Site Defined Groups Hide Filter Panel

Property Viewer

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A
Total Disk Sp...	2.00
Inconsistent	No
Connectable	Yes
Prototype	N/A
CPU's	1
Memory Min (...)	1024
Memory Max (...)	1024
Modified By	waveadm on 2013-08-20 13:52:19
Create By	WAVE Daemon Updater on 2013-08-20 ...

Filter Active Guest Name = z\*, Account = \*

Filter: Guest Name = z\* And Account = \*

Filtering based on multiple criteria is also possible

Start A - z/VM\_tmcc16.W5 Command Prompt cslwave.z0plex.com - Pu... Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... BTS Online waveadm

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## Filtering

## The WAVE GUI (Hardware Viewer – z/VM User Groups)

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Select Fields... Export to CSV

22/139 Guests ( Known IBM machines are hidden )

OPMGRM1	TMCC16
XVMON	TMCC16
ELIZA	TMCC16
CF1	TMCC16
CF2	TMCC16
MVSMAINT	TMCC16
LINUX390	TMCC16
ZVMND	TMCC16
XCAT90	TMCC16
CSLWAVE	TMCC16
FLBTF	TMCC16
WAVEADM	TMCC16
CFCONSOL	TMCC16
WAVEWRK1	TMCC16
OPMGRS2	TMCC16
WAVEWRK3	TMCC16
5697310C	TMCC16
BACKUPVM	TMCC16
OPMGRS1	TMCC16
WAVEWRK4	TMCC16
ZHCP16	TMCC16
ZLIN79	TMCC16

Property Viewer

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A
Total Disk Sp...	2.00
Inconsistent	No
Connectable	Yes
Prototype	N/A
CPU#	1
Memory Min (...)	1024
Memory Max ...	1024
Modified By	waveadm on 2013-08-20 13:52:19
Create By	WAVE Daemon Updater on 2013-08-20 ...

Account = \* +

Go Reset

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Switch between different views

## The WAVE GUI (Hardware Viewer – z/VM User Groups)

```

x3270-4 9.152.123.14
File Options Macros
USER TOTAL = 42 , ACTIV = 3 , DISCO = 39 , NETZ = 0
CSLWAVE - DSC OPERATOR - SYSC VMSERVS - DSC WAVEWRKC - DSC
DATAMOVE - DSC OPERSYMP - DSC VMSERVU - DSC WAVEWRKL - DSC
DIRMAINT - DSC OPMGRM1 - DSC VSM - TCP/IP WAVEWRKS - DSC
DISKACHT - DSC OPMGRS1 - DSC VSMVSRV - DSC XCAT - DSC
DTCMAP1 - DSC OPMGRS2 - DSC VSMGUARD - DSC XCAT80 - DSC
DTCVSW1 - DSC PERFSVM - DSC VSMREQIN - DSC XYMON - DSC
DTCVSW2 - DSC PERSMAP1 - DSC VSMREQIU - DSC ZHCP - DSC
EREP - DSC PURIT -L0003 VSMREQ16 - DSC ZHCP16 - DSC
FTPSEVE - DSC TCP/IP - DSC VSMWORK1 - DSC ZLIN
LOHCDST - DSC VMSERVP - DSC VSMWORK2 - DSC
OPERATNS - DSC VMSERVR - DSC VSMWORK3 - DSC

Ready; T=0.01/0.01 12:45:10

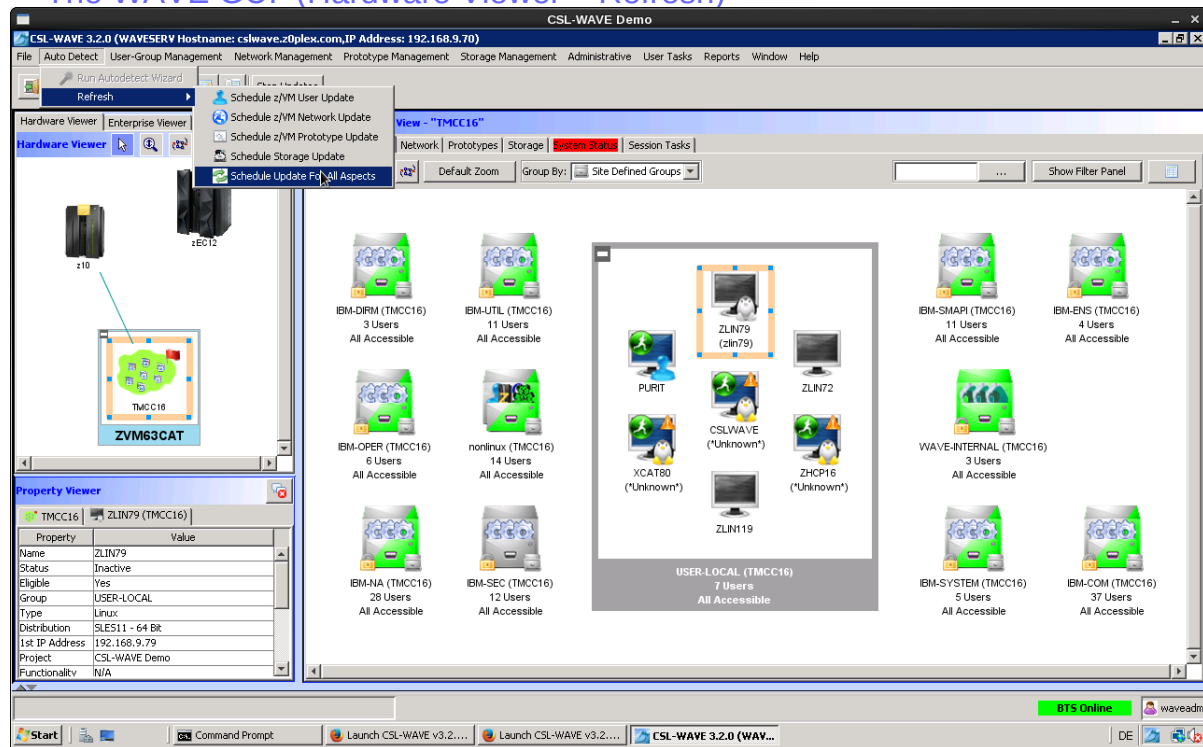
RUNNING TMCC16
042/001
  
```

Here the view from the "green screen" in z/VM

30.09.13

Green screen view of the same managed z/VM

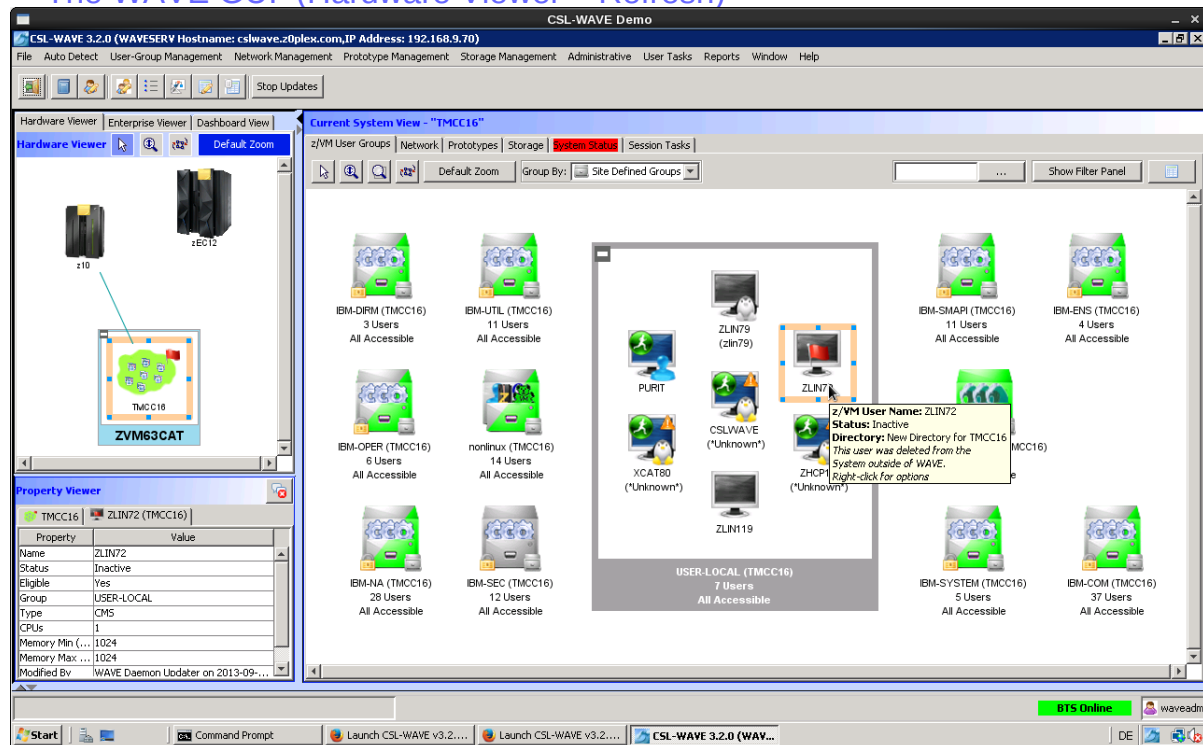
## The WAVE GUI (Hardware Viewer – Refresh)



At any time you can refresh the z/VM status – for example if this z/VM system is also managed outside of the CSL-WAVE GUI with normal green-screen z/VM tasks.

The refresh detects inconsistencies in the CSL-WAVE database compared to the actual z/VM state and the corresponding objects will get a red flag so that the CSL-WAVE GUI user can then do cleanup actions.

## The WAVE GUI (Hardware Viewer – Refresh)



In this example a guest was deleted outside of the CSL-WAVE GUI – you can now cleanup the CSL-WAVE database to fix this issue – or look at the guest details and later re-create it with the same configurations (not the same disks!)

# The WAVE GUI (Hardware Viewer – Refresh)

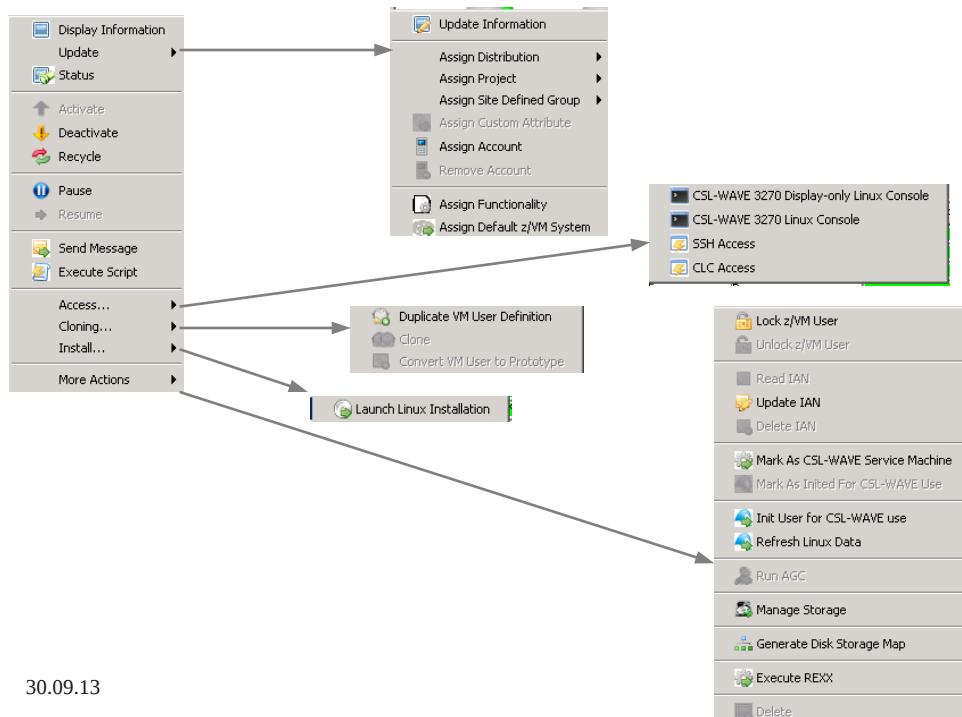
The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "Current System View - 'TMCC16'". It features a top menu bar with options like File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. Below the menu is a toolbar with various icons and a "Stop Updates" button.

The interface is divided into several panes:

- Hardware Viewer:** Shows a graphical representation of hardware components, including z10 and zEC12 servers, and a ZVM63CAT system.
- Property Viewer:** A table showing properties for the selected system (ZLIN72 (TMCC16)).
- System View:** A central area displaying various system icons and their associated user counts and access levels. A context menu is open over the ZLIN72 system, showing options like "Display Information", "Remove from DB", "More Actions", "Lock z/VM User", "Unlock z/VM User", "Read IAN", "Update IAN", and "Delete IAN".

The bottom of the window shows a Windows taskbar with the Start button, several open applications (Command Prompt, Launch CSL-WAVE v3.2..., Launch CSL-WAVE v3.2..., CSL-WAVE 3.2.0 (WAV...)), and system tray icons including "BTS Online" and "waveadm".

## The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)



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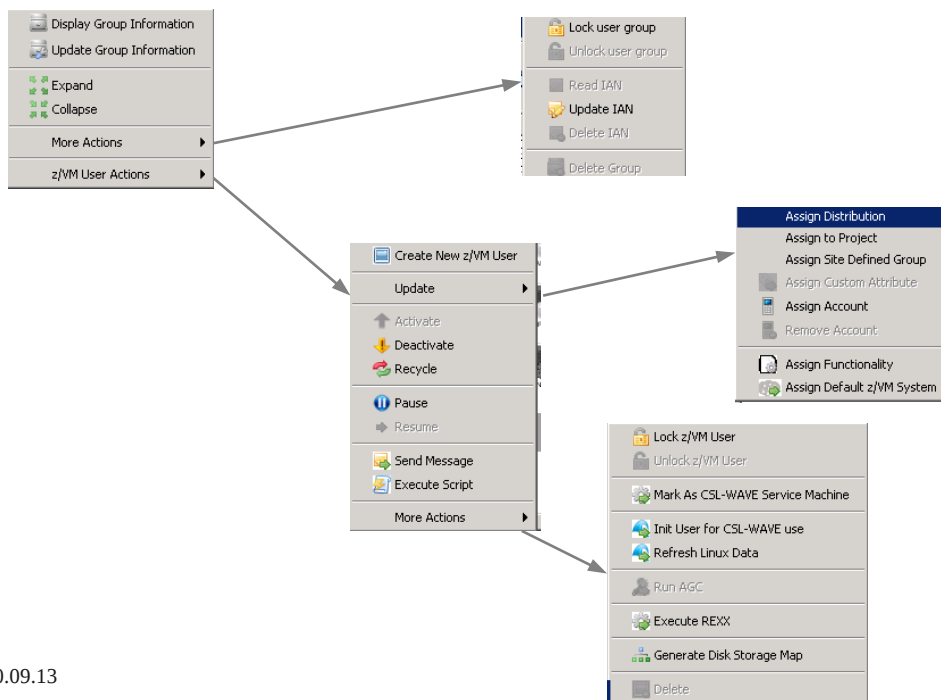
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Here an overview of the possible actions for a managed Linux guest system.



## The WAVE GUI (Hardware Viewer – z/VM User Groups – Group Actions)



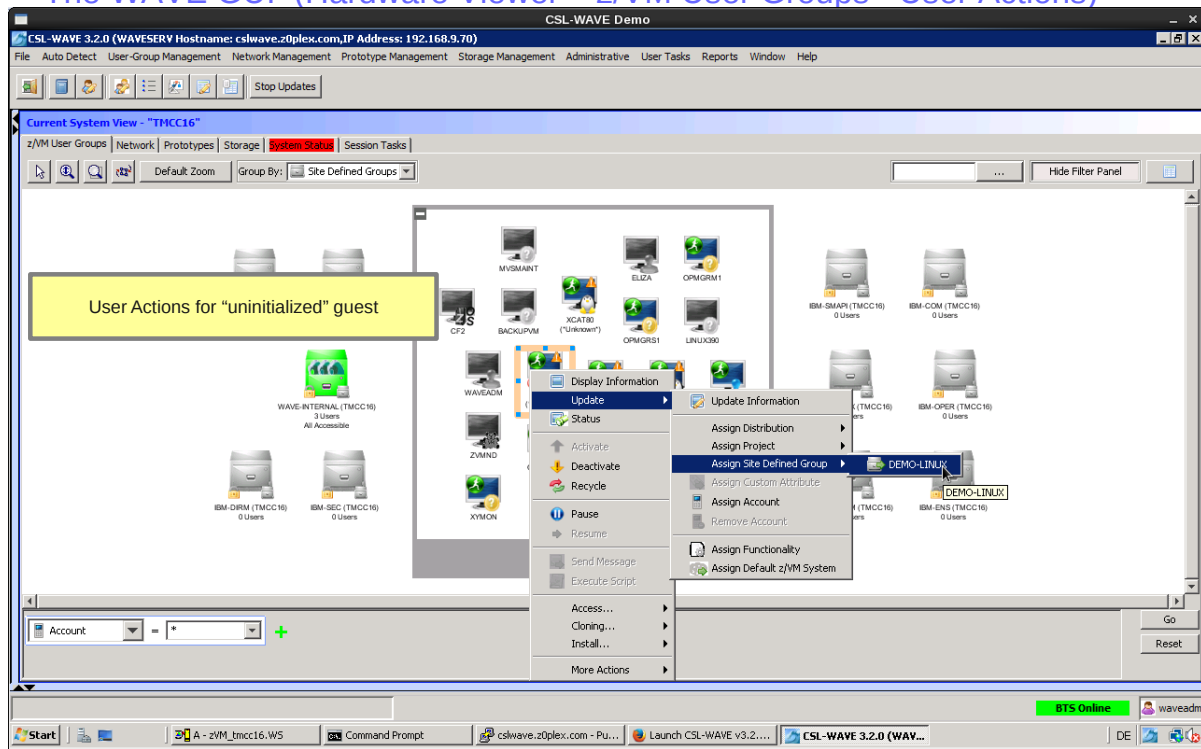
30.09.13

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Here an overview of the possible actions for a group of managed Linux guest systems.

## The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)

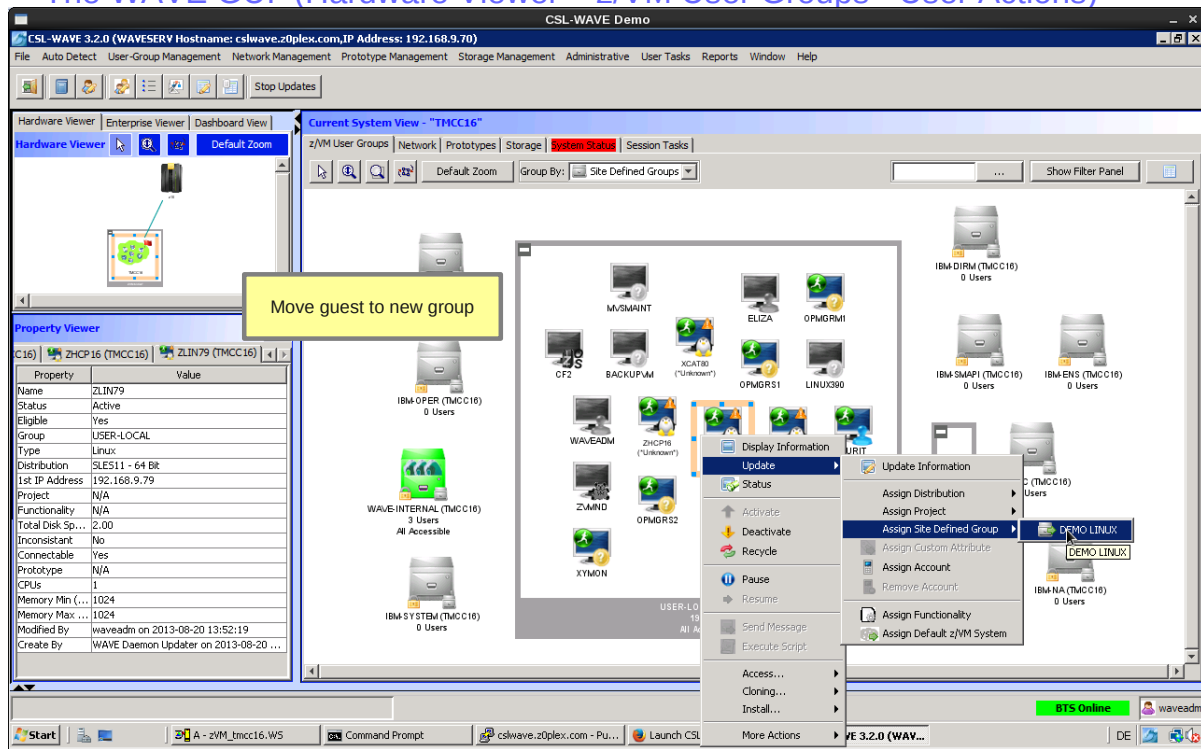


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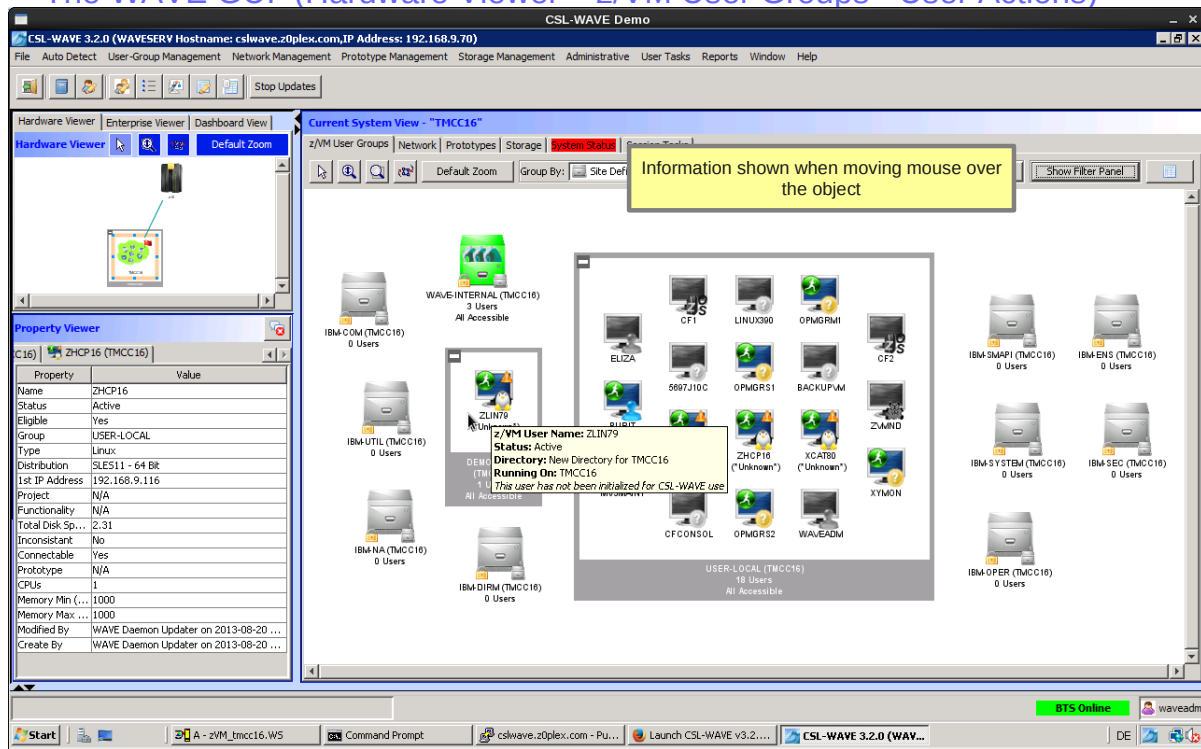
Some actions available for an “uninitialized” guest – only some are valid – for example move to a different group.

## The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)



Move can be done with drag&drop or with the selection of the action task from the menu

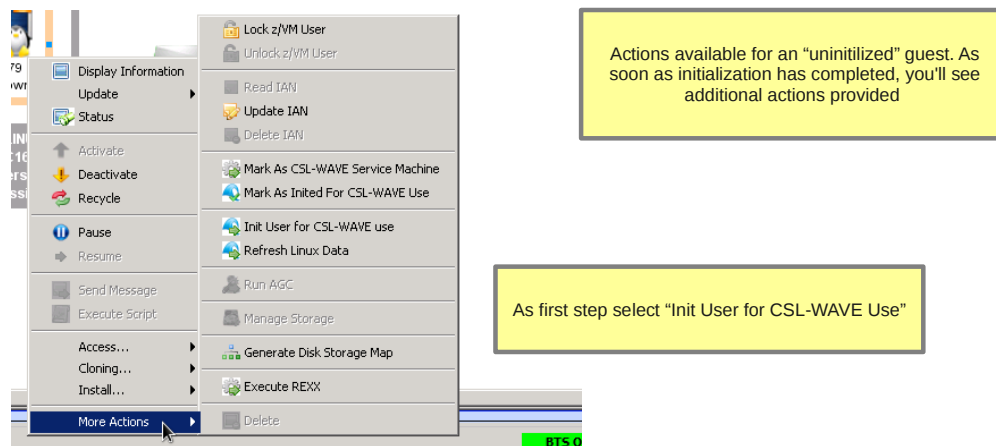
## The WAVE GUI (Hardware Viewer – z/VM User Groups - User Actions)



Information shown when moving the mouse over the object

Explain the different symbols for the guests  
 Initialized/uninitialized  
 Connectable/non-connectable  
 up/down

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



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To be able to run the task “Init User for CSL-WAVE use” in a z/VM guest, following interface must be available to the running Linux OS:

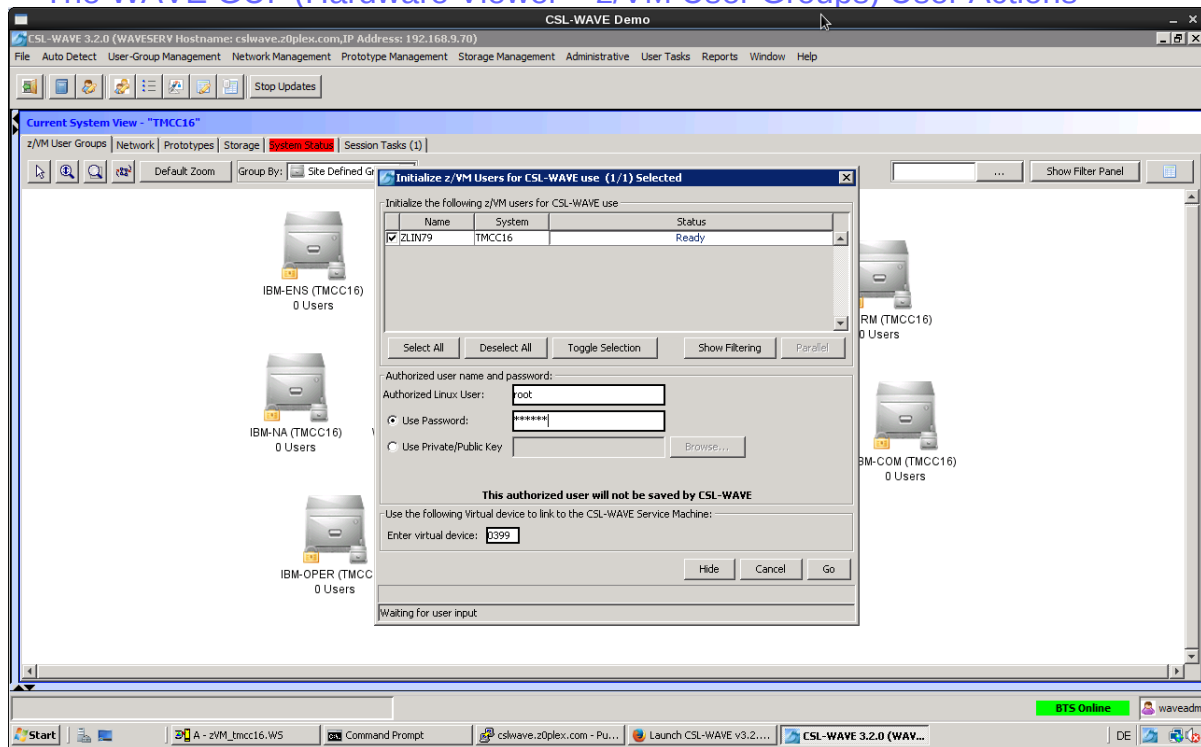
- CMS Filesystem driver and utility (cmsfs) to allow Linux to access CMS files on CMS minidisks
- z/VM CP interface device driver (vmcp) to allow Linux to send commands to z/VM CP.

After starting the task you have to provide:

- password or passphrase for an authorized Linux user
- devicenumbr which is used for the read-only access to WAVEWRKS 399 minidisk (See CSL-WAVE v3.2.0 User Guide and Reference p.131)

After successful task completion, additional actions are enabled which can be performed for/with the z/VM guest system. Other actions might have been disabled (for example cloning – if there are settings in the guest which inhibit proper reconfiguration after cloning). Guest details comprise information of the Linux as well as the z/VM environment.

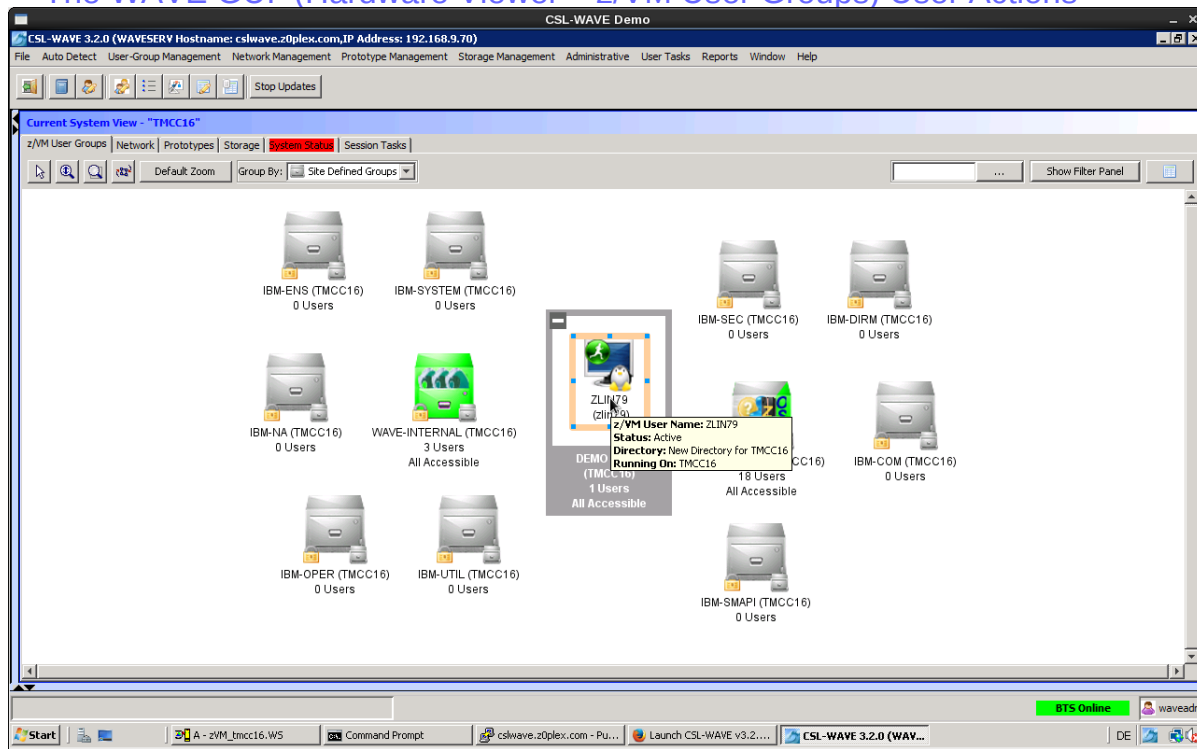
## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Enter authorized Linux user id: CSL-WAVE uses it for collecting information about this Linux system or even initiate specific actions.

This step doesn't install any large package but only some scripts are added to /usr/wave and a user id WAVEuser is created. It also links the CSL-WAVE service machine WAVEWRKS 399 disk to the guest for future reads via the cmsfs driver utility.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Now the guest is connectable and fully initialized for management by CSL-WAVE.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

After successful initialization - all tabs are filled with values. For "uninitialized" guests only z/VM values are presented.

z/VM System Data

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC16	Active	Yes	DEMO LINUX	Yes		1	1024 MB	1024 MB	2.00 GB	g	N/A

Connection Availability from This Work Station

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.79	DEMOLAN	DEMOLAN	Reachable

Update  
Created By: WAVE Daemon Updater on 2013-08-20 13:50:23  
Last Modified By: waveadm on 2013-08-20 14:18:10

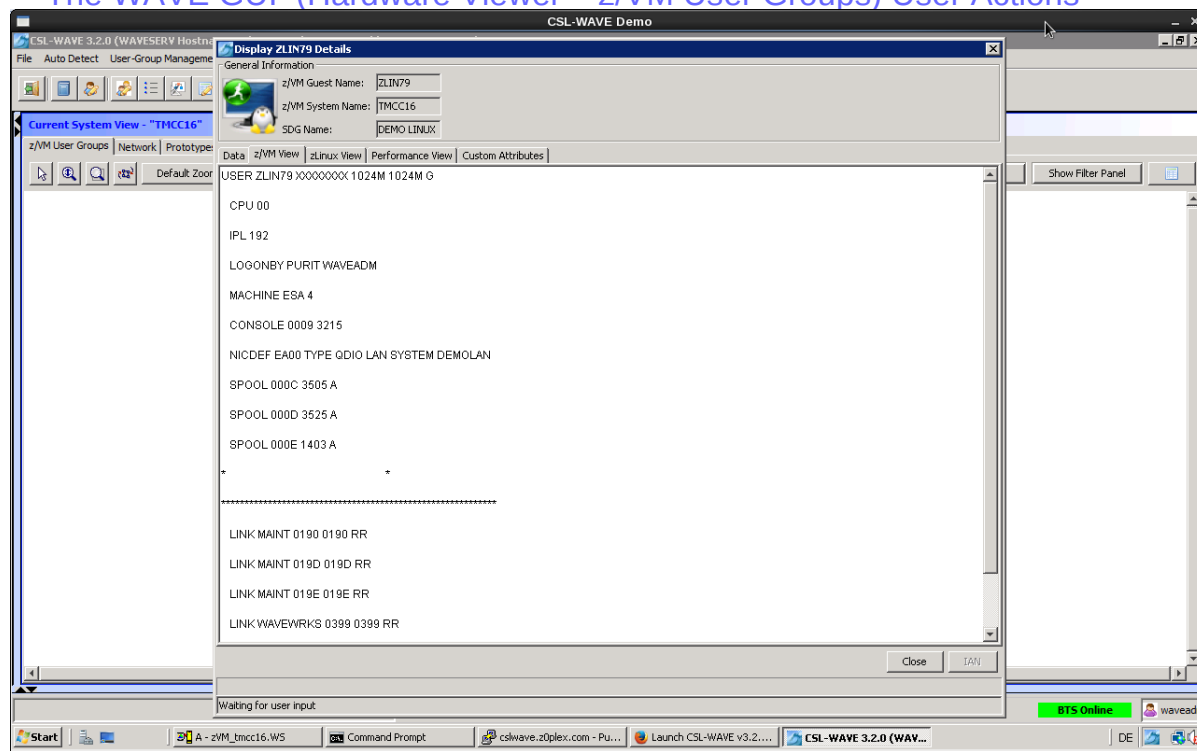
Detailed information for the guest is provided by CSL-WAVE after initialization.

Next we will show you the information provided for Linux guest ZLIN79:

- z/VM View: available from within z/VM (z/VM directory information)
- zLinux View: Real-time information out of the Linux guest OS slide 86



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Directory of the guest as seen in z/VM

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot shows the 'Display ZLIN79 Details' window in the CSL-WAVE 3.2.0 GUI. The window is titled 'Display ZLIN79 Details' and contains the following information:

**General Information:**

- z/VM Guest Name: ZLIN79
- z/VM System Name: TMCC16
- SDG Name: DEMO LINUX

**File System Information (df -ah):**

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Mount Point	Status (Capacity)
/dev/dasda1	ext3	1.57	1.03	0.47	STD	/	66%
proc	proc	0.00	0.00	0.00	STD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	/dev/pts	0%

**Network Information (ifconfig -all):**

Device	MAC Address	IP Address	Status
eth0	02:00:16:00:00:31	192.168.9.79	ONLINE
lo		127.0.0.1	ONLINE

**Routing Information (route):**

Destination	Gateway	Mask	Flags	Metric	Ref	Use	Interface	Reachable
0.0.0.0	192.168.9.1	0.0.0.0	UG	0	0	0	eth0	Reachable
loopback	*	255.0.0.0	U	0	0	0	lo	N/A
link-local	*	255.255.0.0	U	0	0	0	eth0	N/A
192.168.9.0	*	255.255.255.0	U	0	0	0	eth0	N/A

**Uptime Information:**

Uptime: up 0:12 hours

The window also shows a 'Waiting for user input' message at the bottom. The taskbar at the bottom of the screen displays the Start button, several open applications including 'A - z/VM\_tmcc16.W5', 'Command Prompt', 'cslwave.z0plex.com - Pu...', 'Launch CSL-WAVE v3.2...', and 'CSL-WAVE 3.2.0 (WAV...', and system tray icons for 'BTS Online' and 'waveadm'. The system clock shows 'DE' and the date '86'.

Real-time information out of the Linux guest OS ZLIN79

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot shows the 'Display ZLIN79 Details' window in the CSL-WAVE GUI. The window is divided into several sections:

- General Information:**
  - z/VM Guest Name: ZLIN79
  - z/VM System Name: TMCC16
  - SDG Name: DEMO LINUX
- Linux Performance Data:**
  - CPU:** A circular gauge showing the CPU usage, with a 'Idle' label.
  - Memory:** A vertical bar chart showing 868.38 MB Free and 127.00 MB Used.
  - Swap (408449024/4...):** A vertical bar chart showing 389.53 MB Free.
  - Load Average:**

	1 Minute	5 Minutes	15 Minutes
Load Average	0.05	0.07	0.05
  - Cache:**

Type	Amount
Buffers	5.70 MB
Cache	73.51 MB
  - Tasks (76 total):**

Status	Amount
Running	2
Sleeping	74
Stopped	0
Zombie	0
- Processes:**

Process Name	PID	User	Prio.	Nice	Virtual	Resident	Share	Status	% CPU	% Memory	Time
init	1	root	20	0	2.43 KB	888	752	S	0.0	0.1	0:00.24
kthreadd	2	root	20	0	0	0	0	S	0.0	0.0	0:00.00
ksoftirqd/0	3	root	20	0	0	0	0	S	0.0	0.0	0:00.02
kworker/u:0	4	root	20	0	0	0	0	S	0.0	0.0	0:00.00
kworker/uj:0	5	root	20	0	0	0	0	S	0.0	0.0	0:00.02
imigration/0	16	root	RT	0	0	0	0	S	0.0	0.0	0:00.00

Monitoring views – can be correlated z/VM view and Linux view (see next slide)

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the 'Display ZLIN79 Details' window in the CSL-WAVE GUI. The window is titled 'CSL-WAVE Demo' and shows various system metrics for the z/VM Guest Name 'ZLIN79'.

**General Information:**

- z/VM Guest Name: ZLIN79
- z/VM System Name: TMCC16
- SDG Name: DEMO LINUX

**z/VM Performance Data:**

- Machine Information: Machine Type [ESA], IPL Device [0192]
- Storage Information: Storage Type [V], Configured Storage [1] GB, XStore [0] MB
- Pages Information: RES [43688] PREF [0], WS [43636] NPREF [1], RESVD [0] READS [2], LOCK [52] WRITES [2]
- CPU Information: Table with columns ID, CTIME, VTIME, TTIME, IO.

**Linux Performance Data:**

- CPU:** A circular gauge showing CPU usage, with a label 'Idle'.
- Memory:** A vertical bar chart showing 868.38 MB Free and 137.66 MB Used.
- Swap (408449024):** A vertical bar chart showing 389.53 MB Free.
- Load Average:** Table with columns 1 Minute, 5 Minutes, 15 Minutes.
- Cache:** Table with columns Type, Amount.
- Tasks (76 total):** Table with columns Status, Amount.
- Processes:** Table with columns Process Name, PID, User, Prio., Nice, Virtual, Resident, Share, Status, % CPU, % Memory, Time.

The bottom of the window shows a taskbar with the Start button, several open applications (A - z/VM\_tmcc16.WS, Command Prompt, cslwave.z0plex.com - Pu..., Launch CSL-WAVE v3.2..., CSL-WAVE 3.2.0 (WAV...)), and system tray icons (BTS Online, waveadm). The status bar at the bottom indicates 'Waiting for user input' and '© 2013 IBM Corporation'.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. A dialog box titled "Refresh Linux Data (1/1) Selected, Last Run: 1/1 Ended" is open, showing a table of z/VM guests and a form for user authentication.

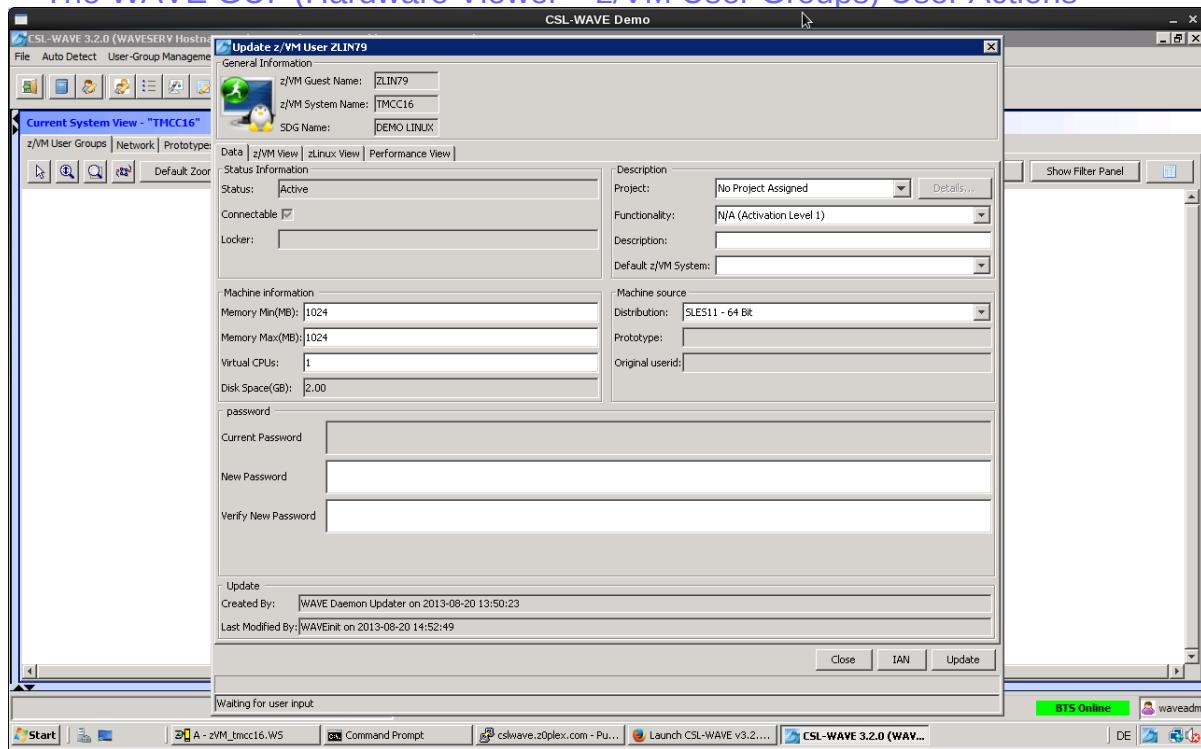
Name	System	Status
zlin7*	TMCC16	Done - Request added

Below the table, there are fields for "Authorized Linux User:" (containing "root") and "Use Password:" (containing "\*\*\*\*\*"). A warning message states: "This authorized user will not be saved by CSL-WAVE".

At the bottom of the GUI, a task log table is visible:

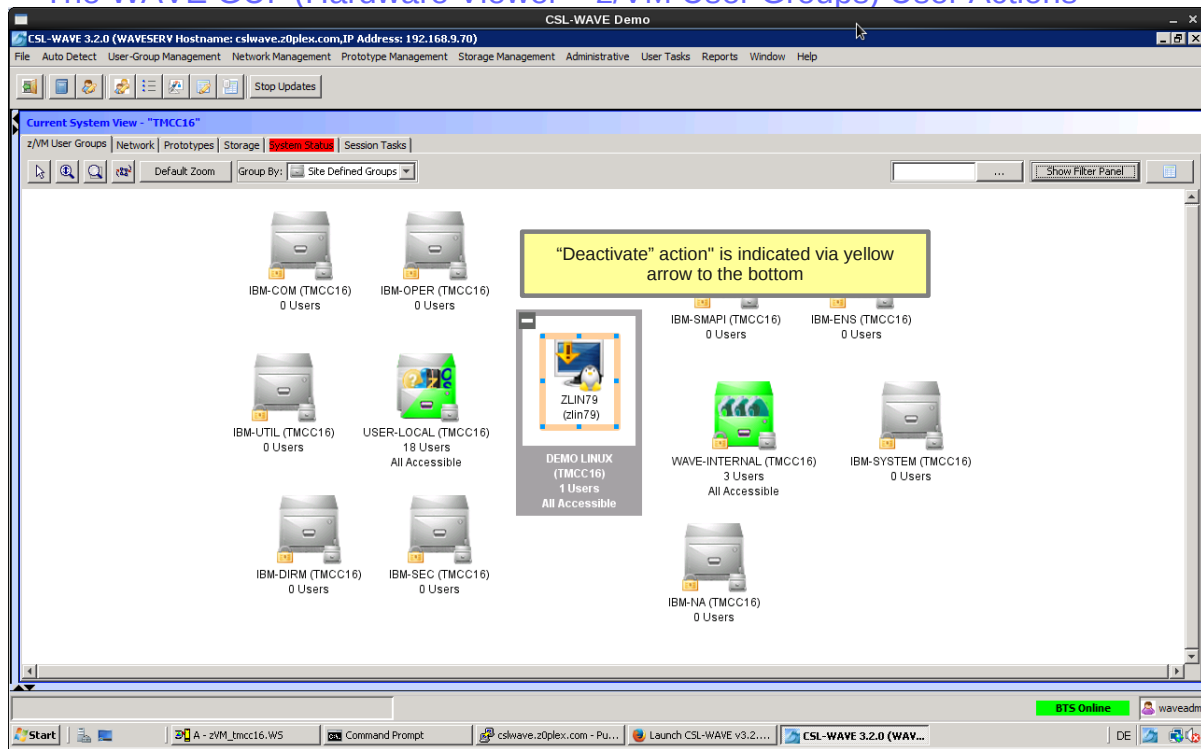
Workunit Name	Workunit Name	Status	Progress			
Refresh Linux Data for z/VM Guests	waveadm	Waiting for user input				
Delete z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43	22 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:57	2013-08-23 07:36:58	1 seconds	Done	100%
Delete z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24	15 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Refresh Linux Repository	waveadm	2013-08-23 06:52:12	2013-08-23 07:05:25	12.14 minutes	Done	100%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



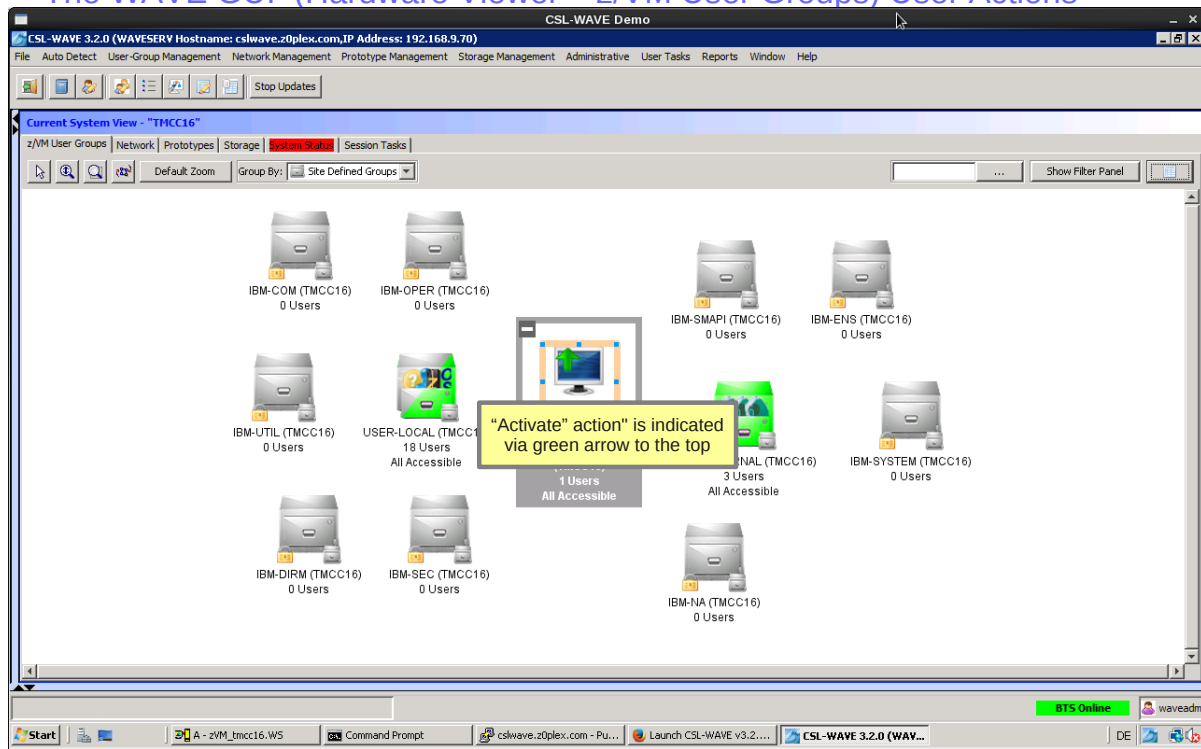
Update a guest – for example assign more storage or assign to a project ...

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



## Deactivation

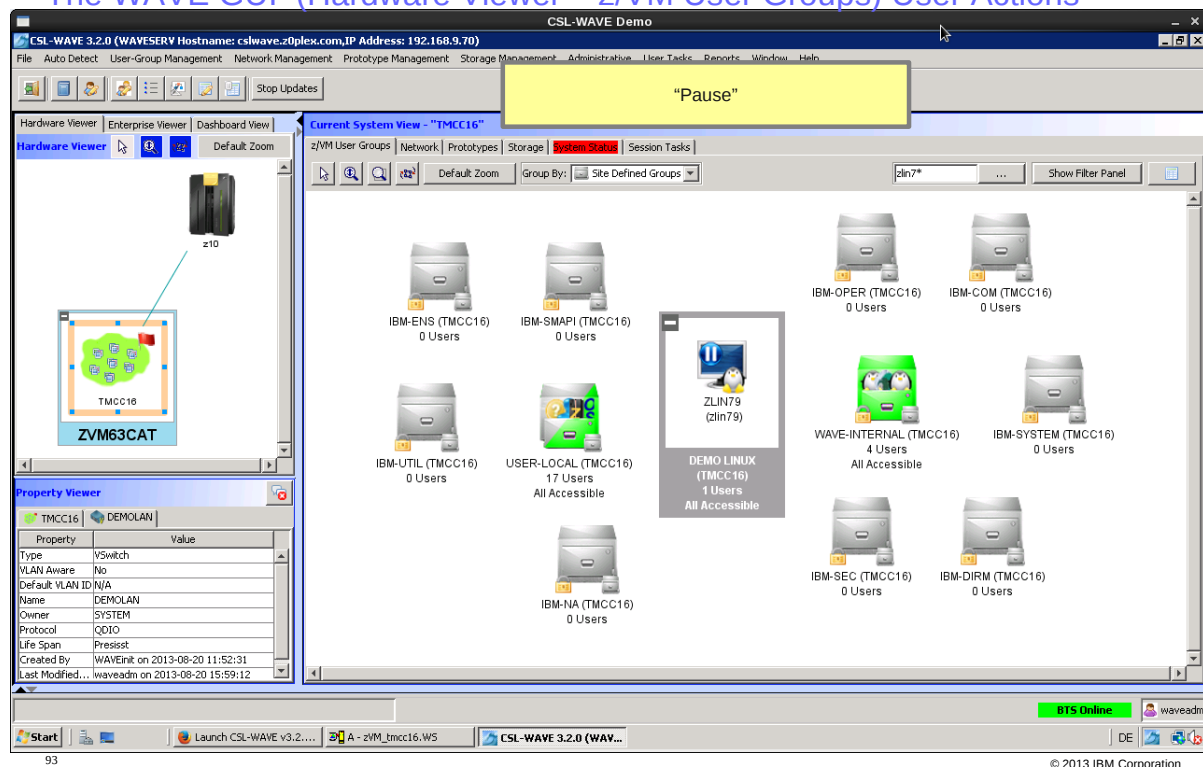
## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



## Activation



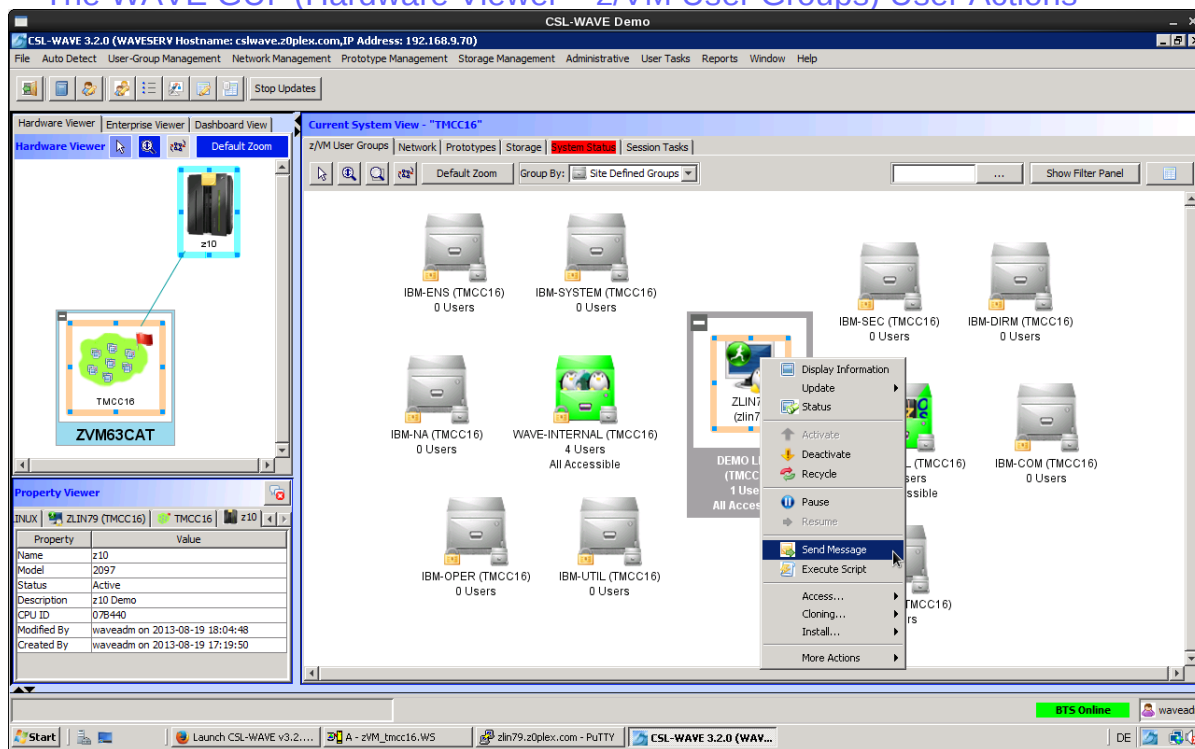
## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Pause – this will do a “CP STOP” for all the Linux virtual CPs.

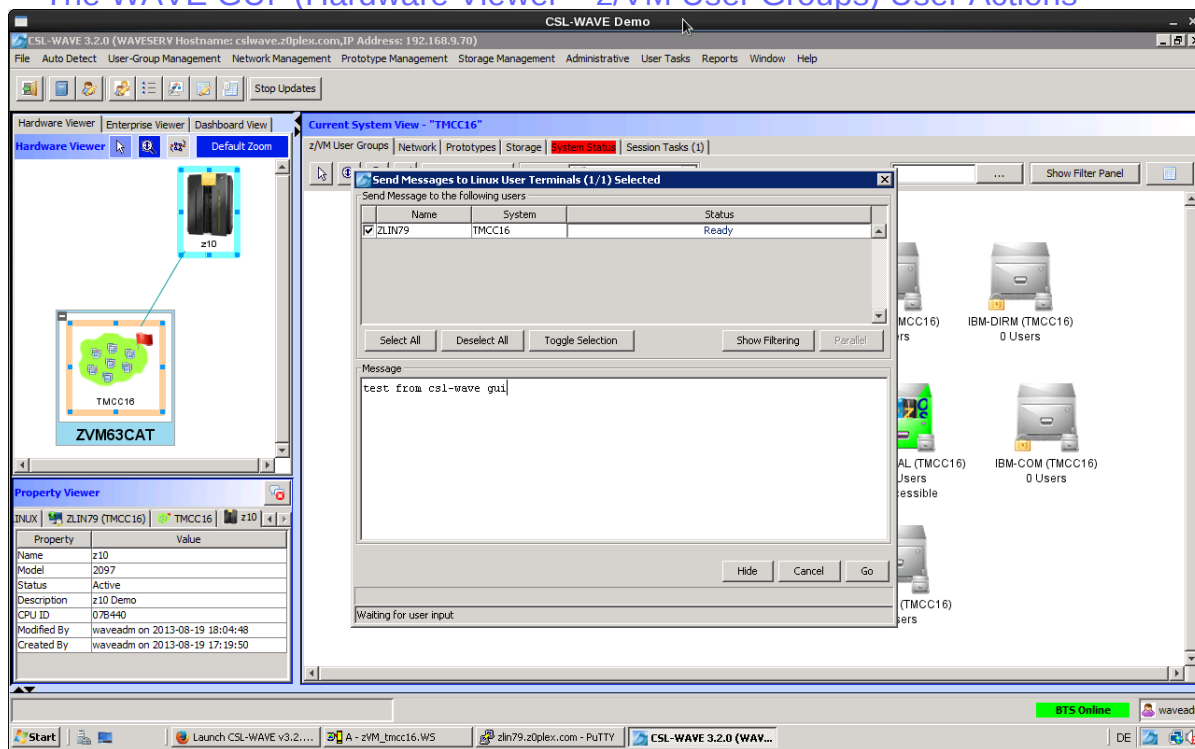
The guest can run again with resume – this will do a CP START for the CPs.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



You can send a message to Linux user ids which are logged on in one or multiple Linux systems

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



In order to see the message 'test from csl-wave GUI' arriving at the target Linux ZLN79 system, a background SSL session is started - see next slide.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled "CSL-WAVE Demo" and shows a terminal session for user "root" on host "zlin79.z0plex.com". The terminal output includes login details and a message from the administrator.

```

login as: root
Using keyboard-interactive authentication.
Password:
Last login: Tue Aug 20 21:43:12 2013 from 192.168.9.27
zlin79:~ #

-----
Message From CSL-WAVE administrator waveadm:
test from csl-wave gui

-----

*This message was sent using CSL-WAVE
    
```

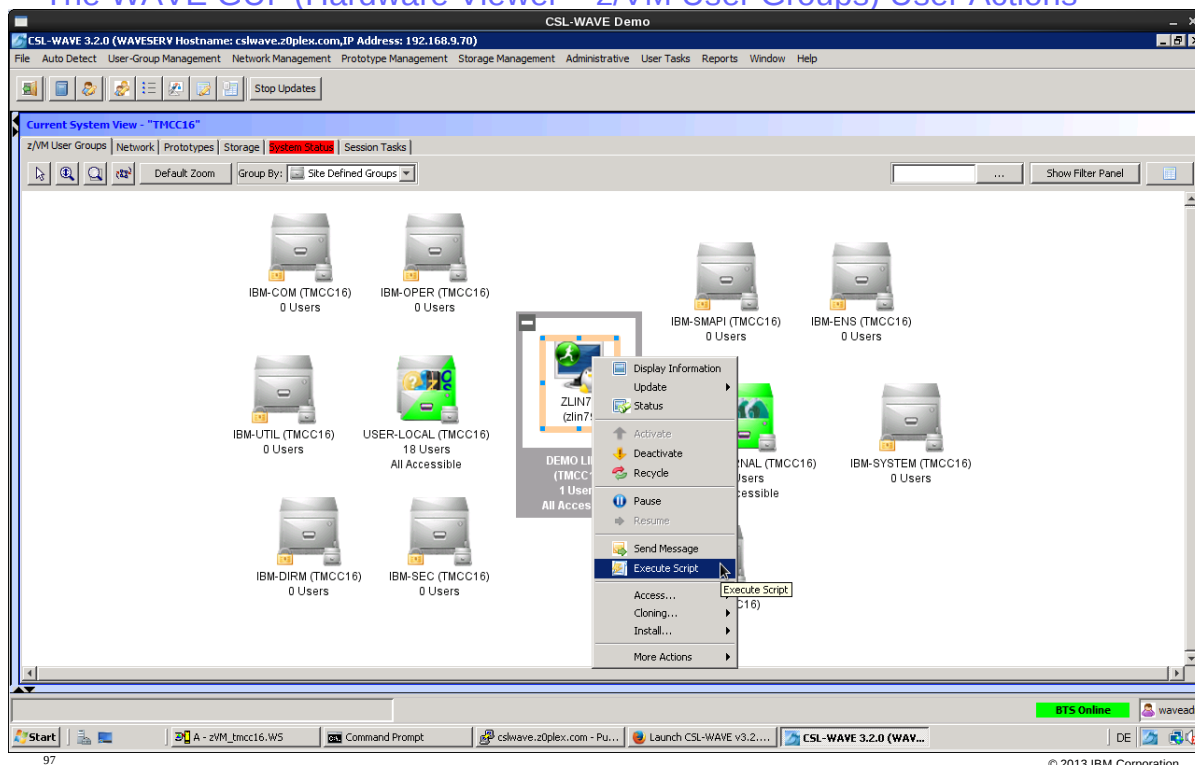
Below the terminal is a "Property View" for the selected hardware component:

Property	
Name	
Model	
Status	
Description	
CPU ID	078490
Modified By	waveadm on 2013-08-19 18:04:48
Created By	waveadm on 2013-08-19 17:19:50

The right-hand side of the interface shows a hardware viewer with two components: "IBM-DIRM (TMCC16)" and "IBM-COM (TMCC16)", both with "0 Users".

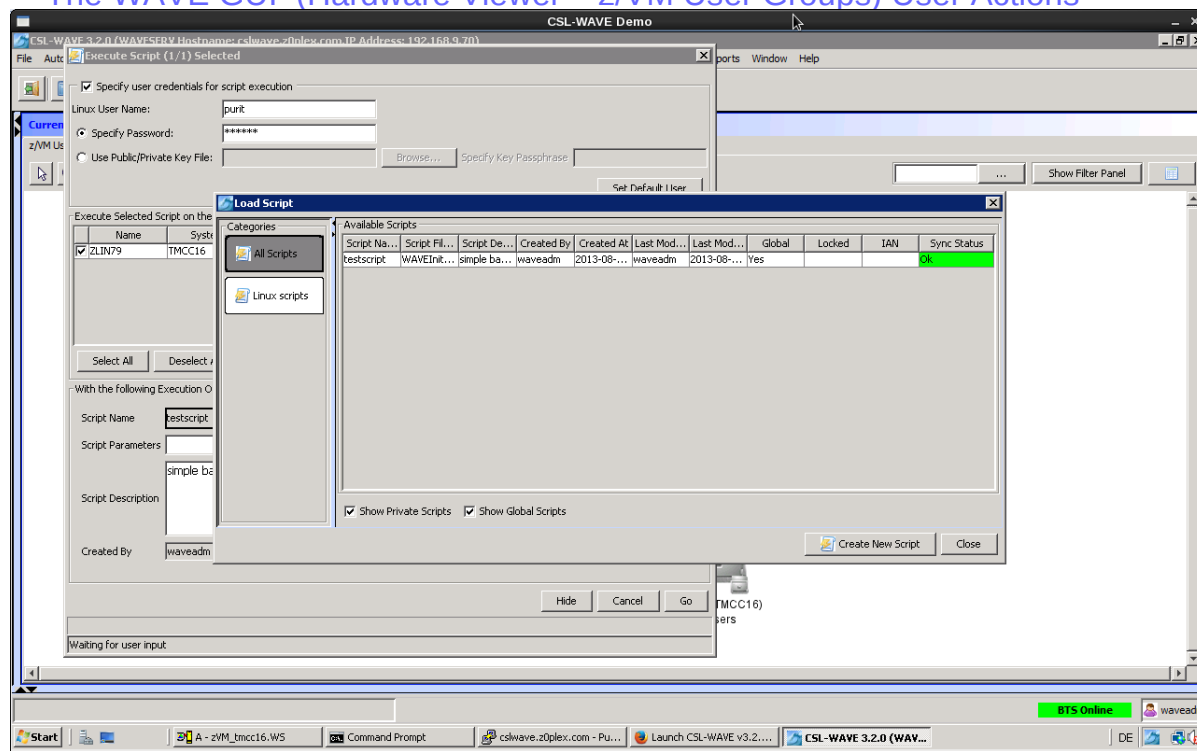
The taskbar at the bottom shows the following open applications: "Launch CSL-WAVE v3.2.0...", "A - zVM\_tmcc16.WS", "zlin79.z0plex.com - P...", and "CSL-WAVE 3.2.0 (WAVE...". The system tray includes "BTS Online" and "waveadm".

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Script execution - you are able to execute previously created scripts in one or more CSL-Wave managed Linux guest systems.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



The script manager allows do define additional scripts if needed

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows a "Workunit Details" dialog box. The "Log COR" tab is selected, displaying a list of log entries with columns for Time Stamp and Data. Below the log entries, there is a table showing the status and progress of various requests.

Request Name	Status	Progress
Execute Script WAVEInit.testscript on g...	Done	100%
Execute Script on z/VM Guests	Done	100%
Init z/VM Guests for CSL-WAVE	Done	100%
Update z/VM Prototype	Done	100%
Update z/VM Prototype	Done	100%
Update All z/VM Aspects	Done	100%
Update Distribution to z/VM Guests	Done	100%
Remove z/VM Virtual Network From Knowledgebase	Done	100%
Disconnect VNS from z/VM Virtual Network	Done	100%

The output of the script can be seen in the log view – switch to tab “Script COR”

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows a "Workunit Details" dialog box for a task named "Execute Script on z/VM Guests". The task is completed, with a status of "Done" and 100% progress. The log shows the execution of a script that displays system information for two z/VM guests.

**Workunit Details:**

- Workunit Name: Execute Script on z/VM Guests
- Workunit ID: 2013232-21:54:21\_644
- Workunit Initiator: waveadm
- Workunit Status: Done
- Workunit Start Time: 2013-08-20 21:54:21
- Workunit End Time: 2013-08-20 21:54:23
- Workunit Duration: 2 seconds

**BTS Requests Table:**

Request Name	Status	Progress
Execute Script WAVEInit.testscrip on g...	Done	100%

**Log COR Entries:**

```

Log COR | Script COR
-----|-----
test script called via WAVE - will show userid, hostname and IP address
WAVEuser
zlin799
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
   link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
   inet 127.0.0.1/8 brd 127.255.255.255 scope host lo
   inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1492 qdisc pfifo_fast state UNKN
   link/ether 02:00:16:00:00:11 brd ff:ff:ff:ff:ff:ff
  
```

**Task Log Table:**

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Execute Script on z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:24:40	2013-08-20 19:24:41	1 seconds	Done	100%

The interface also includes a "Property Viewer" for the selected z/VM guest (z10), showing details like Name, Model, Status, and CPU ID. The bottom status bar indicates "BTS Online" and the user "waveadm".



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The top section shows the 'Current System View - "TMCC16"' with a 'z/VM User Groups' tab selected. Below this, several z/VM user group icons are visible, including IBM.COM, IBM.OPER, IBM.SMAPI, IBM.ENS, IBM.SYSTEM, IBM.UTIL, USERLOCAL, IBM.DIRK, and IBM.SEC. A context menu is open over the USERLOCAL icon, listing actions such as 'Display Information', 'Update', 'Status', 'Activate', 'Deactivate', 'Recycle', 'Pause', 'Resume', 'Send Message', and 'Execute Script'. The bottom section of the GUI shows a 'Workunit Name' table with columns for 'Initiator', 'Start At', and 'Progress'. The table lists various tasks performed by 'waveadm' on 2013-08-20, with progress bars indicating completion status.

Workunit Name	Initiator	Start At	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	100%

Different types of access to the guest itself and the guests console are possible. You don't need a 3270 emulation on the CSL-Wave GUI workstation – the CSL-Wave GUI has its own 3270 console access to the guest systems.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

3270 connection to zLIN79

Enter VM User Password

Enter Password:

Use LogonBY

LogonBY User : WAVEADM

LogonBY Password : \*\*\*\*\*

Cancel Login

Connecting to zLIN79

Logging in...

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

BTS Online waveadm

The guest ZLIN79 is defined with password 'LBYONLY'.  
 You need to use LOGONBY with the user id  
 'WAVEADM' and password 'CSLINT'.



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot shows the CSL-WAVE GUI interface. The main window displays a grid of z/VM User Groups, including IBM.COM, IBM.OPFR, IBM.SMAPI, IBM.ENS, IBM.UTIL, USER.LOCAL, IBM.DIRK, and IBM.SBEC. A context menu is open over the USER.LOCAL group, showing options: Display Information, Update, Status, Activate, Deactivate, Recycle, Pause, Resume, Send Message, and Execute Script. The 'Access...' option is selected, opening a sub-menu with 'CSL-WAVE 3270 Display-only Linux Console' and 'CSL-WAVE 3270 Linux Console'. Below the main window is a log table with columns for Workunit Name, Initiator, Start At, and Progress.

Workunit Name	Initiator	Start At	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	100%

Via 'Access' - 'CSL-WAVE 3270 Linux Console' you reach out the real 3270 console. You can enter commands and receive back results - see ZLIN79 console on next slide.



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERY) interface. The main window shows a 'Current System View - TMCC16' with various z/VM User Groups represented by icons. A modal dialog titled 'SSH to ZLIN79' is open, allowing for login credentials and connection options to be configured. Below the main view, a log table tracks system actions.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

Via 'Access' - 'SSL' an SSH access to ZLIN79 will start using the previously defined SSH client

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 interface. The top menu includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. A terminal window titled 'zlin72.z0plex.com - PuTTY' shows a successful login as root with the following text:

```

login as: root
Using keyboard-interactive authentication.
Password:
Last login: Tue Aug 20 15:12:48 2013
zlin79:~ #
  
```

Below the terminal is a table with columns for task name, user, start time, end time, duration, status, and progress. The progress column uses green bars to indicate completion.

Task Name	User	Start Time	End Time	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

The task list table also includes a 'Show Filter Panel' button. The system tray at the bottom shows 'BTS Online' and 'waveadm'.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. A modal dialog titled "Connecting to ZLIN79" is open, showing login credentials for a Linux environment. The dialog includes fields for User Name (root), Password (masked), VM Login Credentials (VM Guest Password), and LogonBY (WAVEADM). A "LogonBY Password" field is also present. The background shows the "Current System View - TMCC16" with a grid of z/VM User Groups and a "Property Viewer" on the left.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36	3 seconds	Done	100%
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23	2 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02	19 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06	4 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%

Via 'Access' - 'CLC' you able to start a Command Line Console (CLC) - a line mode console and immediately logon the account into the Linux environment.



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERY) interface. The main window is titled "CSL-WAVE Demo" and shows a "Hardware Viewer" on the left with a tree view of z/VM components. A central terminal window is connected to z/VM via CLC, showing the following commands and output:

```

o!prompt>hostname
hostname
zlin79
o!prompt>vmop q userid
vmop q userid
zlin79  An IMCC16
o!prompt>
  
```

A dialog box titled "Executing EP commands" is overlaid on the terminal, containing the following text:

Please Note: You cannot run CP commands from CLC, the command will be changed to vmop command.  
Proceed?

The dialog has "Yes" and "No" buttons. Below the dialog, the terminal shows the command `vmop q op1eve1` and "Go" and "Break" buttons.

On the right side of the GUI, there is a "Progress" section with a table of progress bars:

Progress
100%
100%
100%
100%
100%
100%
100%
100%
100%
100%

The bottom status bar shows "BTS Online" and "waveadm". The Windows taskbar at the bottom includes the Start button and several open applications: "Launch CSL-WAVE v3.2...", "A - z/VM\_tmcc16.WS", "zlin79.zplex.com - PUTTY", and "CSL-WAVE 3.2.0 (WAV...".

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

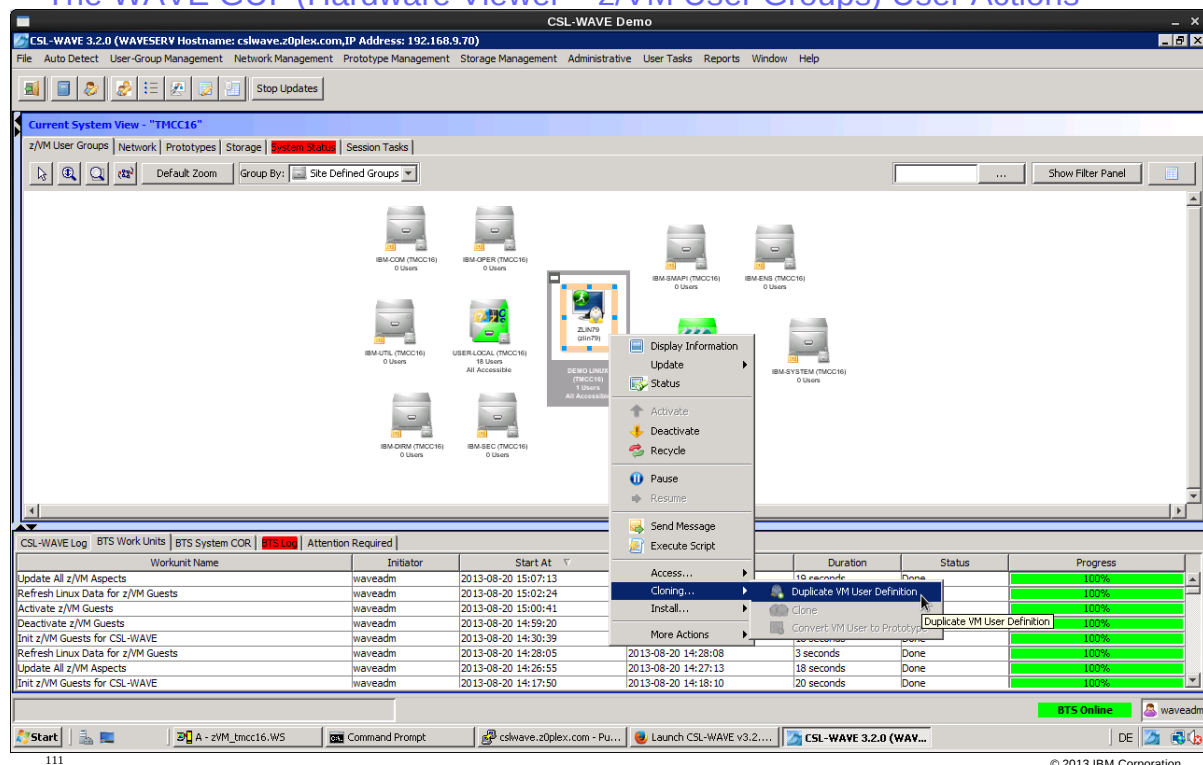
The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled "CSL-WAVE Demo" and shows a "Hardware Viewer" on the left with a tree view of z/VM user groups. The "Property Viewer" for "ZLIN79 (TMCC16)" is visible, showing details such as Name, Status, Group, and Distribution. A central terminal window, titled "CLC Connection for ZLIN79", shows a shell prompt and the following output:

```

cloprompt>hostname
hostname
zlin79
cloprompt>vmop q userid
vmop q userid
zlin79  AT TMCC16
cloprompt>vmop q oplevel
vmop q oplevel
z/VM Version 6 Release 3.0, service level 1301 (64-bit)
Generated at 06/28/13 14:58:28 CEST
IPL at 08/20/13 17:41:14 CEST
cloprompt>
  
```

At the bottom right, a progress bar shows 100% completion for several tasks. The system tray at the bottom indicates "BTS Online" and "waveadm".

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Cloning of a running guest will simply copy the guest' directory and create a new guest without copying the operating system.

The newly created guest will have an empty disk. A Bare Metal Installation (BMI) installation might be started to get a OS in place.

In order to clone a guest inclusive the OS:

- the selected guest has to be stopped
- or you need to clone out of a prototype
- one or multiple clones can be created

You can get a new prototype by converting a linux guest into it.

The conversion into a prototype means that the guest gets a password of NOLOG and stays defined in the z/VM directory. If a cloning request comes in, CSL-Wave can then use the guest' disks to copy/clone to new guests. At any time, a guest prototype can be converted back to a normal no-logged Linux guest.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled 'Current System View - "TMCC16"'. A dialog box titled 'Duplicate zLINUX's VM User Definition' is open, allowing for the configuration of a new z/VM user. The dialog includes the following fields and sections:

- New user Information:**
  - New z/VM User name: zlin71
  - New user password: [masked]
  - Confirm new password: [masked]
  - New DASD Group: LINUX (11.75 GB Free)
- Data:**
  - z/VM View: XCAT1 (0.00 GB Free)
  - z/VM View: LINUX (11.75 GB Free)
- Status Information:**
  - Status: Active
  - Connectable:
  - Locker: [empty]
- Machine information:**
  - Memory Min(MB): 1024
  - Memory Max(MB): 1024
  - Virtual CPUs: 1
  - Disk Space(GB): 2.00
- Machine source:**
  - Distribution: Other
  - Prototype: [empty]
  - Original userid: [empty]

At the bottom right of the dialog, there is a table showing the status and progress of various VMs:

Status	Progress
[Green bar]	100%
[Green bar]	100%
[Green bar]	100%
[Green bar]	100%
[Green bar]	100%
[Green bar]	100%
[Green bar]	100%
[Green bar]	100%
[Green bar]	100%

The Windows taskbar at the bottom shows the following open applications: Start, A - z/VM\_tmcc16.W5, Command Prompt, cslwave.z0plex.com - Pu..., Launch CSL-WAVE v3.2..., and CSL-WAVE 3.2.0 (WAV...). The system tray includes 'BTS Online' and 'waveadm'.

New guest specification

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

z/VM User Groups | Network | Prototypes | Storage | **System Status** | Session Tasks

Default Zoom | Group By: Site Defined Groups

Duplicate ZLIN79's VM User Definition

New user ZLIN71 created successfully

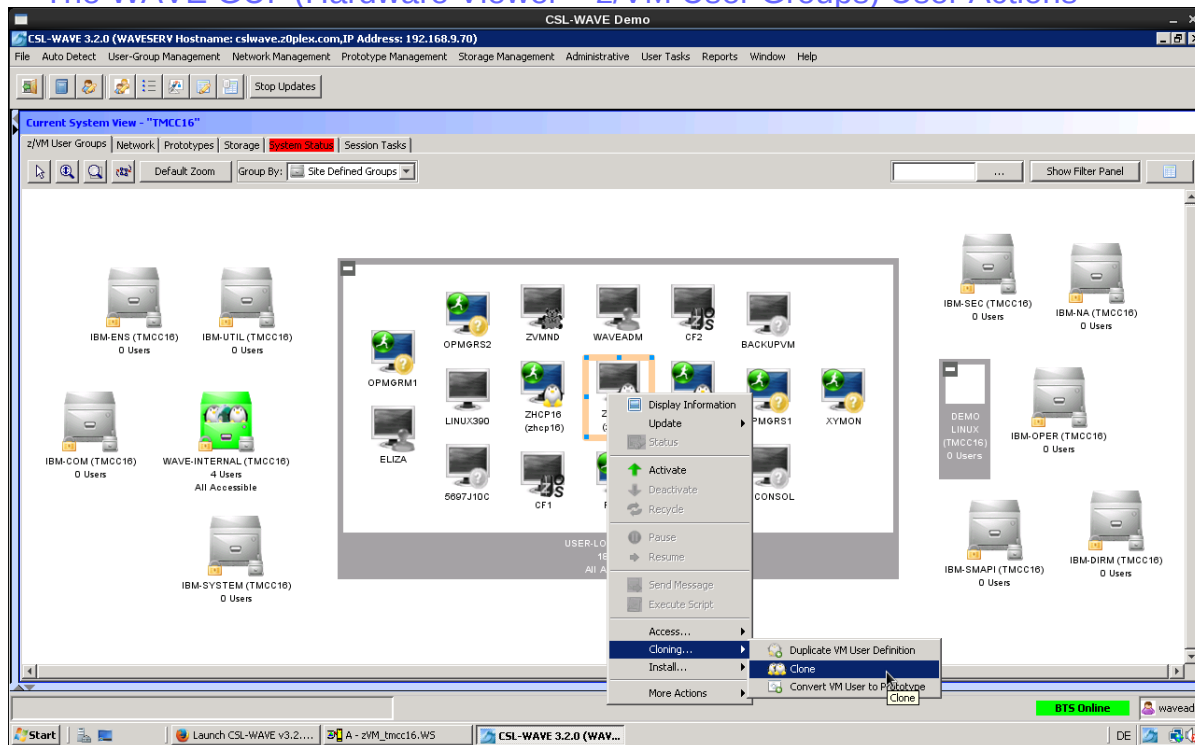
A new z/VM machine ZLIN71 is defined - the guest definitions are simply copied from ZLIN79. No OS is being provided.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:20	2013-08-20 14:59:21	1 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:30:39	2013-08-20 14:30:57	18 seconds	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 14:28:05	2013-08-20 14:28:08	3 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 14:26:55	2013-08-20 14:27:13	18 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 14:17:50	2013-08-20 14:18:10	20 seconds	Done	100%

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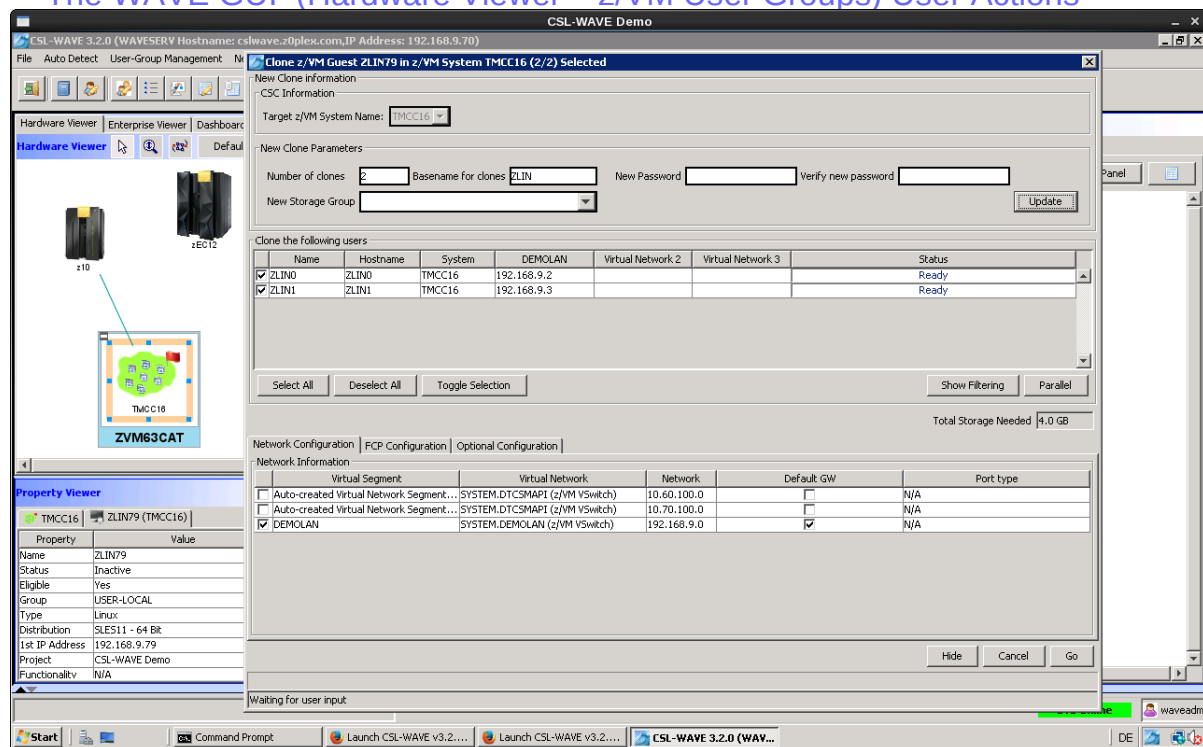
- Creating a new z/VM guest with an OS installed:
- Clone of a so-called “prototype” OS - this is shown later at slides 120- 126
  - Bare-metal install OS - slides 127-138.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



If the guest is down it can be cloned – this will copy everything and after starting the new guest it will be personalized

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Enter the parameters for the new Linux guest:

- number of how many guests to be created
- guest name prefix

and press “update” - then additional fields show up where you need to change the values as wished.

Simply click into the field, for example 'Name' or the IP address in 'DEMOLAN'.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.zdplex.com, IP Address: 192.168.9.70)

Clone z/VM Guest ZLIN79 in z/VM System TMCC16 (2/2) Selected

New Clone Information

Target z/VM System Name: TMCC16

New Clone Parameters

Number of clones: 2 Base name for clones: zlin7 New Password: \*\*\*\*\* Verify new password: \*\*\*\*\*

New Storage Group: LINUX (11.61 GB Free)

Clone the following users

Name	Hostname	System	DEMOLAN	Virtual Network 2
<input checked="" type="checkbox"/> zLIN70	ZLIN71	TMCC16	192.168.9.2	
<input checked="" type="checkbox"/> zLIN71	ZLIN72	TMCC16	192.168.9.73	

Assign IP addresses in VNS...

Associated IP Addresses	Status
IP	Ready
192.168.9.72	

Total Storage Needed: 4.0 GB

Network Configuration | FCP Configuration | Optional Configuration

Network Information

Virtual Segment	Virtual Network	Network	Default GW	Port type
<input type="checkbox"/> Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM V5switch)	10.60.100.0	<input type="checkbox"/>	N/A
<input type="checkbox"/> Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM V5switch)	10.70.100.0	<input type="checkbox"/>	N/A
<input checked="" type="checkbox"/> DEMOLAN	SYSTEM.DEMOLAN (z/VM V5switch)	192.168.9.0	<input checked="" type="checkbox"/>	N/A

Property Viewer

Property	Value
Name	ZLIN79
Status	Inactive
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	CSL-WAVE Demo
Functionality	N/A

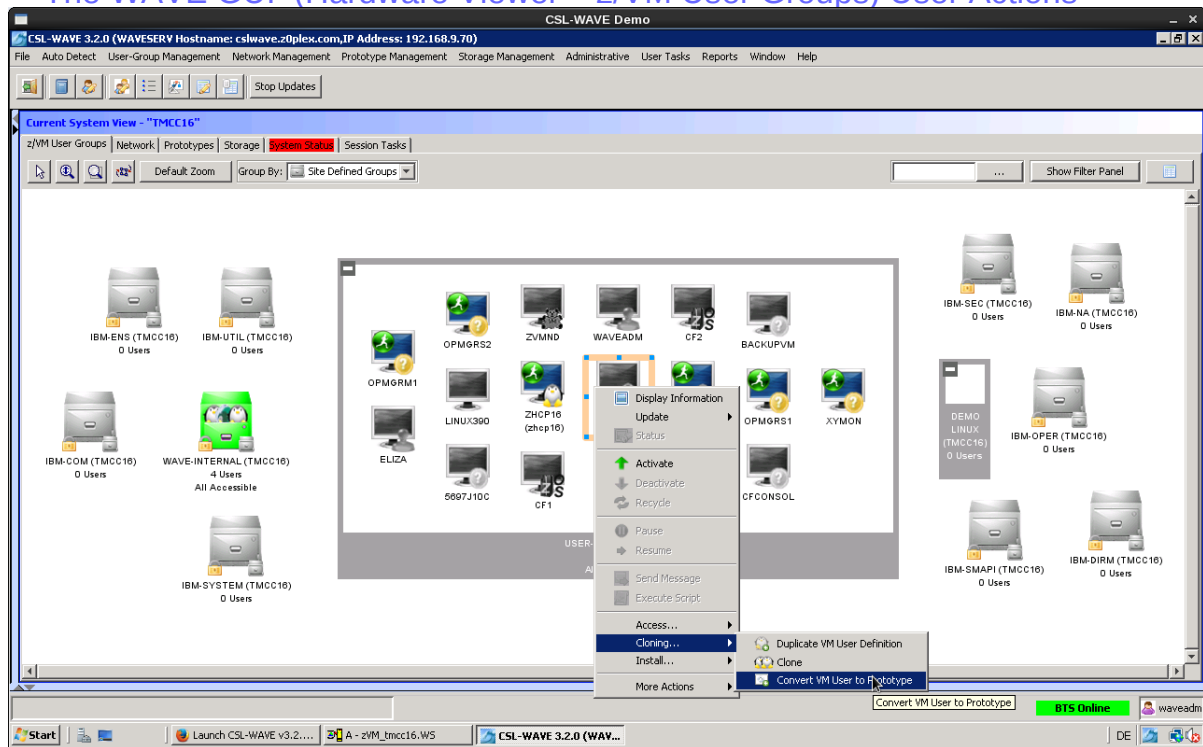
Waiting for user input

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Same screen as in cloning out of a prototype – change the names and ip address

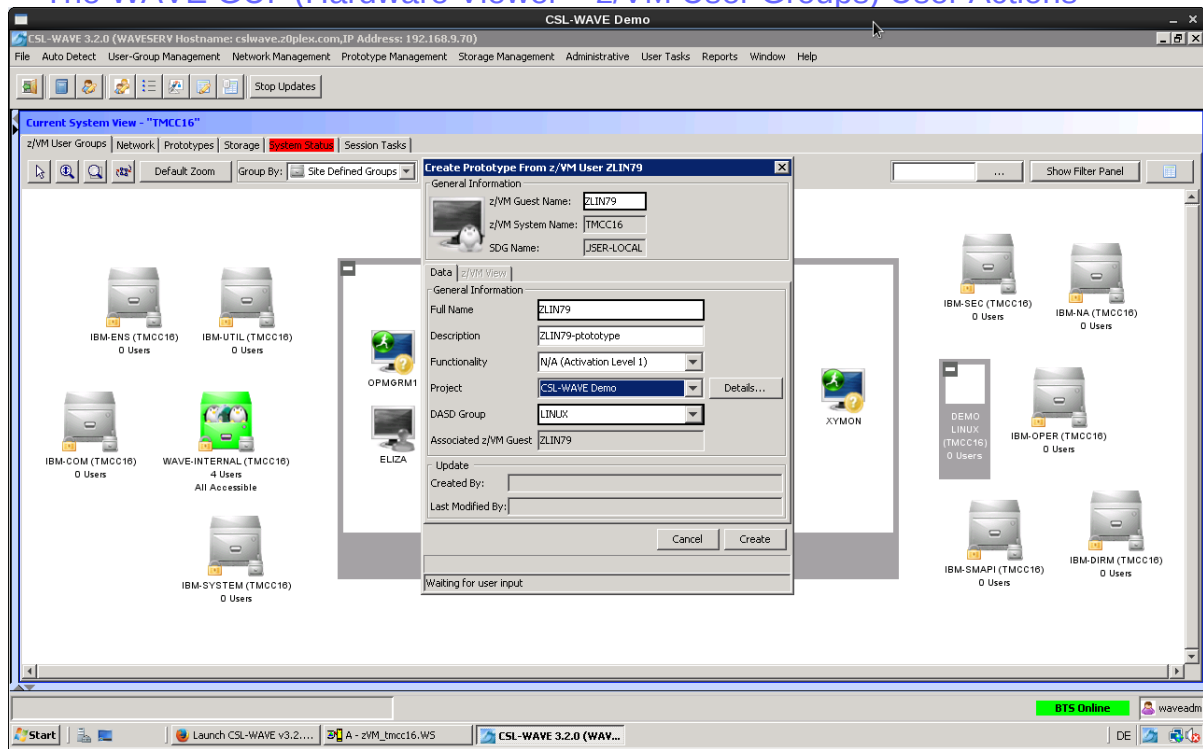


## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



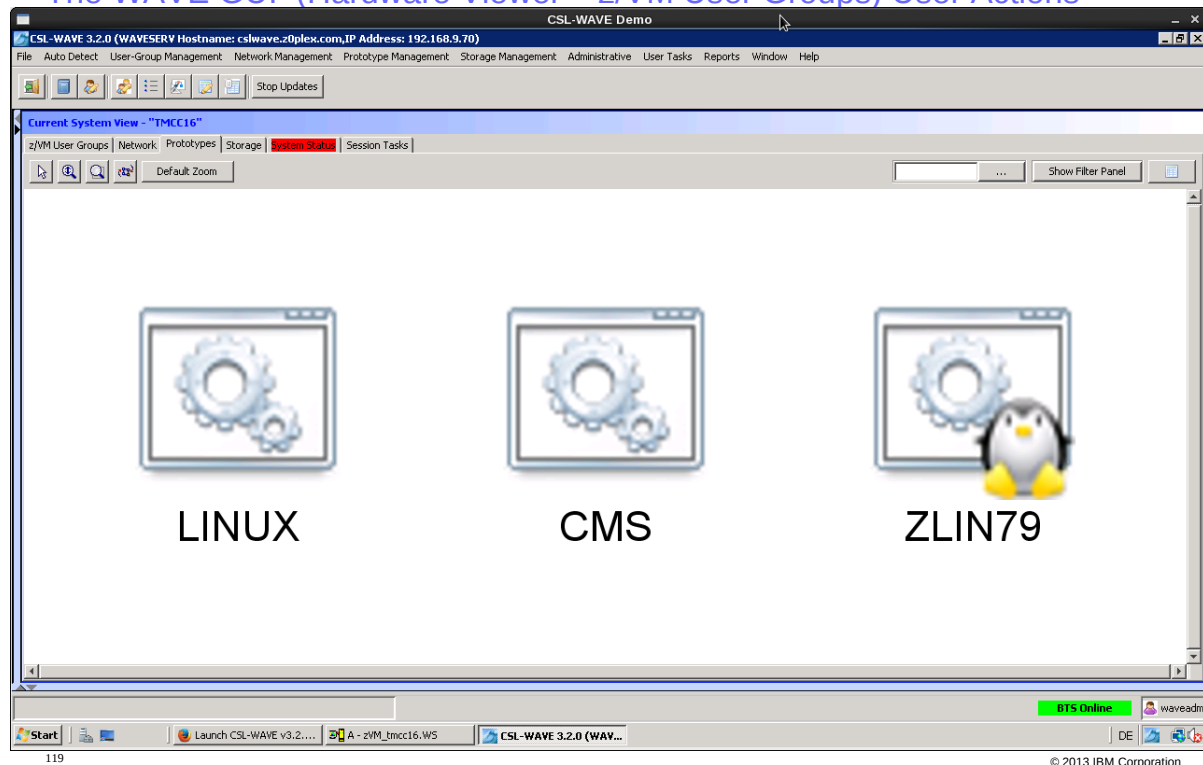
Now start cloning out of a prototype.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



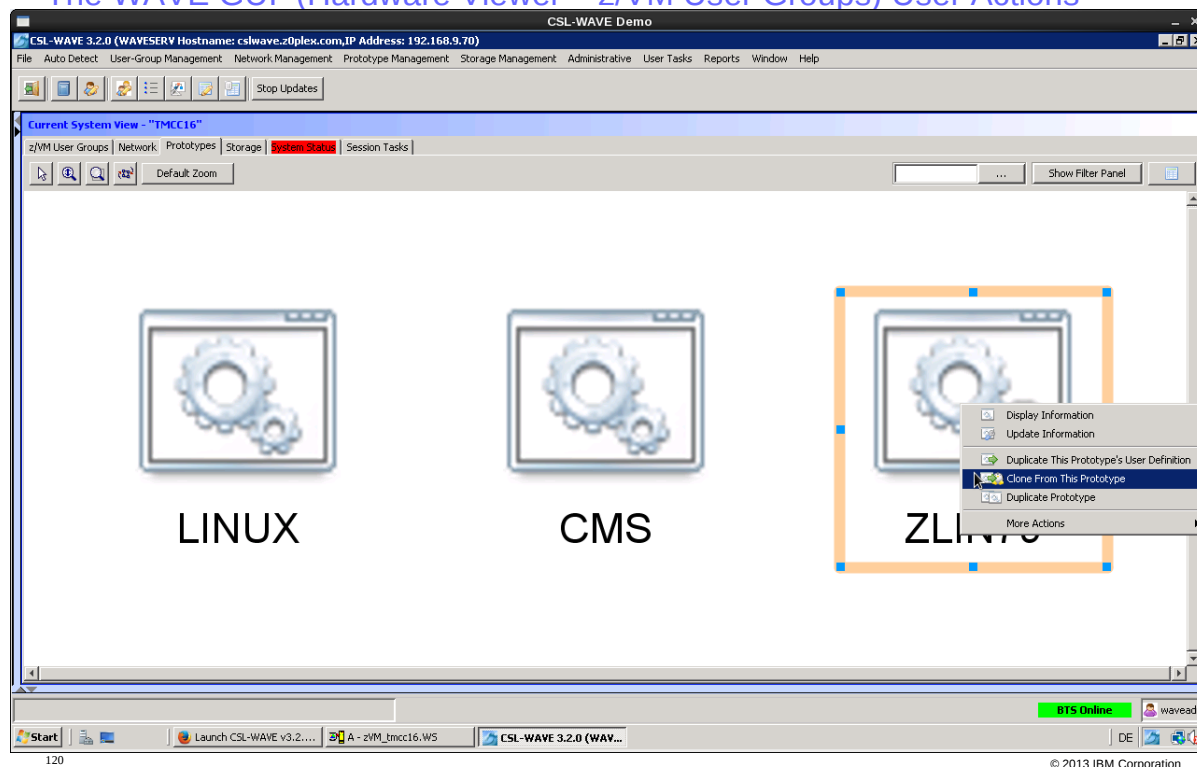
Convert into prototype

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



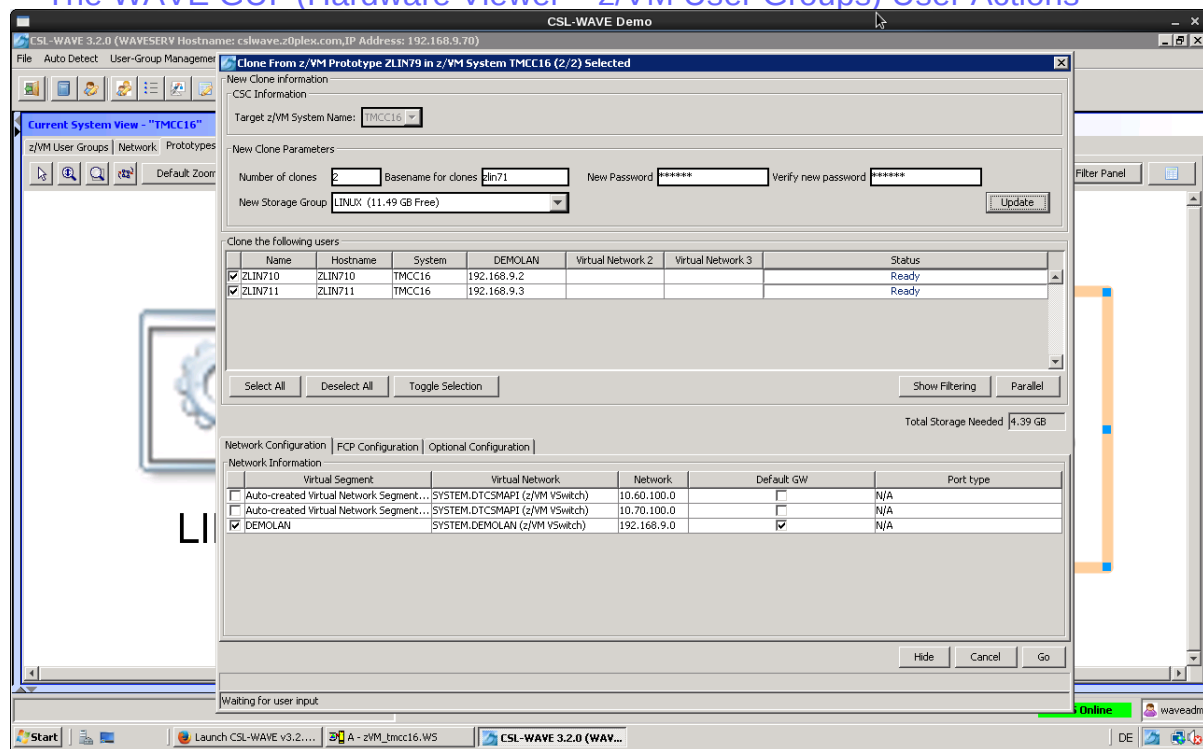
Switch to Prototype tab – a new object will be shown

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Now start cloning based on a selected prototype.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Enter the parameters for the new Linux guest:

- number of how many guests to be created
- guest name prefix

and press “update” - then additional fields show up where you need to change the values as wished.

Simply click into the field, for example 'Name' or the IP address in 'DEMOLAN'.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave.zplex.com, IP Address: 192.168.9.70)

Clone From z/VM Prototype ZLIN79 in z/VM System TMCC16 (2/2) Selected

New Clone Information

CSC Information

Target z/VM System Name: TMCC16

New Clone Parameters

Number of clones: 2    Basename for clones: zlin71    New Password: \*\*\*\*\*    Verify new password: \*\*\*\*\*

New Storage Group: LINUX (11.49 GB Free)    Update

Clone the following users

Name	Hostname	System	DEMOLAN	Virtual Network 2	Virtual Network 1
<input checked="" type="checkbox"/>	ZLIN71	TMCC16	192.168.9.72		
<input checked="" type="checkbox"/>	ZLIN72	TMCC16	192.168.9.73		

Select All    Deselect All    Toggle Selection

Assign IP addresses in VNS...

Associated IP Addresses

IP: 192.168.9.73

Close    Show Filtering    Parallel

Total Storage Needed: 4.39 GB

Network Configuration    FCP Configuration    Optional Configuration

Network Information

Virtual Segment	Virtual Network	Network	Default GW	Port type	
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.60.100.0	<input type="checkbox"/>	N/A
<input type="checkbox"/>	Auto-created Virtual Network Segment...	SYSTEM.DTCSMAPI (z/VM VSwitch)	10.70.100.0	<input type="checkbox"/>	N/A
<input checked="" type="checkbox"/>	DEMOLAN	SYSTEM.DEMOLAN (z/VM VSwitch)	192.168.9.0	<input checked="" type="checkbox"/>	N/A

Hide    Cancel    Go

Waiting for user input

Start    Launch CSL-WAVE v3.2.0...    A - z/VM\_tmcc16.WS    CSL-WAVE 3.2.0 (WAV...    Online    waveadm

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "Current System View - 'TMCC16'" and shows a grid of z/VM User Groups. The groups are represented by icons and labels, including IBM-ENS (TMCC16), IBM-UTIL (TMCC16), IBM-COM (TMCC16), WAVE-INTERNAL (TMCC16), ZVMND, OPMGRS2, ELICA, WAVEADM, OPMGRS1, XYMON, X-CAT80 (xcat80), ZLIN72 (ZLIN72), ZLIN71 (ZLIN71), ZHCP16 (zhcp16), LINUx300, CF1, CF2, and BACKUPVM. The bottom section of the GUI shows a log table with columns for Workunit Name, Initiator, Start At, End At, Duration, Status, and Progress.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%
Pause z/VM Guests	waveadm	2013-08-23 10:12:37	2013-08-23 10:12:37	0 seconds	Done	100%
Pause z/VM Guests	waveadm	2013-08-23 10:12:23	2013-08-23 10:12:23	0 seconds	Done	100%

After some time (2-3 minutes) the new guests will appear – you can also see the progress in the log section

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "Current System View - 'TMCC16'". The interface is divided into several sections:

- Hardware Viewer:** Shows a tree view of the system hierarchy, including z/VM User Groups, Network, Prototypes, Storage, System Status, and Session Tasks.
- Property Viewer:** Displays properties for the selected system (TMCC16), such as Name, IP Address, Status, Total Users, Total Virtual..., Total Prototy..., Total Volumes..., and DASD Free St....
- z/VM User Groups:** A grid of user groups is shown, including IBM-NA, IBM-SEC, IBM-SYSTEM, IBM-DRM, IBM-URL, USER-LOCAL, ZLIN71, ZLIN79, WAVE-INTERNAL, IBM-COM, and IBM-SHAPE. A context menu is open over the 'DEMO LINUX (TMCC16)' group, showing options like 'Create New z/VM User', 'Update', 'Activate', and 'Deactivate'.
- Log Table:** A table at the bottom displays system logs with columns for Workunit Name, Initiator, Start At, End At, Duration, and Status. The table shows various operations performed by 'waveadm' on 2013-08-20.

Workunit Name	Initiator	Start At	End At	Duration	Status
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done
Activate z/VM Guests	waveadm	2013-08-20 12:57:29	2013-08-20 12:57:29	0 seconds	Done
Deactivate z/VM Guests	waveadm	2013-08-20 12:49:37	2013-08-20 12:49:37	0 seconds	Done

Now start creating a new guest and install from scratch



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the 'Create New z/VM Guest' dialog box in the CSL-WAVE 3.2.0 GUI. The dialog is configured with the following parameters:

- General Information:** User Name: zlin72, System Name: TMCC16, Group Name: DEMO.LINUX
- Data:** Password fields (masked with asterisks)
- Storage:** add: 2048, Selection: LINUX (11.56 GB Free)
- Machine Information:** Memory Min(MB): 1024, Memory Max(MB): 1024, Virtual CPUs: 1
- Description:** Project: CSL-WAVE Demo, Functionality: N/A (Activation Level 1), Description: guest created in CSL-WAVE ZLIN72, Default z/VM System: TMCC16
- Network Information:**

Virtual Segment	Virtual Network	Network
<input type="checkbox"/> Auto-created Virtual Network Segment (10.60.100.0)	SYSTEM.DTCSMART (z/VM Vswitch)	10.60.100.0
<input type="checkbox"/> Auto-created Virtual Network Segment (10.70.100.0)	SYSTEM.DTCSMART (z/VM Vswitch)	10.70.100.0
<input checked="" type="checkbox"/> DEMOLAN	SYSTEM.DEMOLAN (z/VM Vswitch)	192.168.9.0

The background interface shows the 'Hardware Viewer' tab with a tree view containing 'IBM-DRM (TMCC16)' and 'IBM-ENS (TMCC16)'. A status bar at the bottom indicates 'Waiting for user input'.

Enter the required parameters for the new guests directory entry

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled 'Current System View - "TMCC16"'. The 'Hardware Viewer' tab is active, showing a grid of z/VM User Groups. A context menu is open over the 'z/VM User Groups' area, with 'Install...' selected. This action has triggered a 'Launch Linux Installation' progress bar, which is currently at 100% completion. The 'System Status' section at the bottom shows a table of workunits with their respective initiators, start times, and completion times.

Workunit Name	Initiator	Start At	End At	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:14	Done	100%
Execute REIXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:02	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:06	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:54	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 12:57:29	2013-08-20 12:57:29	Done	100%

Via 'Install' - 'Launch Linux Installation' get the Linux installation started.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. A central dialog box titled "Launch Linux Installation on Guest ZLIN71" is open, showing "Step 1 - Welcome". The wizard steps are: 1. Welcome, 2. Customize Installation, 3. Repository Verification, and 4. Summary. The main window shows a hardware viewer for "TMCC16" with a "z/VM User Groups" tab selected. A "Property Viewer" on the left lists details for "ZLIN71 (TMCC16)". At the bottom, a "CSL-WAVE Log" table shows the execution history of various tasks.

Workunit Name	Start Time	End Time	Duration	Status	Progress
Update All z/VM Aspects	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REIX on z/VM Objects	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%
Update Distribution to z/VM Guests	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done	100%
Activate z/VM Guests	2013-08-20 12:57:29	2013-08-20 12:57:29	0 seconds	Done	100%

The wizard will guide you through the process

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

**Step 2 - Customize Installation**

Host Information  
 Hostname: ZLIN71  
 DNS: 192.168.9.23

Network Information  
 Networking Interface: NICDEF EA00 Connected to z/VM VSwitch DEMOLAN  
 Virtual Network Segment: DEMOLAN (192.168.9.0)  
 Temporary IP Address: 192.168.9.71

Password Information  
 Temporary Installation Password: [masked] Show Password

Linux Repository Information  
 Use Linux Repository: sles11sp2 (SUSE 11 SP2)

Temporary Installation SSH Password  
 Temporary installation SSH password is: k5rDqybid

Workunit Name	Start Time	End Time	Duration	Status	Progress
Update All z/VM Aspects	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REIX on z/VM Objects	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%
Update Distribution to z/VM Guests	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done	100%
Activate z/VM Guests	2013-08-20 12:57:29	2013-08-20 12:57:29	0 seconds	Done	100%

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. A dialog box titled "Launch Linux Installation on Guest ZLIN71" is open, showing "Step 3 - Repository Verification". The dialog includes a "Property Viewer" on the left with details for VM ZLIN71 (TMCC16), such as Name, Status (Inactive), Group (DEMO LINUX), and Memory (1024). The main dialog area shows instructions for repository verification and a form to specify the Storage Group (set to LINUX) and Minidisk Address (400). A progress table at the bottom of the dialog shows the status of various tasks.

Workunit Name	Waveadm	Start Time	End Time	Duration	Status	Progress
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REIX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done	100%

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

**Launch Linux Installation on Guest ZLIN71**

1. Welcome  
2. Customize Installation  
3. Repository Verification  
4. Summary

**Step 4 - Summary**

Linux Repository Information  
Using Linux Repository sles11sp2 (SUSE version 11 SP2)

Repository Verification Information  
Service Machine will be populated with repository files using DASD Group LINUX, at minidisk address 400  
Hypervisor TMCC16 is now using this repository

Generated Linux PARMFILE Information

```
ZLIN71.INSTBASE:
readisk_size=65536 root=/dev/ram0 ro init=/linuxrc TERM=dumb
Hostname=ZLIN71
nameserver=192.168.9.23 InstNetDev=osa OsaInterface=qdio OsaMedium=eth

Portname=DEMOLAN layer2=1 readchannel=0.0.es00 writechannel=0.0.es01
datachannel=0.0.es02 Portno=1 HostIP=192.168.9.71 Gateway=192.168.9.1
Netmask=255.255.255.0 Broadcast=192.168.9.255
install=ftp://anonymous:anonymous@192.168.9.80/sles11sp2/s390x/1
```

Workunit Name	Waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Verify Linux Repository	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Execute REIX on z/VM Objects	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:01:17	2013-08-20 13:01:17	0 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm					

Installation of SLES will start with the shown parameters – the guest will be autologged and the installation files will be punched to the guests reader and IPLed

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The top menu bar includes options like File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The main window is titled 'Current System View - "TMCC16"' and shows a 'z/VM User Groups' view with a grid of system icons. The Property Viewer on the left shows details for 'ZLIN71 (TMCC16)'. The bottom section is a log viewer showing the progress of various tasks.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Launch Linux: Installation	waveadm	2013-08-23 06:53:12			Active	17%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%

Watch the progress of the installation in the log viewer

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows a hardware viewer on the left and a property viewer for the z/VM system "ZLIN71 (TMCC16)". A "Workunit Details" dialog box is open, showing the following information:

- Workunit Name:** Launch Linux Installation
- Workunit ID:** 2013235-06:53:12\_779
- Workunit Initiator:** wwaveadm
- Workunit Status:** Active
- Workunit Start Time:** 2013-08-23 06:53:12
- Workunit End Time:** 2013-08-23 06:53:12
- Workunit Duration:** 0 seconds

The dialog also contains a table of BTS Requests:

Request Name	Status	Progress
Write Permfile information for Linux Inst...	Done	100%
Launch Interactive Linux Installation (sl...	Done	100%
Wait for Installation Medium availability	Active	30%
Wait for Interactive Installation to start	Scheduled	0%
Wait for Interactive Installation to compl...	Scheduled	0%

Below the requests table is a section for COR Entries, which is currently empty. At the bottom of the dialog, there is a table of log entries:

Workunit Name	Request Name	Status	Start Time	End Time	Duration	Progress
Launch Linux Installation	Launch Linux Installation	Active	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	65%
Launch Linux Installation	Verify Linux Repository	Done	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	100%
Launch Linux Installation	Update All z/VM Aspects	Done	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	100%
Launch Linux Installation	Execute REXX on z/VM Objects	Done				100%
Launch Linux Installation	Update Distribution to z/VM Guests	Done				100%
Launch Linux Installation	Deactivate z/VM Guests	Done				100%
Launch Linux Installation	Activate z/VM Guests	Done				100%
Launch Linux Installation	Deactivate z/VM Guests	Done				100%

The different steps of the installation



# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows a "Workunit Details" dialog box for a workunit named "Launch Linux: Installation".

**Workunit Details:**

- Workunit Name: Launch Linux: Installation
- Workunit ID: 2013235-06:53:12\_779
- Workunit Initiator: waweadm
- Workunit Status: Active
- Workunit Start Time: 2013-08-23 06:53:12
- Workunit End Time: 2013-08-23 06:53:12
- Workunit Duration: 0 seconds

**BTS Requests:**

Request Name	Status	Progress
Write Parnfile information for Linux Inst...	Done	100%
Launch Interactive Linux Installation (sl...	Done	100%
Wait for Installation Medium availability	Active	0%
Wait for Interactive Installation to start	Scheduled	0%
Wait for Interactive Installation to compl...	Scheduled	0%

**COR Entries:**

Time Stamp	Data
2013-08-23 06:53:44	BTS Workunit: Launch Linux: Installation, Request: Wait for Installation Medium availab...
2013-08-23 06:53:44	Request running with debug level: Debug
2013-08-23 06:53:44	Waiting for the interactive Linux installation program to be ready for SSH connections...
2013-08-23 06:53:44	Waiting for port 22... (approximately 500 seconds)

**Log COR:**

Time Stamp	User	Start Time	End Time	Duration	Status	Progress
2013-08-20 13:38:54	waweadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
2013-08-20 13:34:47	waweadm	2013-08-20 13:34:48	2013-08-20 13:34:48	1 seconds	Done	100%
2013-08-20 13:34:05	waweadm	2013-08-20 13:34:06	2013-08-20 13:34:06	1 seconds	Done	100%

The interface also includes a "Property Viewer" for the z/VM system ZLIN71 (TMCC16), showing details like Name, Status (Inactive), Eligible (Yes), Group (DEMO LINUX), Type (CMS), CPUs (1), Memory Min (1024), and Memory Max (1024). A "BTS System COR" table is visible at the bottom right, showing the current status of various components.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot shows the CSL-WAVE GUI interface. The main window displays a 'Workunit Details' dialog for a 'Launch Linux Installation' workunit. The dialog includes the following information:

- Workunit Details:**
  - Workunit Name: Launch Linux Installation
  - Workunit ID: 2013235-06:53:12\_779
  - Workunit Initiator: wwaveadm
  - Workunit Status: Active
  - Workunit Start Time: 2013-08-23 06:53:12
  - Workunit End Time: 2013-08-23 06:53:12
  - Workunit Duration: 0 seconds
- BTS Requests Table:**

Request Name	Status	Progress
Write Parnfile information for Linux Inst...	Done	100%
Launch Interactive Linux Installation (sl...	Done	100%
Wait for Installation Medium availability	Done	100%
- Log COR Entries:**
  - 2013-08-23 06:53:44 Request running with debug level: Debug
  - 2013-08-23 06:53:44 Waiting for the interactive Linux installation program to be ready for SSH connections...
  - 2013-08-23 06:53:44 Waiting for port 22... (approximately 500 seconds)
  - 2013-08-23 06:53:44 BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availab...
  - 2013-08-23 06:53:44 Request running with debug level: Debug
  - 2013-08-23 06:53:44 Waiting for the interactive Linux installation program to be ready for SSH connections...
  - 2013-08-23 06:53:44 Waiting for port 22... (approximately 500 seconds)
  - 2013-08-23 06:55:12 Port is available for connections.
  - 2013-08-23 06:55:12 BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availab...

An 'Interactive Installation Ready' dialog is also present, stating: 'The interactive installation is ready for guest ZLIN71 in hypervisor TMCC16. Click "Start SSH Session" to access the guest and start the installation process.' The 'Start SSH Session' button is highlighted.

At the bottom of the main window, there is a table showing the status and progress of various tasks:

Status	Progress
Active	78%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

The z/VM part of the Linux OS installation is now done. The Linux administrator can take over and proceed with the normal Linux network installation.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled 'YaST2 - installation @ ZLIN71' and shows a Linux installation progress screen. The screen content includes:

```

Welcome
Language
English (US)
Keyboard Layout
English (US)
License Agreement
SUSE(R) Linux Enterprise Server ("SLES (TM)") 11 SP2
Novell(R) Software License Agreement
PLEASE READ THIS AGREEMENT CAREFULLY. BY INSTALLING OR OTHERWISE
USING THE SOFTWARE (INCLUDING ITS COMPONENTS), YOU AGREE TO THE
[ ] I Agree to the License Terms. [License Translations...]
[Help] [Back] [Abort] [Next]
  
```

Below the main window, there is a task list table with columns for Workunit Name, Start Time, End Time, Duration, and Status. The table shows several tasks related to Linux installation and z/VM guest management.

Workunit Name	Start Time	End Time	Duration	Status
Launch Linux Installation	2013-08-23 06:55:12	BTS Workunit: Launch Linux Installation, Request: Wait for Installation Medium availab...		Active
Verify Linux Repository				Done
Update All z/VM Aspects				Done
Execute REXX on z/VM Objects				Done
Update Distribution to z/VM Guests				Done
Deactivate z/VM Guests	waveadm 2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done
Activate z/VM Guests	waveadm 2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done
Deactivate z/VM Guests	waveadm 2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done

At the bottom of the GUI, there is a taskbar with the following items: Start, Launch CSL-WAVE v3.2..., zlin71.z0plex.com - P..., A - z/VM\_tmcc16.W5, CSL-WAVE 3.2.0 (WAVE...), and a user profile for waveadm. The system tray shows 'BTS Online' and 'waveadm'.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "CSL-WAVE Demo" and shows a "Workunit Details" dialog box for a "Launch Linux: Installation" workunit. The workunit is active and has a duration of 0 seconds. The "BTS Requests" table shows several requests that are either "Done" or "Active" with 100% progress. The "Property" section shows a log of COR entries. Below the dialog, a table lists various tasks performed by the user "waveadm".

Task	User	Start Time	End Time	Duration	Status	Progress
Launch Linux: Installation	waveadm	2013-08-23 06:53:12	2013-08-23 06:53:12	0 seconds	Active	91%
Write Parnfile information for Linux Inst...	waveadm	2013-08-23 06:57:06	2013-08-23 06:57:06	0 seconds	Done	100%
Launch Interactive Linux Installation (sl...	waveadm	2013-08-23 06:57:06	2013-08-23 06:57:06	0 seconds	Done	100%
Wait for Installation Medium availability	waveadm	2013-08-23 06:57:06	2013-08-23 06:57:06	0 seconds	Done	100%
Wait for Interactive Installation to start	waveadm	2013-08-23 06:57:06	2013-08-23 06:57:06	0 seconds	Done	100%
Wait for Interactive Installation to compl...	waveadm	2013-08-23 06:57:06	2013-08-23 06:57:06	0 seconds	Active	30%
Update All z/VM Aspects	waveadm	2013-08-20 06:48:14	2013-08-20 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The main window is titled "Current System View - 'TMCC16'" and shows a grid of system components. The bottom section, "CSL-WAVE Log", contains a table of workunit logs.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	100%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:38:54	2013-08-20 13:38:55	1 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 13:34:47	2013-08-20 13:34:48	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:34:05	2013-08-20 13:34:06	1 seconds	Done	100%

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After five minutes CSL-Wave stops waiting for the new Linux system to start up. This normally does not indicate a real problem: for example if the Linux admin is not fast enough finishing the installation in this time, the task will end “red”.

Once the Linux is fully installed and connectable it can be managed as usual Linux guest

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled 'CSL-WAVE Demo' and shows a 'Hardware Viewer' for a z/VM system named 'TMCC16'. The 'Property Viewer' on the left lists system details:

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	140
Total Virtual ...	3
Total Prototy...	2
Total Volumes ...	22
Total Volume ...	2
DASD Free St...	4.56 GB

The 'Full Workunit Log COR' window shows a detailed log of system events, including the Linux installation process. The log entries include timestamps and descriptions of actions such as 'BTS Workunit: Launch Linux Installation, Request: Write Pamfile information for Linux ...', 'Starting Linux installation on Guest ZLIN71...', and 'Installation program started'.

At the bottom right, a 'Status' table shows the progress of various tasks:

Status	Progress
Error	
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

The bottom status bar indicates 'BTS Online' and 'Waveadm'.

## Details of the installation log

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV) interface. The main window is titled "Current System View - TMCC16" and shows a grid of z/VM user groups. A context menu is open over the "ZLIN79 (TMCC16)" user group, with the "Manage Storage" option selected. The "Property Viewer" on the left shows details for the selected user group, including Name (ZLIN79), Status (Active), and Distribution (SLES11 - 64 Bit). The "CSL-WAVE Log" at the bottom shows a list of tasks performed by the waveadm user, such as "Refresh Linux Data for z/VM Guests" and "Update z/VM Prototype".

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36	3 seconds	Done	100%
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23	2 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02	19 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06	4 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%

With the “Manage Storage” task for a Linux guest you can not only add new disk space to the guest but also format and mount the new filesystem to the Linux guest filesystem.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "Current System View - TMCC16" and shows the "Hardware Viewer" section. A table lists the current active file systems on the server:

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Storage Type	Mount Point	Status (Capacity)
/dev/dasda1	ext3	1.57	1.03	0.47	STD	DASD	/	65%
proc	proc	0.00	0.00	0.00	STD	DASD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	DASD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	DASD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	DASD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	DASD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	DASD	/dev/pts	0%

Below the table, a "Waiting for user input" dialog box is visible, titled "FEP / DASD Selection". It prompts the user to select the type of partition to add, with options for "DASD" and "FCP". Progress bars for each option are shown as 100%.

The bottom of the screen shows a log window with the following entries:

Workunit Name	Initiator	Start At	End At	D
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36	3 seconds
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23	2 seconds
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02	19 seconds
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06	4 seconds
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds

First show the actual Linux filesystem status – only one disk (dasda) exists and its filesystem is mounted as root filesystem (/)



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot shows the CSL-WAVE GUI interface. The main window displays the 'Current System View - TMCC16' for the z/VM User zLIN79 Storage. A 'Create New DASD Partition' dialog box is open, allowing the user to configure a new partition. The dialog includes fields for Unit Specifications (DASD Allocation: 200 MB (CKD)), Storage Group (LINUX (11.75 GB Free)), Partition Definitions (Standard Partition selected), File System Options (FS Type: ext3, Mount on: /test), and Add new filesystem to (/etc/fstab).

Below the dialog, the 'CSL-WAVE Log' table shows the following entries:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 21:59:33	2013-08-20 21:59:36	3 seconds	Done	100%
Execute Script on z/VM Guests	waveadm	2013-08-20 21:54:21	2013-08-20 21:54:23	2 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 19:40:43	2013-08-20 19:41:02	19 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:28:02	2013-08-20 19:28:06	4 seconds	Done	100%
Update z/VM Prototype	waveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%
Remove z/VM Virtual Network From Knowledgebase	waveadm	2013-08-20 19:24:46	2013-08-20 19:24:47	1 seconds	Done	100%

We add a new disk and choose to format and mount it also

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "Workunit Details" and shows the following information:

- Workunit Name: Create New DASD Partition
- Workunit ID: 2013232-22:08:46\_978
- Workunit Initiator: wwaveadm
- Workunit Status: Done
- Workunit Start Time: 2013-08-20 22:08:46
- Workunit End Time: 2013-08-20 22:09:11
- Workunit Duration: 25 seconds

Below this, there is a table of BTS Requests:

Request Name	Status	Progress
Add 200 MB (CKD) to Guest ZLIN79(TMCC16)	Done	100%
Create New DASD Partition for z/VM Guest ZLIN79 (TMCC16)	Done	100%
Create New ext3 Filesystem for z/VM Guest ZLIN79 (TMCC16)	Done	100%
Update Storage Aspect for z/VM Directory New Directory for TMCC16(TMCC16)	Done	100%

At the bottom of the window, there is a log table:

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Create New DASD Partition	wwaveadm	2013-08-20 19:27:18	2013-08-20 19:27:23	5 seconds	Done	100%
Refresh Linux Data for z/VM Guests	wwaveadm	2013-08-20 19:26:24	2013-08-20 19:26:42	18 seconds	Done	100%
Update Distribution to z/VM Guests	wwaveadm	2013-08-20 19:26:01	2013-08-20 19:26:02	1 seconds	Done	100%

Here the log of this action

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE 3.2.0 (WAVESERY HostIn...)

File Auto Detect User-Group Managemen...

Hardware Viewer Enterprise Viewer Das

Hardware Viewer

z/VM Guest Name: ZLIN79  
z/VM System Name: TMCC16  
SDG Name: DEMO LINUX

Data z/VM View z/Linux View Performance View Custom Attributes

```

USER ZLIN79 XXXXXXXX 1024M 1024M G
CPU 00
IPL 192
LOGONBY PURIT WAVEADM
MACHINE ESA 4
CONSOLE 0009 3215
NICDEF EA00 TYPE QDIO LAN SYSTEM DEMOLAN
SPOOL 000C 3505 A
SPOOL 000D 3525 A
SPOOL 000E 1403 A
**
*****
LINK MAINT 0190 0190 RR
LINK MAINT 019D 019D RR
LINK MAINT 019E 019E RR
LINK WAVEWRKS 0399 0399 RR
MDISK 0192 3390 1 2884 Z16LXB
MDISK 0193 3390 3085 281 Z16LXB WR
*DVHOPT LNK0 LOG1 RCM1 SMS0 NPW1 LNGAMENG PWC20130820 CRC
    
```

Property Viewer

Property	Value
Name	ZLIN79
Status	Active
Eligible	Yes
Group	DEMO LINUX
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.79
Project	N/A
Functionality	N/A

CSL-WAVE Log BTS Work Units BTS Sys

Workunit Nam

- Create New DASD Partition
- Refresh Linux Data for z/VM Guests
- Execute Script on z/VM Guests
- Init z/VM Guests for CSL-WAVE
- Update z/VM Prototype
- Update z/VM Prototype
- Update All z/VM Aspects
- Update Distribution to z/VM Guests

Close TAN

Waiting for user input

Progress

- 100%
- 100%
- 100%
- 100%
- 100%
- 100%
- 100%
- 100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - z/VM\_tmcc16.WS zlin79.zplex.com - PuTTY CSL-WAVE 3.2.0 (WAV... DE

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Now check the guest directory entry in z/VM: the new DASD is 193

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot shows the 'Display ZLIN79 Details' window in the CSL-WAVE 3.2.0 GUI. The window is divided into several sections:

- General Information:** z/VM Guest Name: ZLIN79, z/VM System Name: TMCC16, SDG Name: DEMO LINUX.
- File System Information (df -ah):** A table showing disk usage for various file systems.
- Network Information (ifconfig -all):** A table showing network interface details for eth0.
- Routing Information (route):** A table showing routing table entries.
- Uptime Information:** Uptime: up 4:27 hours.

The 'File System Information' table is as follows:

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Mount Point	Status (Capacity)
proc	proc	0.00	0.00	0.00	STD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	/dev/pts	0%
jdev/dasdb1	ext3	0.19	0.02	0.17	STD	/test	8%

The 'Network Information' table is as follows:

Device	MAC Address	IP Address	Status
eth0	02:00:16:00:00:11	192.168.9.79	ONLINE
lo		127.0.0.1	ONLINE

The 'Routing Information' table is as follows:

Destination	Gateway	Mask	Flags	Metric	Ref	Use	Interface	Reachable
0.0.0.0	192.168.9.1	0.0.0.0	UG	0	0	0	eth0	Reachable
loopback	*	255.0.0.0	U	0	0	0	lo	N/A
link-local	*	255.255.0.0	U	0	0	0	eth0	N/A
192.168.9.0	*	255.255.255.0	U	0	0	0	eth0	N/A

The 'Uptime Information' section shows: Uptime: up 4:27 hours.

The bottom of the window shows a progress bar with 100% completion and a 'BTS Online' indicator.

## 'zLinux View':

- shows you the 'File System Information': in the last line you find the newly mounted ext3 file system
- shows 'Network Information': 'eth0' is the only available network at this time. Later we will add another network segment to it.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window shows the 'Current System View - TMCC16' with a grid of z/VM guests. A context menu is open over the 'IBM-OPER (TMCC16)' guest, showing various actions. The 'More Actions' submenu is expanded, highlighting 'Generate Disk Storage Map'. Below the main window, a log table shows system events, with the 'Generate Disk Storage Map' entry highlighted in red.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43			
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:57	2013-08-23 07:36:58			
Delete z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24			
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32			
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Generate Disk Storage Map	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:25	14 seconds	Error	0%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:46:14	2013-08-23 06:46:33	19 seconds	Done	100%

'Generate Disk Storage Map' provides the information about the DASD configuration of the guests in z/VM disk pool.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "Current System View - 'TMCC16'" and shows a hardware viewer with various z/VM User Groups represented by server icons. A "Generate DASD Map" dialog box is open, prompting for user input. The bottom section of the GUI features a task log table with the following data:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43	22 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:57	2013-08-23 07:36:58	1 seconds	Done	100%
Delete z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24	15 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
z/VM Linux Reinstallation	waveadm	2013-08-23 06:52:11	2013-08-23 07:05:25	13:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:46:14	2013-08-23 06:46:33	19 seconds	Done	100%

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled "DASH Volume Map View for ZLIN79". It features a central diagram showing the volume map for the ZLIN79 system, including components like "VOLSER: Z16LXB", "Model: 3390-09", and "Status: Assigned", "Assigned to: LINUX".

On the left side, there is a "Property Viewer" for the system "TMCC16". It lists various properties such as Type (YSwitch), VLAN Aware (No), Default VLAN ID (N/A), Name (DEMOLAN), Owner (SYSTEM), Protocol (QDIO), Life Span (Presist), Created By (WAVEinit on 2013-08-20 11:52), and Last Modified (waveadm on 2013-08-20 15:59).

At the bottom of the GUI, there is a task log table showing various operations performed by the user "waveadm".

Operation	User	Start Time	End Time	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 06:46:14	2013-08-23 06:46:33	19 seconds	Done	100%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:46:14	2013-08-23 06:46:33	19 seconds	Done	100%

The task log also shows a "Distribution" operation that failed with an error, highlighted in red in the original image.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

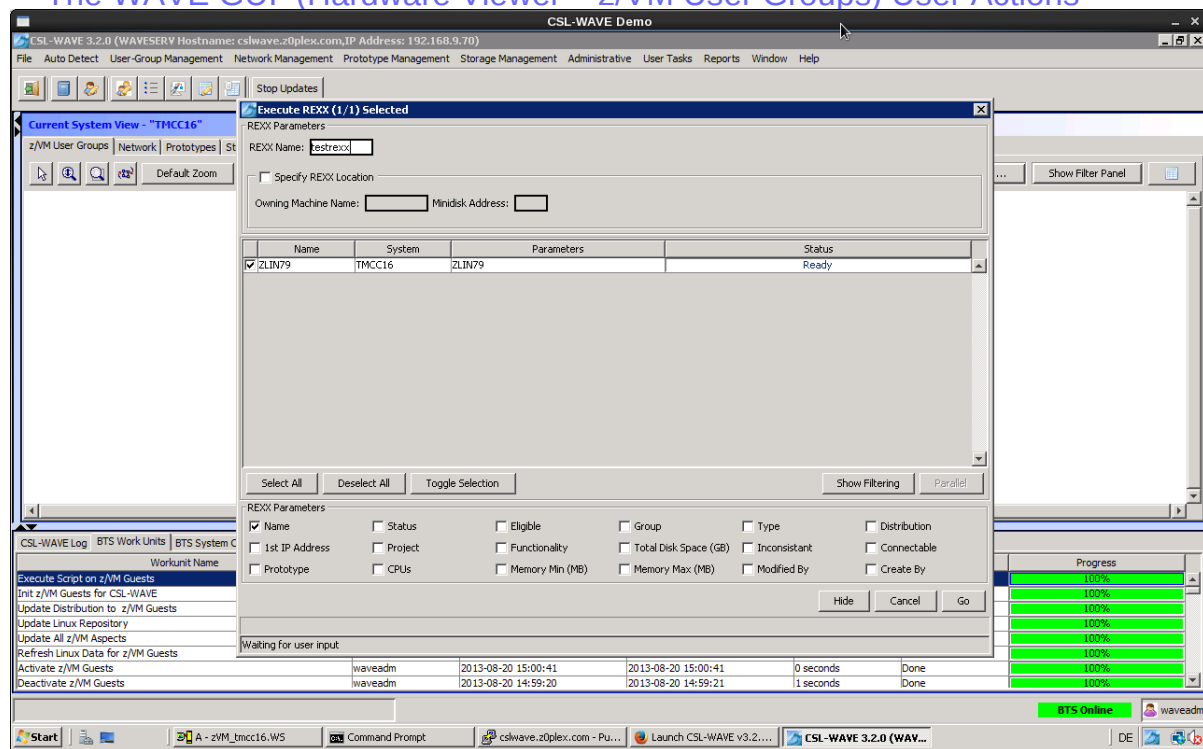
The screenshot displays the CSL-WAVE v3.2.0 interface. The main window shows a grid of z/VM user groups represented by server icons. A context menu is open over one of the icons, listing various actions such as 'Lock z/VM User', 'Update', 'Activate', and 'Execute REXX'. Below the grid, a task log table is visible, showing a list of operations performed by the 'waveadm' initiator.

Workunit Name	Initiator	Start At	Status	Progress
Execute Script on z/VM Guests	waveadm	2013-08-20 15:44:38		
Init z/VM Guests for CSL-WAVE	waveadm	2013-08-20 15:43:36		
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06		
Update Linux Repository	waveadm	2013-08-20 15:40:41		
Update All z/VM Aspects	waveadm	2013-08-20 15:07:13	Done	100%
Refresh Linux Data for z/VM Guests	waveadm	2013-08-20 15:02:24	Done	100%
Activate z/VM Guests	waveadm	2013-08-20 15:00:41	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 14:59:21	Done	100%

CSL-WAVE can exploit scripts and REXX EXECs: you might run REXX EXECs against any virtual object with customized parameters and captured results. Actions can be performed against the z/VM guest system as well as z/VM by itself.



## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions



Enter the location of the REXX procedure 'testrexx' which is normally on WAVEWRKS 399. Select the parameters you need to pass over to REXX – the order is the order of selection.

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled 'Current System View - "TMCC16"'. A 'Workunit Details' dialog box is open, showing the following information:

- Workunit Name: Execute REXX on z/VM Objects
- Workunit ID: 2013232-15:54:02\_880
- Workunit Initiator: wwaveadm
- Workunit Status: Done
- Workunit Start Time: 2013-08-20 15:54:02
- Workunit End Time: 2013-08-20 15:54:03
- Workunit Duration: 1 seconds

Below the details, a 'BTS Requests' table shows the progress of the request:

Request Name	Status	Progress
Execute REXX testrexx using z/VMUser T...	Done	100%

The 'COR Entries' section shows a log of the request execution:

Time Stamp	Data
2013-08-20 15:54:03	BTS Workunit: Execute REXX on z/VM Objects, Request: Execute REXX testrexx using...
2013-08-20 15:54:03	Request running with debug level: Debug
2013-08-20 15:54:03	Connecting to Service Machine in z/VM System TMCC16...
2013-08-20 15:54:03	Locating REXX on the specified guest (WAVEWRKS)...
2013-08-20 15:54:03	Executing REXX testrexx: from guest: WAVEWRKS at minidisk address: <All> with para...
2013-08-20 15:54:03	REXX output stored in REXX output COR entry for request
2013-08-20 15:54:03	Performing volatile DEQs for Request...
2013-08-20 15:54:03	BTS Workunit: Execute REXX on z/VM Objects, Request: Execute REXX testrexx using...

At the bottom of the dialog, a table shows the overall status and progress of the request:

Status	Progress
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%
Done	100%

The main window also shows a 'BTS Log' tab with a list of workunits and their execution details:

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Execute REXX on z/VM Objects	wwaveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Execute Script on z/VM Guests	wwaveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	wwaveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Update Distribution to z/VM Guests						
Update Linux Repository						
Update All z/VM Aspects						
Refresh Linux Data for z/VM Guests						
Activate z/VM Guests						

The execution of 'testrexx' can be followed in the BTS Log viewer – switch to 'REXX COR'.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "Current System View - 'TMCC16'" and shows a list of z/VM User Groups. A "Workunit Details" dialog box is open, showing information for a workunit named "Execute REXX on z/VM Objects". The dialog includes fields for Workunit Name, ID, Initiator, Status, Start Time, End Time, and Duration. Below these fields is a table of BTS Requests and a log window showing the execution details of the REXX program.

**Workunit Details:**

- Workunit Name: Execute REXX on z/VM Objects
- Workunit ID: 2013232-15:54:02\_880
- Workunit Initiator: wwaveadm
- Workunit Status: Done
- Workunit Start Time: 2013-08-20 15:54:02
- Workunit End Time: 2013-08-20 15:54:03
- Workunit Duration: 1 seconds

**BTS Requests:**

Request Name	Status	Progress
Execute REXX testrexx using zVMUser T...	Done	100%

**COR Entries:**

```

Log COR: REXX COR |
Executing REXX TESTREXX FM: 1 with parameters: ZLIN71
***** Start of REXX Output *****
Setting Privileges...
done
userid parsed is: ZLIN71
userid running REXX is: WAVEWRKS AT TMCC16
The z/VM level is 6.3.0
***** End of REXX Output *****
USER REXX RC : 0
    
```

**Log Window:**

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Execute REXX on z/VM Objects	wwaveadm	2013-08-20 15:07:13	2013-08-20 15:07:32	19 seconds	Done	100%
Execute Script on z/VM Guests	wwaveadm	2013-08-20 15:02:24	2013-08-20 15:02:28	4 seconds	Done	100%
Init z/VM Guests for CSL-WAVE	wwaveadm	2013-08-20 15:00:41	2013-08-20 15:00:41	0 seconds	Done	100%
Update Distribution to z/VM Guests					Done	100%
Update Linux Repository					Done	100%
Update All z/VM Aspects					Done	100%
Refresh Linux Data for z/VM Guests					Done	100%
Activate z/VM Guests					Done	100%

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

Workunit Name	Initiator	Start At	End At	Duration	Progress
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	100%
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:36:54	2013-08-20 13:36:55	1 seconds	100%

Deletion of one or more guests can be done only for inactive guests

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 GUI. A dialog box titled "Delete z/VM Users (2/2) Selected" is open, showing a list of users to be deleted. The users listed are ZLIN72 and ZLIN71, both on the TMCC16 system and in a "Ready" status. The dialog includes options to "Select All", "Deselect All", "Toggle Selection", "Show Filtering", and "Parallel". There is also a checkbox for "Erase Disk Contents" which is currently unchecked. Below the dialog, a log table shows the following tasks:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:36:54	2013-08-20 13:36:55	1 seconds	Done	100%

You can choose whether the disk content should be erased as well - in this case DATAMOVE needs to be active to perform this task.

# The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled 'Current System View - "TMCC16"'. A dialog box titled 'Delete z/VM Users (2/2) Selected, 0/2 Ended' is open, showing a table of users to be deleted:

Name	System	Status
<input checked="" type="checkbox"/> ZLIN72	TMCC16	Ready
<input checked="" type="checkbox"/> ZLIN71	TMCC16	Ready

Below the table, a sub-dialog 'Confirm Delete action' is shown with the message: 'You are about to delete these virtual servers. This action is not reversible. Are you sure?' with 'Yes' and 'No' buttons.

At the bottom of the screenshot, a 'CSL-WAVE Log' table is visible:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-20 13:36:54	2013-08-20 13:36:55	1 seconds	Done	100%

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

The screenshot displays the CSL-WAVE v3.2.0 interface. A dialog box titled "Delete z/VM Users (2/2) Selected, Last Run: 2/2 Ended" is open, showing a table of users to be deleted:

Name	System	Status
ZLN71	TMCC16	Done - Request added
ZLN71	TMCC16	Skipped - z/VM Guest is not inactive

Below the dialog box, a task log table is visible:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:36:09			Active	65%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
Launch Linux Installation	waveadm	2013-08-23 06:53:12	2013-08-23 07:05:26	12:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:48:14	2013-08-23 06:48:33	19 seconds	Done	100%
Execute REXX on z/VM Objects	waveadm	2013-08-20 15:54:02	2013-08-20 15:54:03	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 15:41:06	2013-08-20 15:41:07	1 seconds	Done	100%

The interface also shows a "BTS Interaction" dialog box with the message "Request sent to BTS" and a "BTS Online" indicator in the bottom right corner.

BTS = Background Task Scheduler

## The WAVE GUI (Hardware Viewer – z/VM User Groups) User Actions

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototypes Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage System Status Session Tasks

Default Zoom Group By: Site Defined Groups zln7\* Show Filter Panel

Property Viewer

TMCC16 DEMOLAN

Property	Value
Type	YSwitch
VLAN Aware	No
Default VLAN ID	N/A
Name	DEMOLAN
Owner	SYSTEM
Protocol	QDIO
Life Span	Persist
Created By	WAVEinik on 2013-08-20 11:52:31
Last Modified...	waveadm on 2013-08-20 15:59:12

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Delete z/VM Guests	waveadm	2013-08-23 07:37:21	2013-08-23 07:37:43	22 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 07:36:57	2013-08-23 07:36:58	1 seconds	Done	100%
Delete z/VM Guests	waveadm	2013-08-23 07:36:09	2013-08-23 07:36:24	15 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 07:17:31	2013-08-23 07:17:32	1 seconds	Done	100%
Update Distribution to z/VM Guests	waveadm	2013-08-23 07:14:44	2013-08-23 07:14:44	0 seconds	Done	100%
z/VM Linux Repostition	waveadm	2013-08-23 06:52:11	2013-08-23 07:05:25	13:14 minutes	Error	
Verify Linux Repository	waveadm	2013-08-23 06:52:11	2013-08-23 06:52:11	0 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 06:46:14	2013-08-23 06:46:33	19 seconds	Done	100%

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention Required

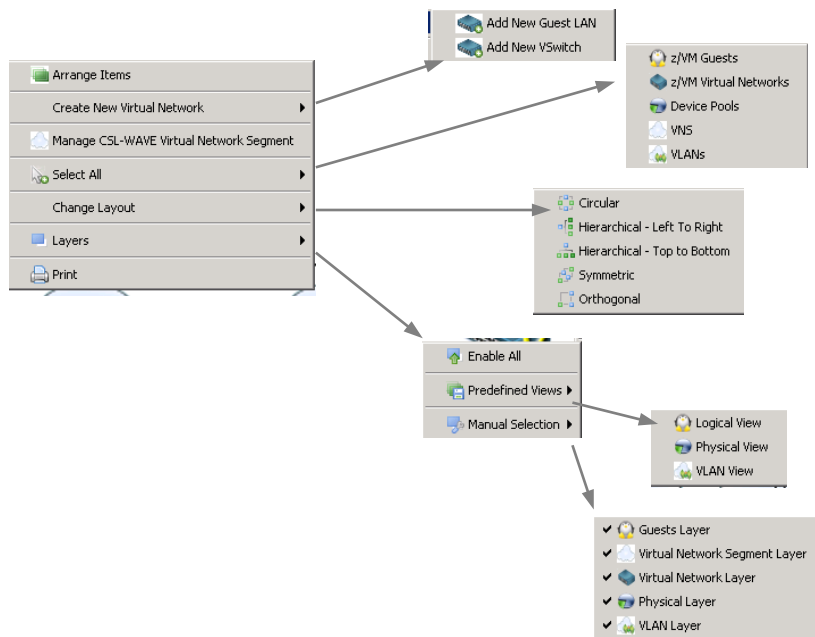
Start Launch CSL-WAVE v3.2.2... A - z/VM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

156 © 2013 IBM Corporation

Guests are gone



## The WAVE GUI (Hardware Viewer – Network)



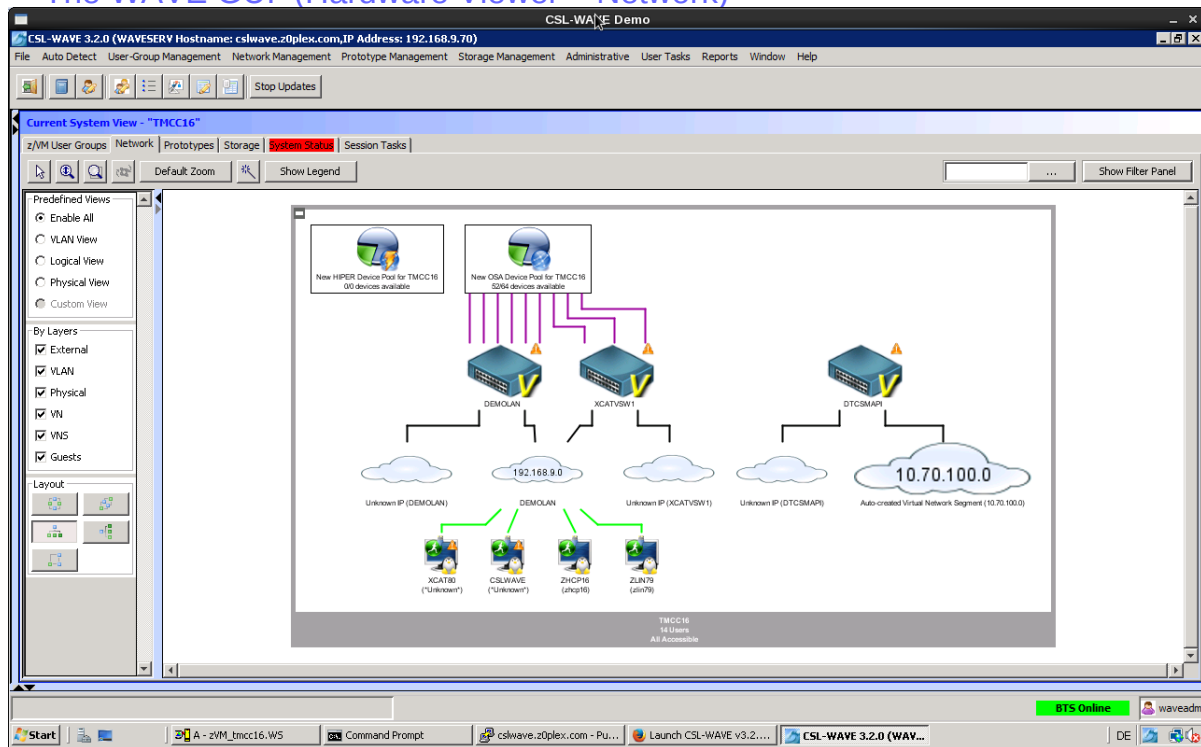
30.09.13

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## Overview of network tasks

## The WAVE GUI (Hardware Viewer – Network)



Network overview presented after discovery. The graphical representation is created based on:

- related z/VM directory entries
- returns from queries against z/VM VSwitch' and guest LANs
- together with the device pools.

First time discovered objects are missing the default NIC parameter - this can be changed by updating this object: see next slides whit default NIC assignment:

- 'EA00' to network object 'DEMOLAN'.

# The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERY) interface. The main window is titled "Current System View - 'TMCC16'" and shows a network diagram with components like "New HPER Device Pool for TMCC16", "XCATVSW", "Unknown IP (XCATVSW1)", and "XCAT80 (xcat80)". An "Update Virtual Network 'DEMOLAN' Information" dialog box is open, showing the following details:

- General Information:**
  - Name: DEMOLAN
  - Owner: SYSTEM
  - z/VM System: TMCC16
  - Default NIC: EA00
  - Lifespan:  Temporary  Persistent  Permanent
- Created By:** WAVEinit on 2013-08-20 11:52:31
- Modified By:** waveadm on 2013-08-20 15:59:12
- Descriptive Information (254/254 left):**
  - Connected Segments | vSwitch Specific |
  - Description:

The dialog box also features "Update" and "Close" buttons and a "Waiting for user input" message at the bottom.

## The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window shows a network diagram with a switch and various network segments. An 'Update Virtual Network DEMOLAN Information' dialog box is open, showing the following details:

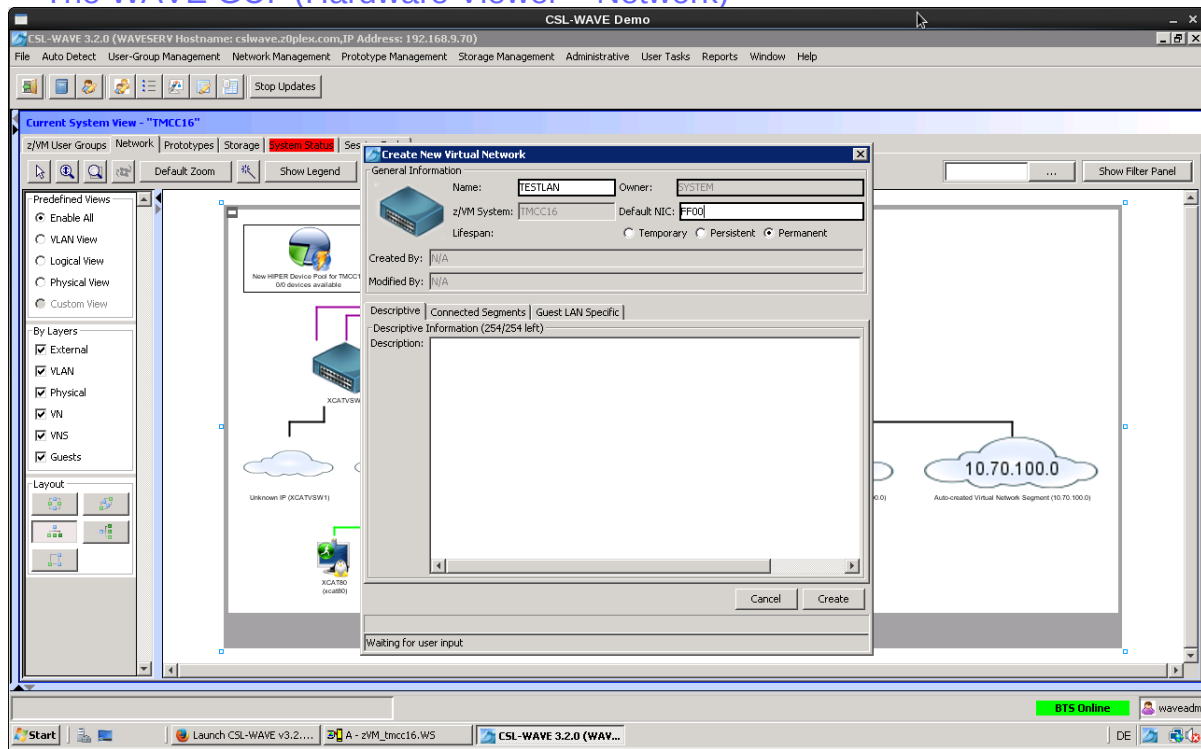
- General Information:**
  - Name: DEMOLAN
  - Owner: SYSTEM
  - z/VM System: TMCC16
  - Default NIC: EA00
  - Lifespan:  Temporary  Persistent  Permanent
  - Created By: jwaveadm on 2013-08-20 11:52:31
  - Modified By: jwaveadm on 2013-08-20 15:59:12
- Table:**

Name	Network	VLAN ID
Unknown IP	N/A	N/A
DEMOLAN	192.168.9.0	N/A

The dialog box also includes 'Update' and 'Close' buttons and a 'Waiting for user input' message at the bottom.

This will clear the attention icon on the switch

## The WAVE GUI (Hardware Viewer – Network)

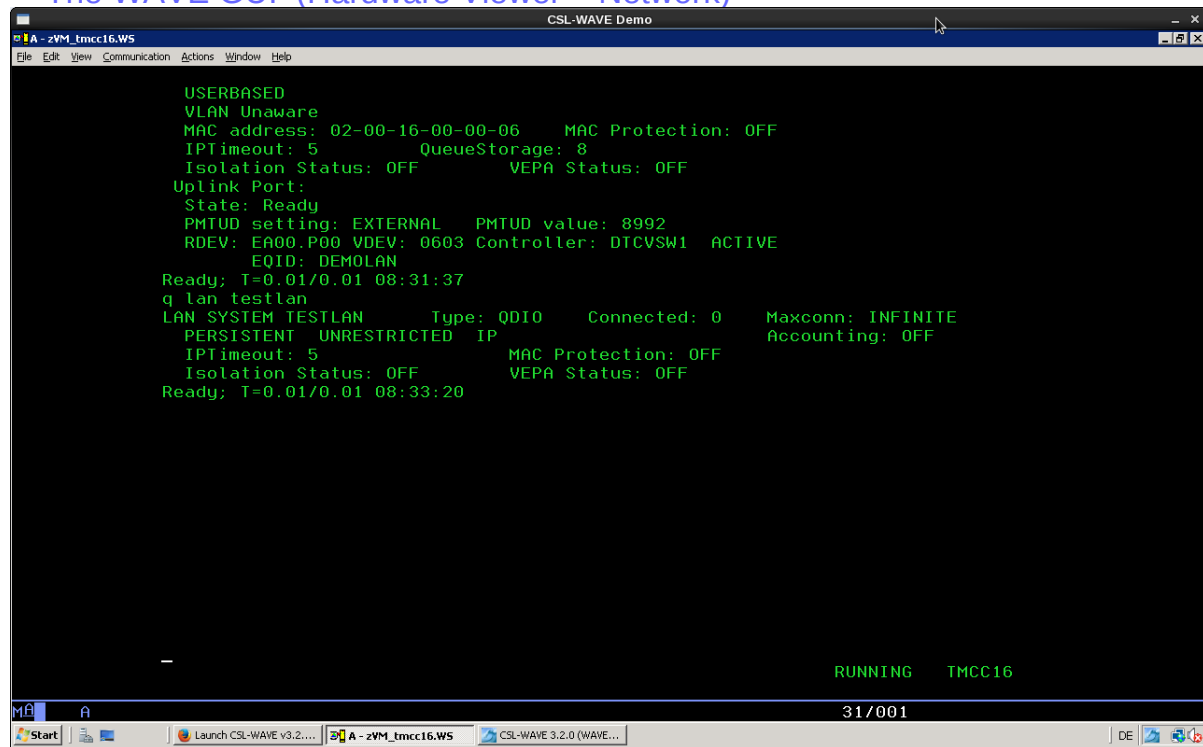


The CSL-WAVE GUI also allows to create a new guest LAN or VSwitch in z/VM:

- we create a new LAN 'TESTLAN' with default NIC 'FF00'.

Go to the z/VM 3270 green screen to show over 'Q LAN' the status before and after the creation request (slide 162) has been issued via CSL-WAVE.

## The WAVE GUI (Hardware Viewer – Network)



The screenshot displays the WAVE GUI interface for a z/VM object named 'zVM\_tmcc16.WS'. The main window shows network configuration details for a test LAN. The configuration includes:

```
USERBASED
VLAN Unaware
MAC address: 02-00-16-00-00-06   MAC Protection: OFF
IPTimeout: 5                     QueueStorage: 8
Isolation Status: OFF           VEPA Status: OFF
Uplink Port:
State: Ready
PMTUD setting: EXTERNAL   PMTUD value: 8992
RDEV: EA00.P00 VDEV: 0603 Controller: DTCVSW1 ACTIVE
EQID: DEMOLAN
Ready; T=0.01/0.01 08:31:37
q lan testlan
LAN SYSTEM TESTLAN   Type: QDIO   Connected: 0   Maxconn: INFINITE
PERSISTENT UNRESTRICTED IP   Accounting: OFF
IPTimeout: 5         MAC Protection: OFF
Isolation Status: OFF   VEPA Status: OFF
Ready; T=0.01/0.01 08:33:20
```

At the bottom of the window, the status 'RUNNING TMCC16' is displayed, along with the IP address '31/001'. The taskbar at the bottom shows the Start button, a search icon, and several open applications: 'Launch CSL-WAVE v3.2...', 'zVM\_tmcc16.WS', and 'CSL-WAVE 3.2.0 (WAVE...)'.

Here we see the new object in z/VM

## The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The main window shows a network diagram titled "Current System View - 'TMCC16'". The diagram illustrates a network topology with several components:

- Two physical switches: DEMOLAN and XCATVSW1.
- A physical switch: DTCSMAPI.
- Virtual Network Segments (VNS):
  - 192.168.9.0 (connected to DEMOLAN)
  - 10.60.100.0 (Auto-created Virtual Network Segment, connected to DTCSMAPI)
  - 10.70.100.0 (Auto-created Virtual Network Segment, connected to DTCSMAPI)
- Physical LAN: TESTLAN.
- Guests (connected to the 192.168.9.0 VNS):
  - XCATV0 (xcat0)
  - CSLWAVE ("Unknown")
  - ZHCPI6 (zhcp16)
  - ZLW70 (zlw70)

A context menu is open over the 10.60.100.0 VNS, with the option "Manage CSL-WAVE Virtual Network Segment" selected. Other menu options include "Arrange Items", "Create New Virtual Network", "Select All", "Change Layout", "Layers", and "Print".

The interface includes a menu bar (File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help) and a toolbar with "Stop Updates". The left sidebar shows "Predefined Views" (Enable All, VLAN View, Logical View, Physical View, Custom View) and "By Layers" (External, VLAN, Physical, VN, VNS, Guests). The bottom status bar shows "BTS Online" and "Waveadm".

Via 'Manage CSL-WAVE Virtual Network Segment' we now we assign the subnet / virtual network segment to a virtual network (VSwitch or virtual LAN).

## The WAVE GUI (Hardware Viewer – Network)

The screenshot shows the CSL-WAVE 3.2.0 GUI with the 'Virtual Network Segment Manager' dialog box open. The dialog displays a table of existing virtual network segments:

Name	Network	Netmask	Broadcast	Default GW	VLAN ID
TESTLAN	172.16.47.0	255.255.255.0	172.16.47.255	172.16.47.1	
Auto-created Virtual...	10.60.100.0	255.255.255.0	10.60.100.255	10.60.100.1	
Auto-created Virtual...	10.70.100.0	255.255.255.0	10.70.100.255	10.70.100.1	
DEMOLAN	192.168.9.0	255.255.255.0	192.168.9.255	192.168.9.1	

The dialog also includes a 'Filters' section with a checkbox for 'Show Unknown IP VNS' and a 'Create New Virtual Network Segment' button. A context menu is open over the 'Auto-created Virtual...' row, showing options: 'Display Information', 'Update Information', and 'Remove'.

If there is no matching subnet defined we can easily create a new one



# The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave-z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Filters

- Show Unknown IP

Update Virtual Network Segment

General Information

Name: TESTLAN

Description: private Demo LAN 172.16.47.0

Created By: waveadm on 2013-08-19 17:41:57

Last Modified By: waveadm on 2013-08-19 17:44:11

IP Information

Network: 172.16.47.0 Default GW: 172.16.47.1

Netmask: 255.255.255.0

Broadcast: 172.16.47.255 VLAN ID:

VLAN ID
N/A
N/A
N/A

Update Cancel

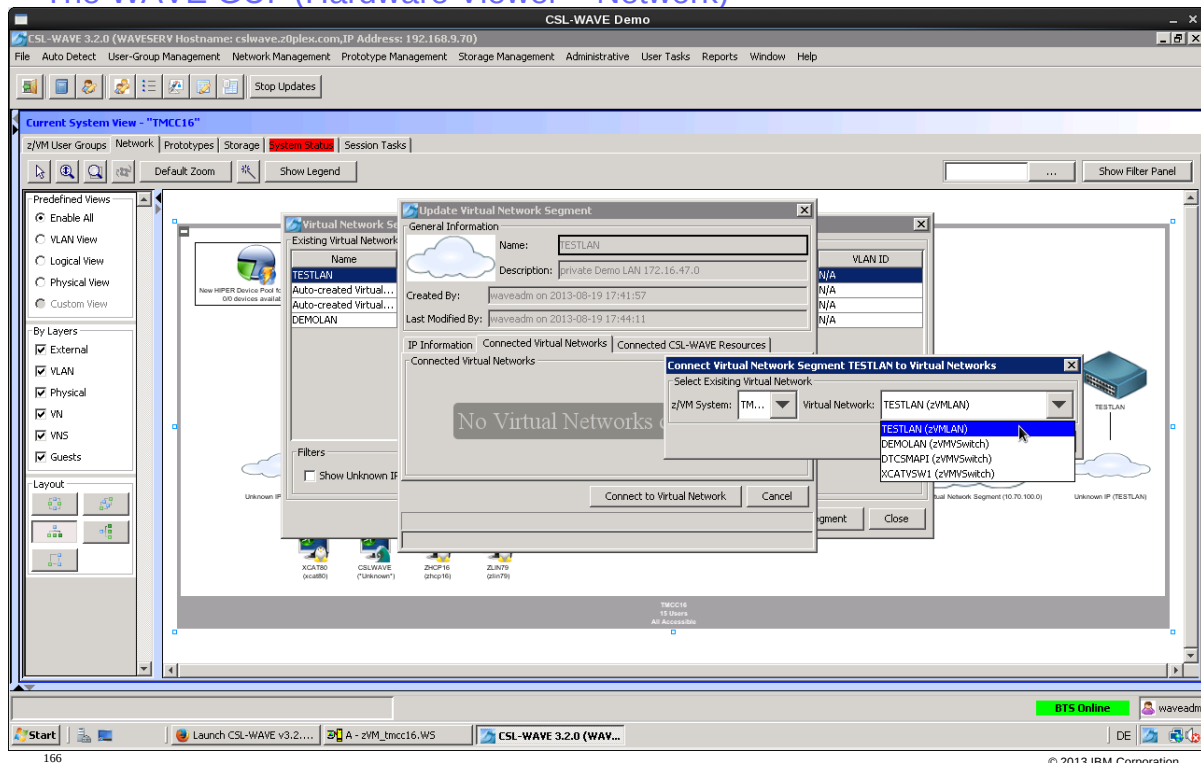
z/VM User Groups

- XCAT70 (ucab0)
- CSLWAVE ("Unknown")
- ZMCP16 (zhp16)
- ZMCP16 (zhp16)

TMCC16  
13 Steps  
All Accessible

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... BTS Online Waveadm

## The WAVE GUI (Hardware Viewer – Network)



Assign the newly created network segment 'TESTLAN' to the wished VSwitch or guest LAN.  
Press the 'Update' button to get the task executed - the graphical network representation changes immediately and now shows the new association between 'TestLAN' and VSwitch.

## The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Legend

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

Network Information:

Network	VLAN ID
172.16.47.0	N/A

Network Diagram:

- TESTLAN (Guest LAN Name: TESTLAN, Switch Type: Guest LAN)
- DEMO LAN (192.168.9.0)
- XCATVSW1
- OTCSMAP1 (10.60.100.0)
- 10.70.100.0
- Devices: XCAT80 (Guest), CSLWAVE (Unknown), ZICP16 (Group 16), ZLIN79 (qlin79)

TMCC16 18 Users All Accessible

Start Launch CSL-WAVE v3.2.0... A - z/VM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... BTS Online Waveadm

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Now we connect the guest 'ZLIN79' to this new network - first show all the network information of the actual setup by moving the mouse over the different network objects - or select a specific object like 'ZLIN79' for the related network set-up details.

# The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE GUI interface. At the top, the title bar reads "CSL-WAVE Demo" and the window title is "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. Below the menu is a toolbar with icons and a "Stop Updates" button.

The main area is titled "Current System View - 'TMCC16'" and shows a network topology. On the left, there are panels for "Predefined Views" (Enable All, VLAN View, Logical View, Physical View, Custom View), "By Layers" (External, VLAN, Physical, VN, VNS, Guests), and "Layout". The network diagram features several nodes: TESTLAN, DEMOLAN, XCATVSW1, and DTCCMAP1. These nodes are connected to various virtual network segments, including "Auto-created Virtual Network Segment (10.60.100.0)" and "Auto-created Virtual Network Segment (10.70.100.0)". A central segment is labeled "192.168.9.0".

A tooltip is visible over the "z/VM User Name: ZLIN79" node, displaying the following information:

- z/VM User Name: ZLIN79 (zlin79)
- NIC Address: EA00
- VSwitch: DEMOLAN

Below the tooltip, a "Connections:" table is shown:

IP Address	VLAN ID
192.168.9.79	N/A

The bottom of the window shows a taskbar with the Start button, several application icons, and a system tray containing "BTS Online" and "Waveadm". The status bar at the very bottom indicates "168" and "© 2013 IBM Corporation".

## The WAVE GUI (Hardware Viewer – Network)

The screenshot shows the CSL-WAVE 3.2.0 GUI. The main window displays a network diagram with a central switch and two hosts (XCAT and CSL-WAVE). The 'Display ZLIN79 Details' window is open, showing the following information:

**General Information**

- z/VM Guest Name: ZLIN79
- z/VM System Name: TMCC16
- SDG Name: DEMO LINUX

**Guest Meta Data**

- Distribution: SLES11 - 64 Bit
- Project: No Project Assigned
- Functionality: N/A (Activation Level 1)
- Prototype: N/A
- Description:
- Original Guest: N/A
- Default z/VM System:
- Locker: N/A

**z/VM Data**

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC16	Active	Yes	DEMO LINUX	Yes		1	1024 MB	1024 MB	2.19 GB	G	N/A

**Connection Availability from This Work Station**

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.79	DEMOLAN	DEMOLAN	Reachable

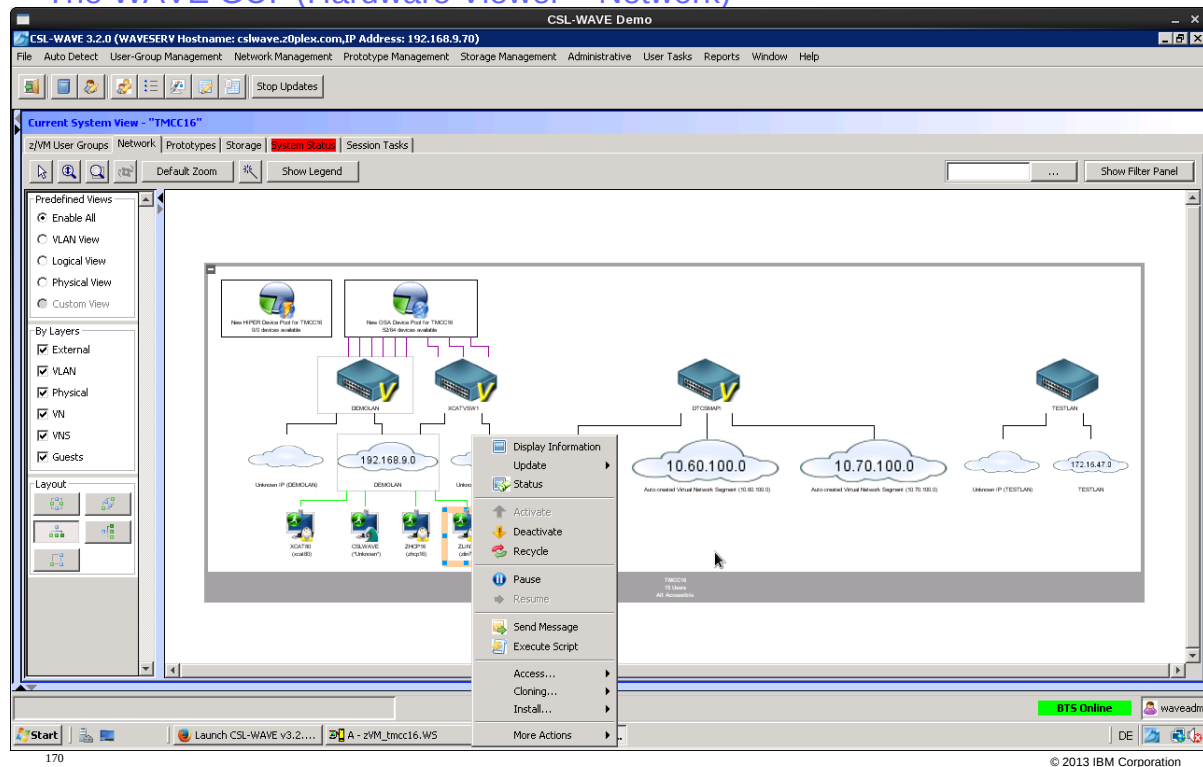
**Update**

- Created By: WAVE Daemon Updater on 2013-08-20 13:50:23
- Last Modified By: WAVEInit on 2013-08-23 06:48:17

'Display ZLIN79 Details' delivers the Linux operating system details about the network set-up.

Remember also slide 144: only 'eth0' with IP address 192.168.9.79 (DEMOLAN) is available at this time.

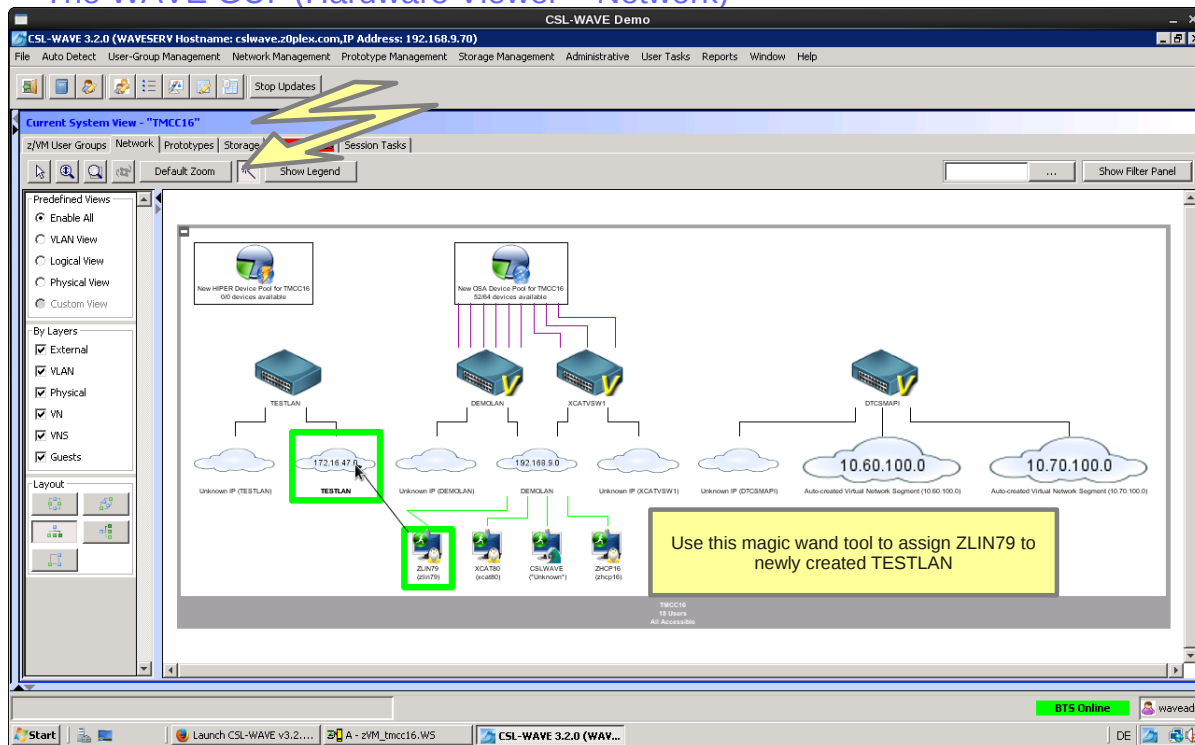
## The WAVE GUI (Hardware Viewer – Network)



There is no task to add a new NIC – this is simply done by first selecting the 'Wizard icon' (slide 171):

- then select the guest 'ZLIN79' and draw a line to the subnet 'TESTLAN' to which it should be connected
- this opens a menu where you can enter the IP address for the guest.

## The WAVE GUI (Hardware Viewer – Network)



Use this magic wand to assign ZLIN79 to newly created TESTLAN  
 Multiple guests can be selected

## The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 GUI in 'Current System View - "TMCC16"'. A dialog box titled "Connect z/VM Guest to Virtual Network Segment (1/1) Selected" is open, showing a table of selected guests:

Name	System	New IP Address	Status
<input checked="" type="checkbox"/> ZLIN79	TMCC16	172.16.47.79	

Below the table are buttons for "Select All", "Deselect All", and "Toggle Selection". The "Select connection options" section shows "Connect through Virtual Network: TESTLAN (zVLAN)" and "Using VLAN ID: " and "And Port Type: N/A". The dialog is waiting for user input.

The background network diagram shows a switch labeled "TESTLAN" connected to a virtual network segment labeled "10.70.100.0".

Taskbar: Start | Launch CSL-WAVE v3.2.2... | A - zVM\_tmcc16.WS | CSL-WAVE 3.2.0 (WAV... | BTS Online | Waveadm | DE

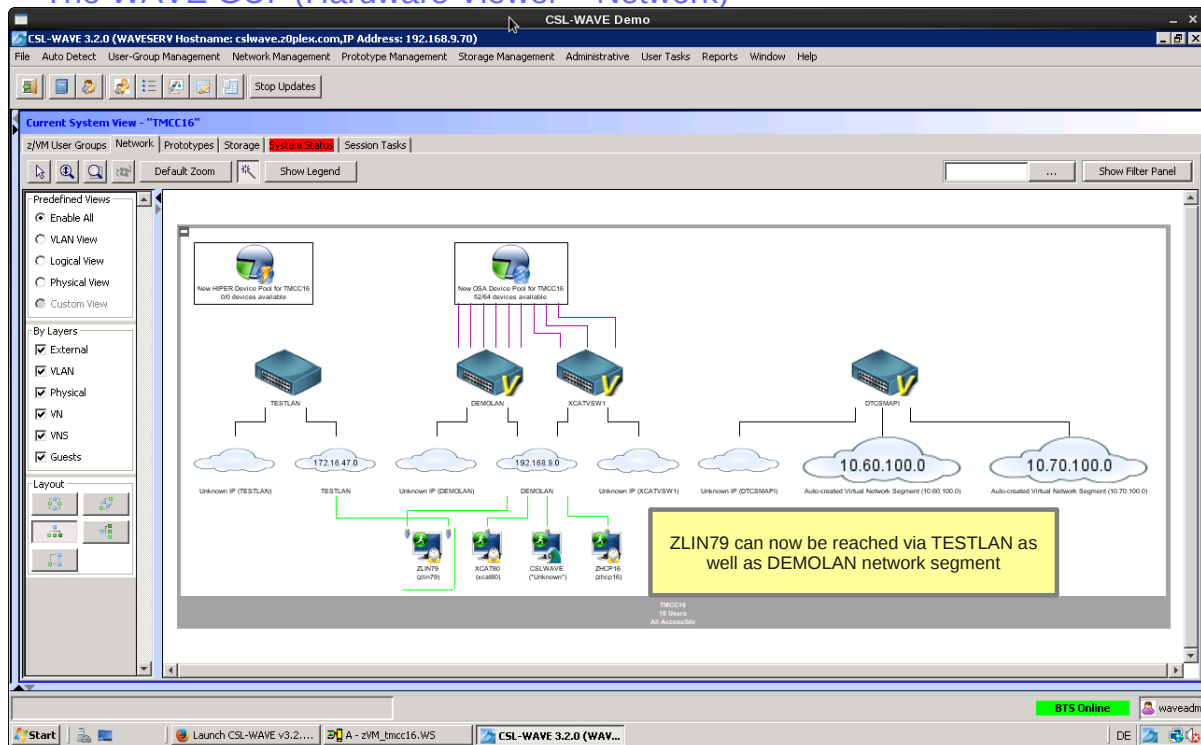
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Modify the IP address of guest 'ZLIN79'.



## The WAVE GUI (Hardware Viewer – Network)



Guest 'ZLIN79' is assigned now to two Virtual Network Segments (VNS) 'DEMOLAN' as well as 'TESTLAN'. Double click onto the guest to open the 'Display ZLIN79 Details' view again (compare slide 144)- see next slide

## The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE 3.2.0 (WAVESERY Hostn...)

File Auto Detect User-Group Managemen...

Current System View - "TMCC16"

z/VM User Groups Network Prototypes

Default Zoom

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- WN
- VNS
- Guests

Layout

z/VM System View - "ZLIN79 Details"

General Information

z/VM Guest Name: ZLIN79

z/VM System Name: TMCC16

SDG Name: DEMO LINUX

Data | z/VM View | zLinux View | Performance View | Custom Attributes

Guest Meta Data

Distribution: SLES11 - 64 Bit Project: No Project Assigned Details

Functionality: N/A (Activation Level 1) Prototype: N/A

Description: Original Guest: N/A

Default z/VM System: Locker: N/A

z/VM Data

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC16	Active	Yes	DEMO LINUX	Yes		1	1024 MB	1024 MB	2.19 GB	G	N/A

Connection Availability from This Work Station

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.79	DEMOLAN	DEMOLAN	Reachable
172.16.47.79	TESTLAN	TESTLAN	Unreachable

Update

Created By: WAVE Daemon Updater on 2013-08-20 13:50:23

Last Modified By: WAVEink on 2013-08-23 08:52:05

Close TAN

Waiting for user input

10.70.100.0

Created Virtual Network Segment (10.70.100.0)

Start

Launch CSL-WAVE v3.2.0...

A - z/VM\_tmcc16.WS

CSL-WAVE 3.2.0 (WAV...

BTS Online

waveadm

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'Display ZLIN79 Details' - Now after this assignment, two Virtual Network Segments(VNS)'DEMOLAN'- as well as 'TESTLAN - are listed!

## The WAVE GUI (Hardware Viewer – Network)

CSL-WAVE 3.2.0 (WAVESERY Host) HostName: CSL-WAVE Demo

File Auto Detect User-Group Management

Current System View - "TMCC16"

z/VM User Groups Network Prototype: Default Zoom

Predefined Views

- Enable All
- VLAN View
- Logical View
- Physical View
- Custom View

By Layers

- External
- VLAN
- Physical
- VN
- VNS
- Guests

Layout

z/VM Guest Name: ZLIN79

z/VM System Name: TMCC16

SDG Name: DEMO LINUX

General Information

Data z/VM View z/Linux View Performance View Custom Attributes

USER ZLIN79 X000000X 1024M 1024M G

CPU 00

IPL 192

LOGONBY PURIT WAVEADM

MACHINE ESA 4

CONSOLE 0009 3215

NICDEF EA00 TYPE QDIO LAN SYSTEM DEMOLAN

NICDEF FF00 TYPE QDIO LAN SYSTEM TESTLAN DEVICES 3

SPOOL 000C 3505 A

SPOOL 000D 3525 A

SPOOL 000E 1403 A

LINK MAINT 0190 0190 RR

LINK MAINT 019D 019D RR

LINK MAINT 019E 019E RR

10.70.100.0

created Virtual Network Segment (10.70.100.0)

Close TAN

Waiting for user input

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - z/VM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

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Check the status in z/VM

## The WAVE GUI (Hardware Viewer – Network)

The screenshot shows the 'Display ZLIN79 Details' window in the CSL-WAVE 3.2.0 GUI. The window is divided into several sections:

- General Information:**
  - z/VM Guest Name: ZLIN79
  - z/VM System Name: TMCC16
  - SDG Name: DEMO LINUX
- File System Information (df -ah):**

Device	FS Type	Size (GB)	used (GB)	Free (GB)	Type	Mount Point	Status (Capacity)
/dev/dasda1	ext3	1.57	1.03	0.47	STD	/	66%
proc	proc	0.00	0.00	0.00	STD	/proc	0%
sysfs	sysfs	0.00	0.00	0.00	STD	/sys	0%
debugfs	debugfs	0.00	0.00	0.00	STD	/sys/kernel/debug	0%
udev	tmpfs	0.49	0.00	0.49	STD	/dev	0%
tmpfs	tmpfs	0.49	0.00	0.49	STD	/dev/shm	0%
devpts	devpts	0.00	0.00	0.00	STD	/dev/pts	0%
- Network Information (ifconfig -all):**

Device	MAC Address	IP Address	Status
eth0	02:00:16:00:00:11	192.168.9.79	ONLINE
eth5	02:00:16:00:00:15	172.16.47.79	ONLINE
lo		127.0.0.1	ONLINE
- Routing Information (route):**

Destination	Gateway	Mask	Flags	Metric	Ref	Use	Interface	Reachable
192.168.9.1		0.0.0.0	UG	0	0	0	eth0	Reachable
loopback	*	255.0.0.0	U	0	0	0	lo	N/A
link-local	*	255.255.0.0	U	0	0	0	eth0	N/A
172.16.47.0	*	255.255.255.0	U	0	0	0	eth5	N/A
192.168.9.0	*	255.255.255.0	U	0	0	0	eth0	N/A
- Uptime Information:**
  - Uptime: up 2:24 hours

The window also shows a network diagram on the right with a cloud labeled '10.70.100.0' and a 'Show Filter Panel' button. The taskbar at the bottom shows the Start button, taskbar, and system tray with 'BTS Online' and 'waveadm' icons.

'Display ZLIN79 Details' - Now after this assignment, two Virtual Network Segments(VNS)'DEMOLAN- eth0' as well as 'TESTLAN - eth5' are listed!

## The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The main window shows a network diagram with several components: TESTLAN, DEMOLAN, XCATVSW1, and DTCSMAP1. A dialog box is open over the TESTLAN segment, displaying the text "Disconnect from TESTLAN IP 172.16.47.79". Below this text, four guest icons are listed: ZLIN79 (zlin79), XCAT790 (xcat790), CSLWAVE (\*Unknown\*), and ZHC16 (zhcp16). The interface includes a menu bar, a toolbar, and a sidebar with various view options and filters. The bottom of the screen shows a Windows taskbar with the Start button and several open applications, including "Launch CSL-WAVE v3.2.2...", "A - zVM\_tmcc16.WS", and "CSL-WAVE 3.2.0 (WAV...".

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Network interfaces can also be removed from a guest: Linux OS and z/VM directory definitions are being removed by this task. We now disconnect guest 'ZLIN79' from network segment 'TESTLAN'.

# The WAVE GUI (Hardware Viewer – Network)

The screenshot shows the CSL-WAVE 3.2.0 GUI interface. The main window displays a network diagram with a central switch labeled 'TESTLAN' connected to two virtual network segments: 'segment (10.60.100.0)' and 'Auto-created Virtual Network Segment (10.70.100.0)'. A dialog box titled 'Disconnect from virtual network Segment: TESTLAN (1/1) Selected' is open, showing a table of users to be disconnected.

Name	System	IP Address	Status
<input checked="" type="checkbox"/> zLIN79	TMCC16	172.16.47.79	Ready

Buttons in the dialog include 'Select All', 'Deselect All', 'Toggle Selection', 'Show Filtering', 'Parallel', 'Hide', 'Cancel', and 'Go'. The status 'Waiting for user input' is shown at the bottom of the dialog.

The GUI includes a menu bar (File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help) and a toolbar with 'Stop Updates'. The left sidebar contains 'Predefined Views' (Enable All, VLAN View, Logical View, Physical View, Custom View) and 'By Layers' (External, VLAN, Physical, VN, VNS, Guests). The taskbar at the bottom shows 'Start', 'Launch CSL-WAVE v3.2...', 'A - zVM\_tmcc16.WS', and 'CSL-WAVE 3.2.0 (WAV...)'.

# The WAVE GUI (Hardware Viewer – Network)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV) GUI for a z/VM system named "TMCC16". The window title is "CSL-WAVE Demo" and the address bar shows "Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70".

The main interface is titled "Current System View - 'TMCC16'" and shows a network topology diagram. The diagram includes several network components:

- Switches:** TESTLAN, DEMOLAN, XCATVSW1, and DTCSMAP1.
- Virtual Network Segments:**
  - 172.16.47.0 (TESTLAN)
  - 192.168.9.0 (DEMOLAN)
  - 10.60.100.0 (Auto-created Virtual Network Segment)
  - 10.70.100.0 (Auto-created Virtual Network Segment)
- Hosts:** ZLINT9 (z/OS), XCAT90 (z/OS), CSLWAVE (z/OS), and ZHCP16 (z/OS).

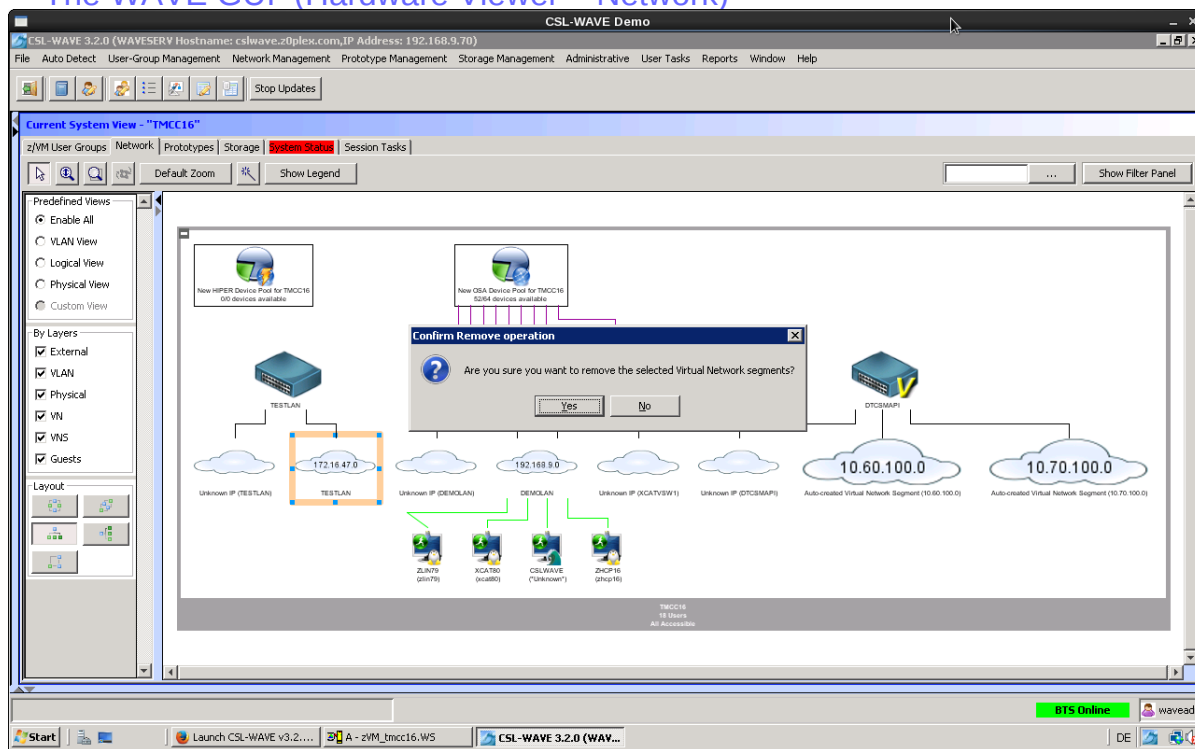
On the left side, there is a navigation pane with the following sections:

- Predefined Views:** Enable All (selected), VLAN View, Logical View, Physical View, Custom View.
- By Layers:** External (checked), VLAN (checked), Physical (checked), VN (checked), VNS (checked), Guests (checked).
- Layout:** Buttons for zooming and refreshing the view.

At the bottom of the window, the Windows taskbar shows the Start button, a clock at 1:19, and several open applications: "Launch CSL-WAVE v3.2...", "A - zVM\_tmcc16.WS", and "CSL-WAVE 3.2.0 (WAV...". The system tray includes "BTS Online" and "waveadm".

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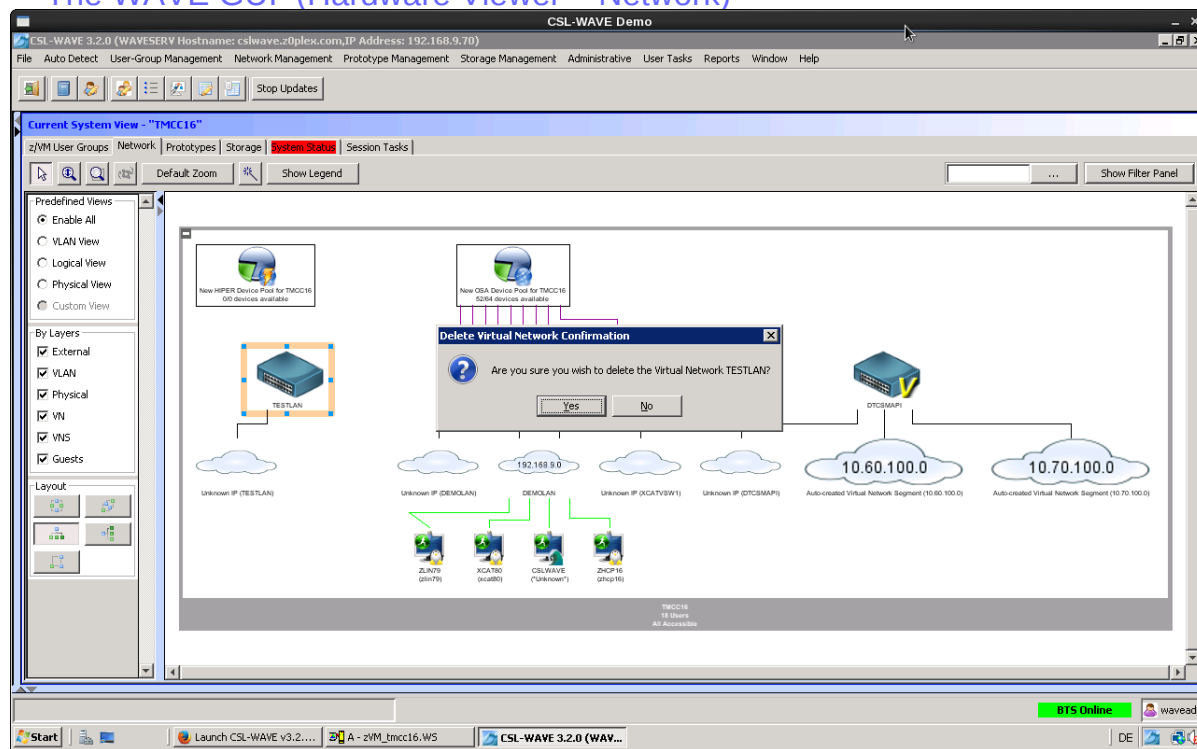
## The WAVE GUI (Hardware Viewer – Network)



Complete network segment can be removed also



## The WAVE GUI (Hardware Viewer – Network)



The previously created VSwitch 'TESTLAN' will now be deleted.

# The WAVE GUI (Hardware Viewer – Network)

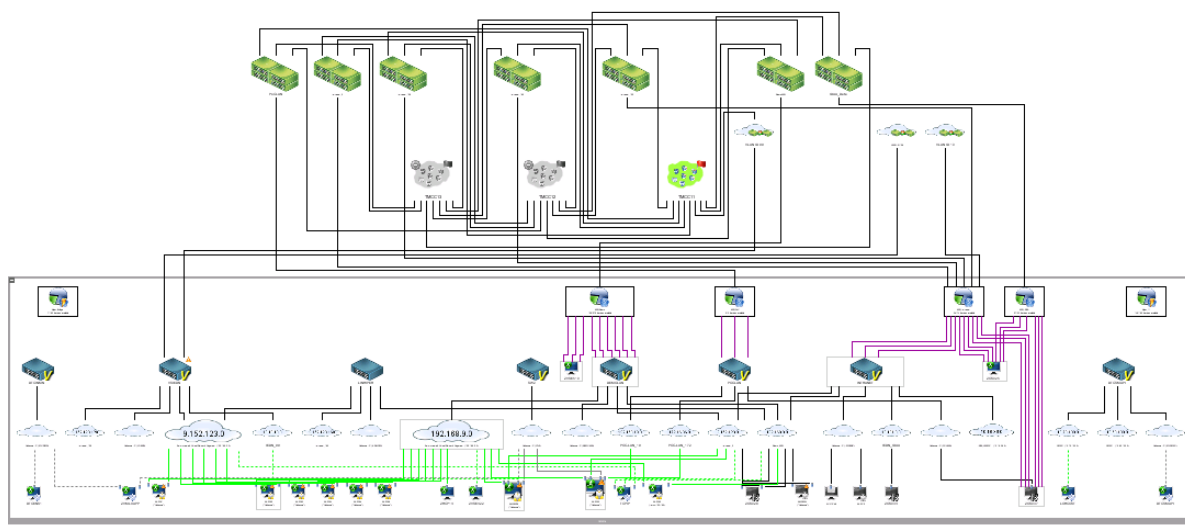
The screenshot shows the CSL-WAVE 3.2.0 GUI for system TMCC16. The window title is "CSL-WAVE Demo" and the address bar shows "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The menu bar includes File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. The toolbar contains icons for various actions and a "Stop Updates" button.

The main interface is titled "Current System View - 'TMCC16'" and shows a network diagram. The diagram includes:

- Two switches: DEMOLAN and XCATVSW1, connected to a central switch DTCSMAP1.
- Virtual Network Segments: 10.60.100.0 and 10.70.100.0, connected to DTCSMAP1.
- VMs: z/VMs (z/OS, z/OS, z/OS, z/OS) connected to the network segments.
- Network Management: A "New HPER Device Pool for TMCC16" and a "New CSA Device Pool for TMCC16" are shown at the top.

The sidebar on the left contains "Predefined Views" (Enable All, VLAN View, Logical View, Physical View, Custom View), "By Layers" (External, VLAN, Physical, VN, VNS, Guests), and "Layout" options. The bottom status bar shows "BTS Online" and "Waveadm".

## The WAVE GUI (Hardware Viewer – Network)



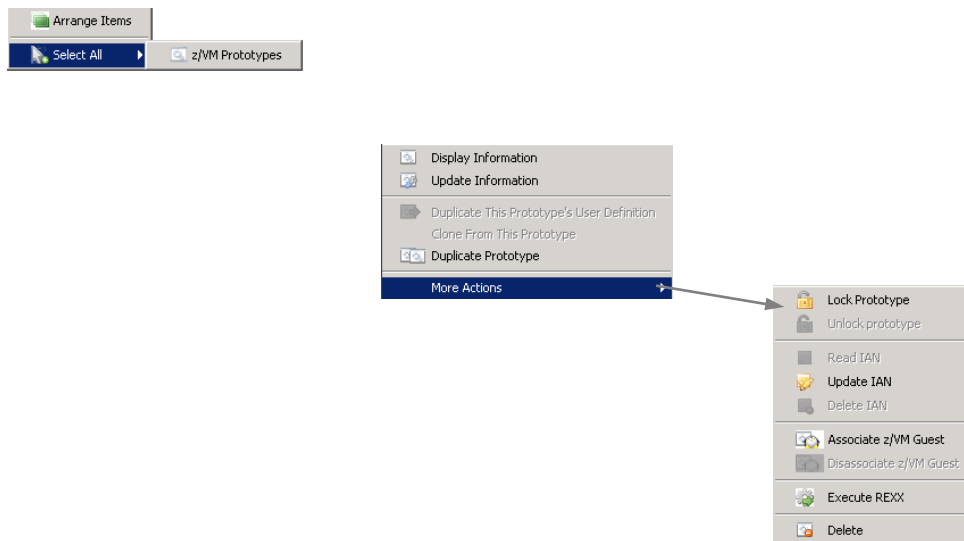
30.09.13

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Picture from another CSL-WAVE instance managing a bigger system

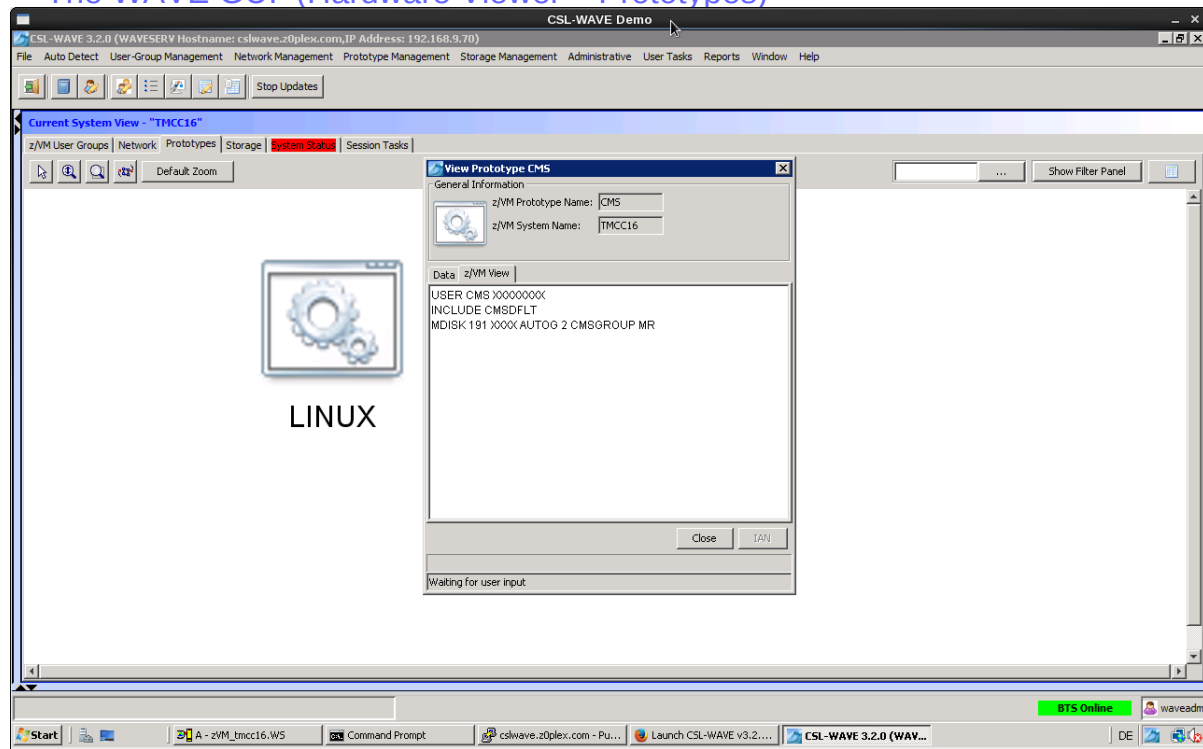
## The WAVE GUI (Hardware Viewer – Prototype Actions)



30.09.13

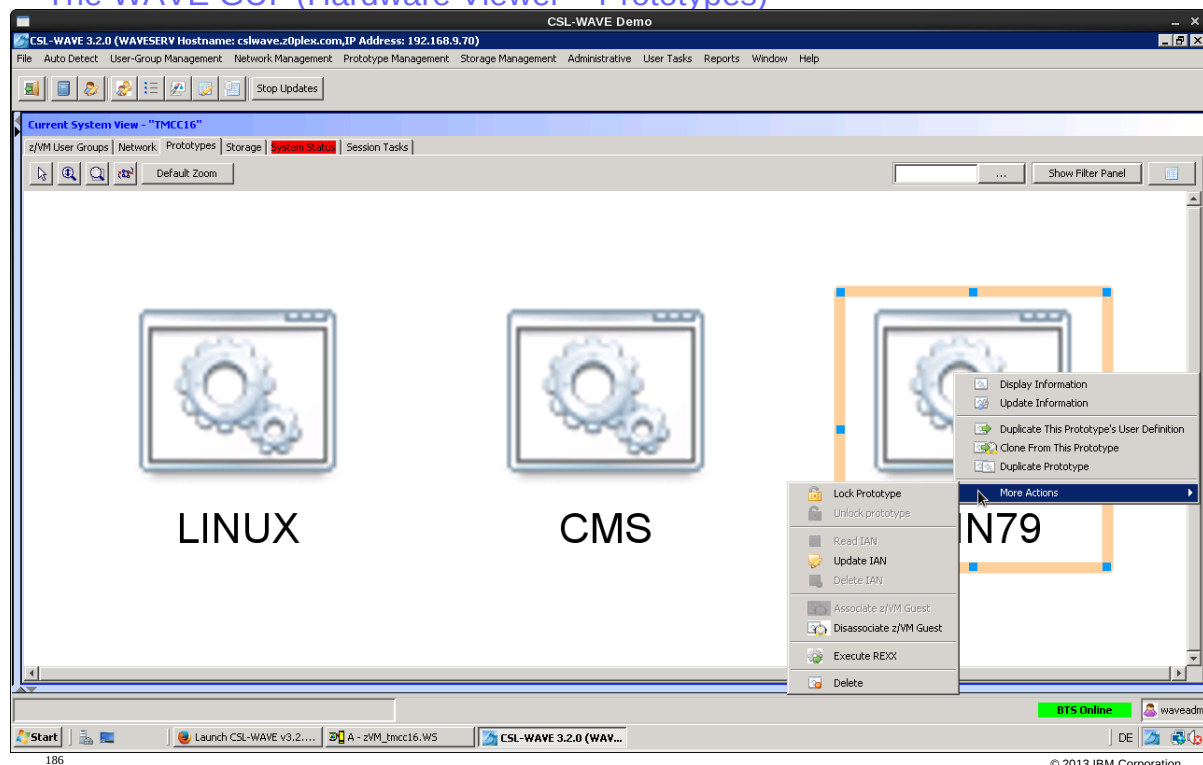
## Overview of tasks for prototypes

## The WAVE GUI (Hardware Viewer – Prototypes)



Display the prototype definition

## The WAVE GUI (Hardware Viewer – Prototypes)



'More Actions' - 'Disassociate z/VM Guest' converts a z/VM Linux prototype back into a "normal" Linux guest. There are two more prototypes shown 'CMS' and 'LINUX'.

# The WAVE GUI (Hardware Viewer – Prototypes)

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. The main window is titled "Current System View - 'TMCC16'". A modal dialog box titled "Disassociate z/VM guest from Prototype" is open, showing configuration details for a z/VM Prototype named "ZLIN79" and a z/VM System named "TMCC16".

**Disassociate z/VM guest from Prototype Dialog:**

- z/VM Prototype Name: ZLIN79
- z/VM System Name: TMCC16
- Full Name: ZLIN79
- Description: ZLIN79-prototype
- Functionality: N/A (Activation Level 1)
- Project: CSL-WAVE Demo
- DASD Group: LINUX
- Associated z/VM Guest: ZLIN79
- Delete Options:
  - Delete Associated z/VM Guest
  - Change z/VM Guest password

**Property Viewer (Left Panel):**

Property	Value
Name	ZLIN72
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.73
Project	CSL-WAVE Demo
Functionality	N/A

**CSL-WAVE Log (Bottom Panel):**

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Activate z/VM Guests	waveadm			0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm			48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%
Pause z/VM Guests	waveadm	2013-08-23 10:12:37	2013-08-23 10:12:37	0 seconds	Done	100%

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV) interface. The main window is titled "Current System View - 'TMCC16'" and shows three system icons: LINUX, CMS, and ZLIN79. The ZLIN79 icon is highlighted with an orange border. The Property Viewer on the left shows details for ZLIN79 (TMCC16), including Name, Status (Active), Eligible (Yes), Group (USER-LOCAL), Type (Linux), Distribution (SLES11 - 64 Bit), 1st IP Address (192.168.9.73), Project (CSL-WAVE Demo), and Functionality (N/A).

The CSL-WAVE Log table at the bottom shows the following data:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Disassociate z/VM Prototype	waveadm	2013-08-23 10:34:10	2013-08-23 10:34:13	3 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 10:30:49	2013-08-23 10:30:49	0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%

Icon for the prototype changes – no longer the disk with the OS which can be cloned are associated with this prototype



## The WAVE GUI (Hardware Viewer – Prototypes)

Property Viewer

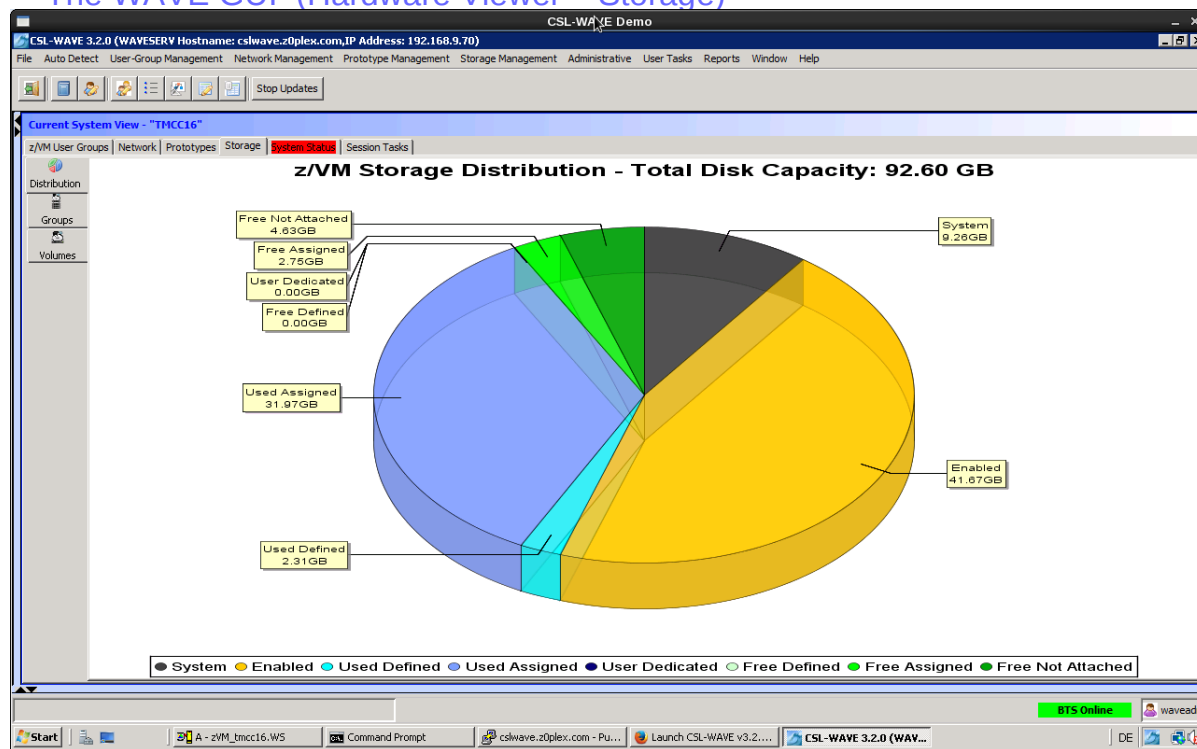
Property	Value
Name	ZLIN72
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.73
Project	CSL-WAVE Demo
Functionality	N/A

z/VM Guest

Workunit Name	Initiator	Start Time	End Time	Duration	Status	Progress
Disassociate z/VM Prototype	waveadm			3 seconds	Done	100%
Activate z/VM Guests	waveadm			0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%
Conditional DASD update	waveadm	2013-08-23 10:26:34	2013-08-23 10:27:30	56 seconds	Done	100%
Create z/VM Prototype	waveadm	2013-08-23 10:21:13	2013-08-23 10:21:21	8 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:15:14	2013-08-23 10:15:14	0 seconds	Done	100%
Resume z/VM Guests	waveadm	2013-08-23 10:13:09	2013-08-23 10:13:10	1 seconds	Done	100%

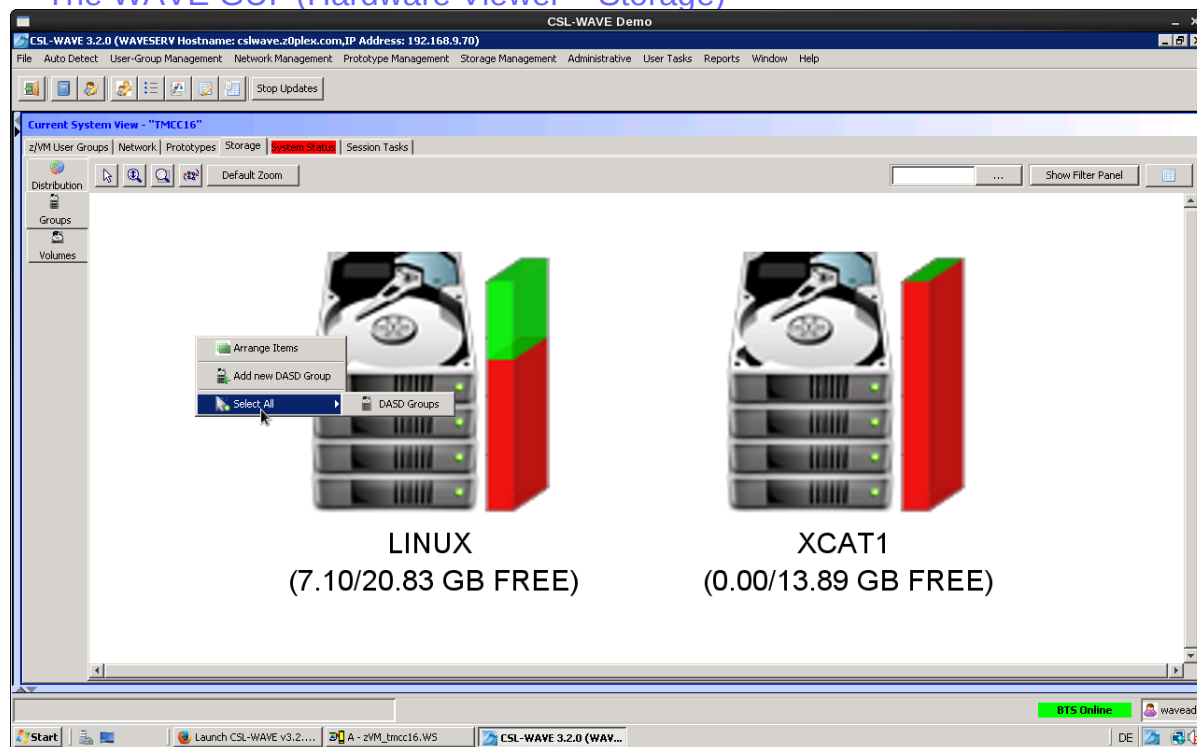
The disks of a Linux OS can always be associated back - for cloning based on a prototype.

## The WAVE GUI (Hardware Viewer – Storage)



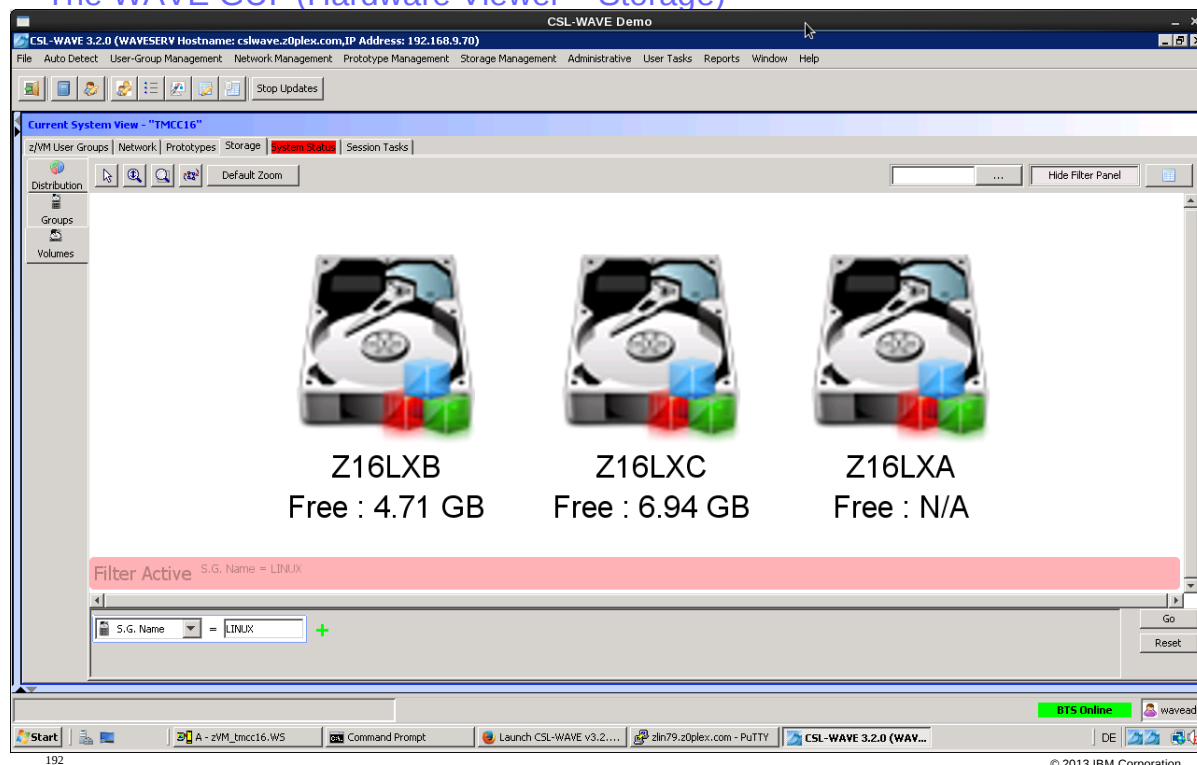
## Storage Overview

## The WAVE GUI (Hardware Viewer – Storage)



Groups shown here are the “group” definitions of DIRMAINT – configured in the EXTENT CONTROL file. Details of a group will show up after doubleclick

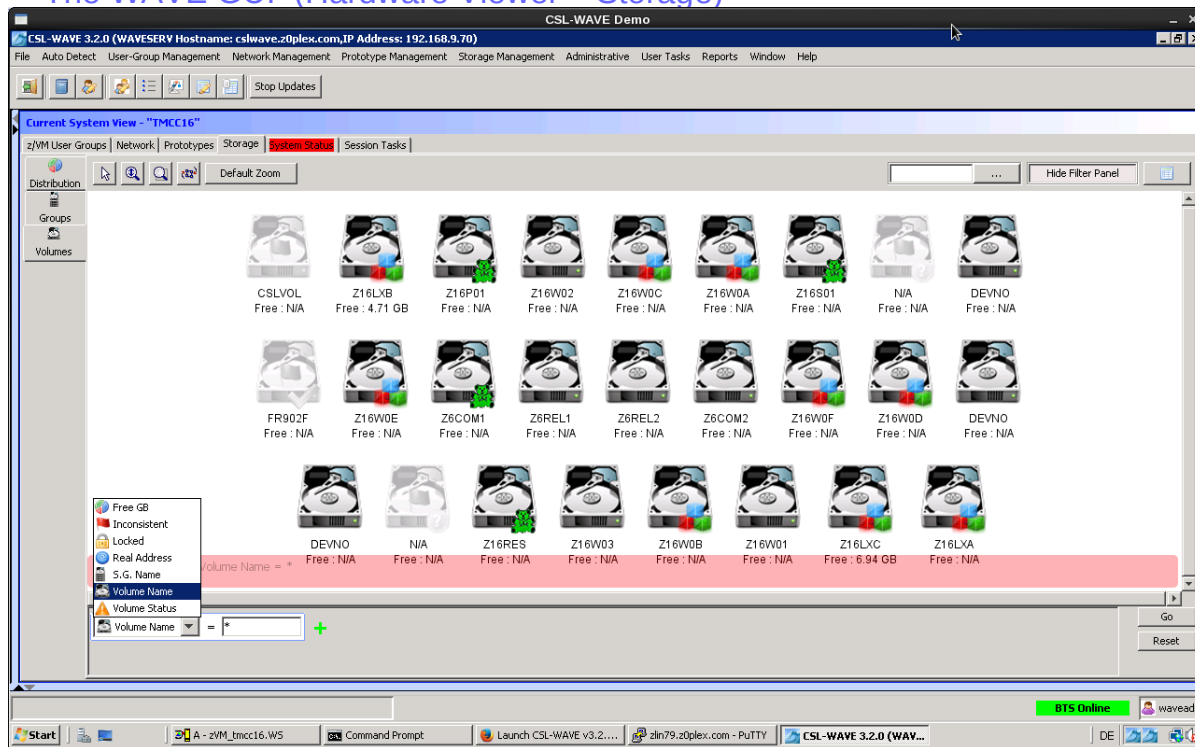
## The WAVE GUI (Hardware Viewer – Storage)



Volumes view with Filter 'S.G.Name = LINUX' active.

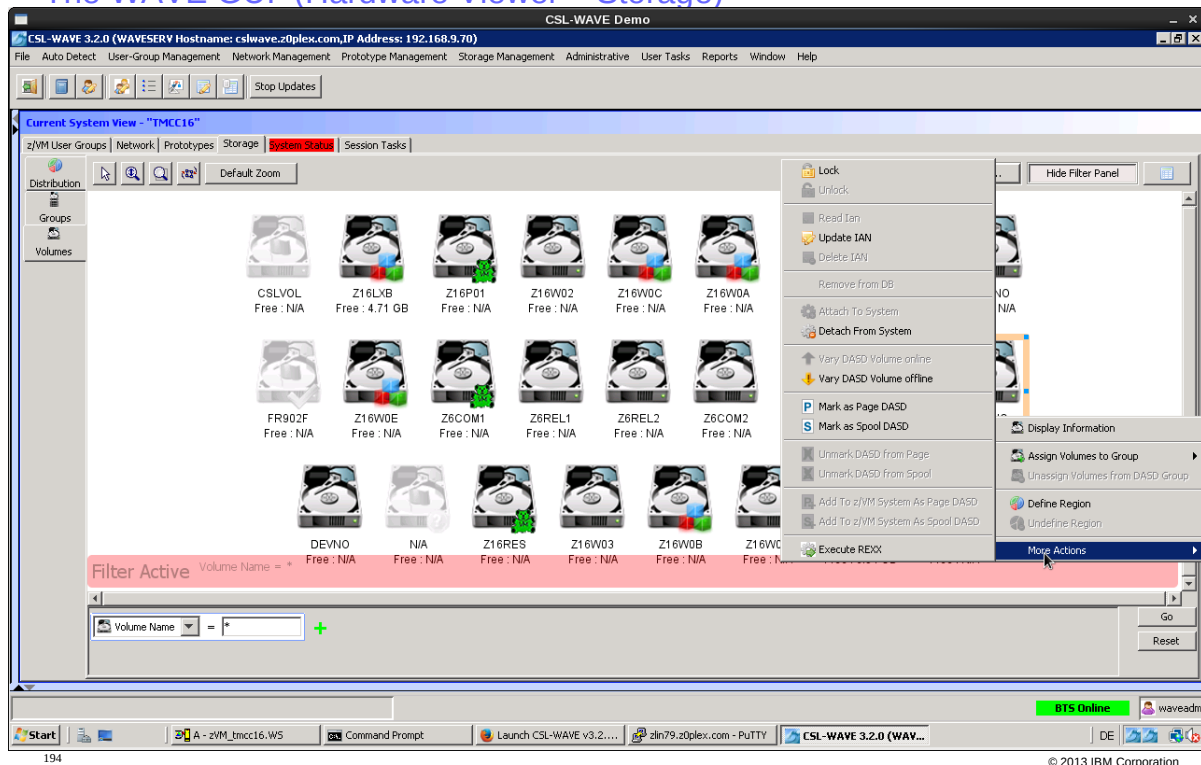
This list might become very large. CSL-WAVE per default restricts the output view to 256 objects if no filter is active.

## The WAVE GUI (Hardware Viewer – Storage)

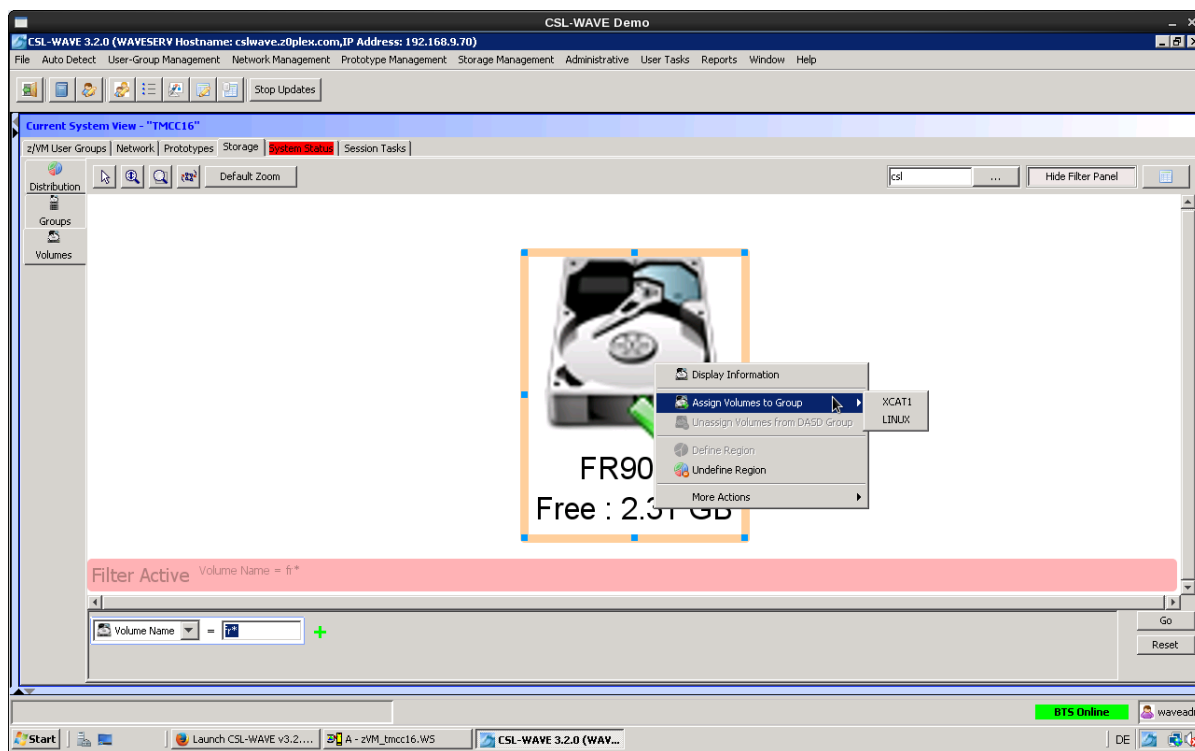


Different filter criteria

## The WAVE GUI (Hardware Viewer – Storage)



- Actions available via CSL-WAVE GUI for storage pools:
- manage the guest volume disk pools (groups & regions)
  - assign free volumes to z/VM as page or spool volumes
  - detach and attach to systems.



Use a free DASD and add as PAGE volume - see next pages

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Distribution Groups Volumes

FR902F  
Free : N/A

Filter Active Volume Name = f\*

Volume Name = [f] +

Go Reset

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE waveadm



The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV) interface. The title bar indicates the host is 'cslwave.z0plex.com' with IP '192.168.9.70'. The main window shows the 'Current System View - "TMCC16"' with tabs for 'z/VM User Groups', 'Network', 'Prototypes', 'Storage', 'System Status', and 'Session Tasks'. A storage volume 'FR902F' is highlighted, showing 'Free : N/A'. A context menu is open over the volume, listing actions such as 'Lock', 'Unlock', 'Reed IAN', 'Update IAN', 'Delete IAN', 'Remove from DB', 'Attach To System', 'Detach From System', 'Vary DASD Volume online', 'Vary DASD Volume offline', 'Mark as Page DASD', 'Mark as Spool DASD', 'Unmark DASD from Page', 'Unmark DASD from Spool', 'Add To z/VM System As Page DASD', 'Add To z/VM System As Spool DASD', and 'Execute REXX'. The 'Add To z/VM System As Page DASD' option is highlighted. Below the volume view, a filter bar is active with 'Volume Name = f\*'. The taskbar at the bottom shows the Start button, several open applications, and the system clock '30.09.13'.

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.zplex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks (1)

Filter Active Volume Name = fr\*

Volume Name = fr\*

**Status Details for Add Page volume to z/VM system**

Task Parameters  
Task Name: Add Page volume to z/VM system

Task Status  
Error - error attaching disk FR902F to SYSTEM  
Error reading allocation record.  
There is an error in the z/VM DASD volume.  
Contact your storage administrator.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Undefine Region from DASD Volumes	waveadm	2013-08-23 11:09:53	2013-08-23 11:09:57	4 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 11:07:27	2013-08-23 11:07:35	8 seconds	Done	100%
Update All z/VM Aspects	waveadm	2013-08-23 11:05:36	2013-08-23 11:05:54	18 seconds	Done	100%
Deactivate z/VM Guests	waveadm	2013-08-23 10:37:03	2013-08-23 10:37:04	1 seconds	Done	100%
Disassociate z/VM Prototype	waveadm	2013-08-23 10:34:10	2013-08-23 10:34:13	3 seconds	Done	100%
Activate z/VM Guests	waveadm	2013-08-23 10:30:49	2013-08-23 10:30:49	0 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%

CSL-WAVE Log BTS Work Units BTS System COR **BTS Log** Attention required

BTS Online waveadm

30.09.13

Before an empty volume can be added as PAGE or SPOOL volume it needs to be formatted – this can be done with a REXX procedure out of CSL-WAVE.

## The WAVE GUI (Hardware Viewer – Storage)

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave-z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Current System View - "TMCC16"

z/VM User Groups Network Prototypes Storage **System**

Distribution Groups Volumes

Filter Active Volume Name = fr\*

Volume Name = fr\*

Execute REXX (1/1) Selected

REXX Parameters

REXX Name: INITPAGE

Specify REXX Location

Owning Machine Name: wavewks Minidisk Address: 399

Name	System	Parameters	Status
<input checked="" type="checkbox"/> FR902F	TMCC16	902F,FR902F	Ready

Select All Deselect All Toggle Selection Show Filtering Parallel

REXX Parameters

VOLSER  Device Type  Size (GB)  Free Size (GB)

Real Address  Status  Assigned to Group  Inconsistent

Locked  Online  Modified By  Created By

Hide Cancel Go

Waiting for user input

Task	User	Start Time	End Time	Duration	Status	Progress
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)	waveadm	2013-08-23 10:27:04	2013-08-23 10:27:52	48 seconds	Done	100%
Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)	waveadm	2013-08-23 10:26:41	2013-08-23 10:27:17	36 seconds	Done	100%

Progress

100% 100% 100% 100% 100% 100%

BTS Online waveadm

Start Launch CSL-WAVE v3.2... A - zVM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... DE

Sample REXX for DASD formatting (You need to create such a REXX first!)

## The WAVE GUI (Hardware Viewer – Storage)

The screenshot displays the CSL-WAVE GUI interface. The main window shows the 'Current System View - TMCC16' with a 'Display Volume FR902F' dialog box open. The dialog box contains the following information:

- General Information:**
  - Volser: FR902F
  - Device Type: 3390-03
  - Size (GB): 2.31
  - Free (GB): N/A
  - Real Address: 902F
- Volume Status:**
  - Status: SYS
  - Assigned To:
  - Inconsistent  Online  Locked
- Update:**
  - Created By: WAVE Daemon Updater on 2013-08-23 11:07
  - Last Modified By: jwaveadm on 2013-08-23 11:40

Below the dialog box, a terminal window shows the following output:

```

Ready; T=0.01/0.01 11:44:26
q alloc page
-----
VOLID RDEV EXTENT START EXTENT END TOTAL PAGES HIGH %
-----
FR902F 902F 1 3338 600840 0 0 0%
Z16P01 9502 1 3338 600840 292 334 1%
SUMMARY
USABLE 1174K 292 1%
Ready; T=0.01/0.01 11:44:30
  
```

The bottom right of the GUI shows a 'Progress' bar with 100% completion for several tasks, and a 'BTS Online' indicator.

Now the disks can be added as paging volume – also check in 3270 z/VM the result.

## The WAVE GUI (Hardware Viewer – System Status)

z/VM System Status (Last updated on Tue, Aug 20, 2013 at 07:11:48 PM)

The following object require attention: (11/15 match filter and current z/VM System selection)

Object Type	Object Name	Attention Required Details	User Severity
z/VM DASD Vol...	9010	Inconsistent, Offline	50
z/VM DASD Vol...	902F	Inconsistent, Offline	50
z/VM DASD Vol...	911D	Inconsistent, Offline	50
z/VM DASD Vol...	911E	Inconsistent, Offline	50
z/VM Prototype	CMS	No z/VM User associated, No DASD group Assigned	50
z/VM Prototype	LINLX	No z/VM User associated, No DASD group Assigned	50
z/VM User	XCAT80	z/PL.conf has parameters lines without "root=" parameter, Not inited for CSL-WAVE Use, CMSFS package status for guest is unknown, VMCP mo...	30
z/VM User	ZHCP16	Not connectable	80
z/VM Switch	DTC5MARI	Virtual Network is missing data	70
z/VM Switch	KCATVSW1	Virtual Network is missing data	70
z/VM Switch	TESTLAN	Virtual Network is inconsistent	50

Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB

System Status overview after discovery - some actions can remove the “red” status lines

# The WAVE GUI (Hardware Viewer – System Status)

The screenshot displays the WAVE GUI interface for a z/VM system named 'TMCC16'. The main dashboard shows several key performance indicators (KPIs) as gauges:

- Total Storage Utilization:** A pie chart showing storage usage across different categories.
- z/VM CPU Utilization:** A gauge showing 2.0% CPU usage.
- Virtual to Real Ratio:** A gauge showing 202.0% ratio.
- z/VM Page Space Utilization:** A gauge showing 1.0% page space usage.
- z/VM Spool Space Utilization:** A gauge showing 1.0% spool space usage.

Below the gauges, a table lists objects requiring attention:

Object Type	Object Name	Attention Required Details	User Severity
z/VMPrototype	CMS	No z/VM User associated	50
z/VMPrototype	LINUX	No z/VM User associated	50

The Property Viewer on the left shows details for the selected system:

Property	Value
Name	ZHCP16
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.116
Project	N/A
Functionality	N/A

The bottom of the window shows the Windows taskbar with the Start button, active windows for 'Launch CSL-WAVE v3.2...' and 'CSL-WAVE 3.2.0 (WAV...', and system tray icons for 'BTS Online' and 'waveadm'. The system clock shows 'DE' and the date '2013'.

## The WAVE GUI (Hardware Viewer – System Status)

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Hardware Viewer Default Zoom

z/VM User Groups Network Prototypes Storage **System Status** Session Tasks

Default Zoom Show Filter Panel

z10

TMCC16

ZVM63CAT

Property Viewer

TMCC16 CMS ZMCP16 (TMCC16)

Property	Value
Name	ZMCP16
Status	Active
Eligible	Yes
Group	USER-LOCAL
Type	Linux
Distribution	SLES11 - 64 Bit
1st IP Address	192.168.9.116
Project	N/A
Functionality	N/A

LINUX

CMS

Prototype Name: CMS  
Associated z/VM Guest: N/A

**Attention Required!**

BTS Online waveadm

Start Launch CSL-WAVE v3.2... CSL-WAVE 3.2.0 (WAV... DE

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## The WAVE GUI (Hardware Viewer – System Status)

The screenshot displays the WAVE GUI interface for a z/VM system named TMCC16. The main dashboard shows five performance gauges:

- Total Storage Utilization: Pie chart showing utilization across different storage categories.
- z/VM CPU Utilization: Gauge showing 1.0% utilization.
- Virtual to Real Ratio: Gauge showing 202.0% ratio.
- z/VM Page Space Utilization: Gauge showing 1.0% utilization.
- z/VM Spool Space Utilization: Gauge showing 1.0% utilization.

Below the gauges, a table titled "Attention Required Details" lists objects that require attention. A context menu is open over the table, showing options:

- Update user severities
- set objects ignored
- Reset user severities
- Reset ignored objects

The table data is as follows:

Object Type	Object Name	Attention Required Details	User Severity
z/VMPrototype	CMS	No z/VM User associated	50
z/VMPrototype	LINUX	No z/VM User ad	50

Filters at the bottom include checkboxes for CPCs, Systems, Guests, Prototypes, LANs, DASD Groups, DASD Volumes, Real Devices, Global, and Ignore. A "Reset" button is also present.

You can also decide to “ignore” such attentions



## The WAVE GUI (Hardware Viewer –Exceptions)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The main window is titled 'Current System View - "TMCC16"'. The left pane shows a hardware tree with a red flag on the z/VM icon. The main pane features five gauges: Total Storage Utilization (pie chart), z/VM CPU Utilization (1.0%), Virtual to Real Ratio (202.0%), z/VM Page Space Utilization (1.0%), and z/VM Spool Space Utilization (1.0%). A warning message 'Error: Virtual to Real Ratio critical (202%)' is shown in the bottom status bar. The bottom left pane shows the 'Property Viewer' for TMCC16, listing properties such as Name (LINUX), Functionality (N/A), Project (CSL-WAVE Demo), and Inconstant (No).

The z/VM icon itself also shows a red flag indicating a problem – in our example it is the overcommitment of the z/VM storage

More details about the z/VM performance monitoring will be shown later in the Dashboard Viewer pages.

## The WAVE GUI (Hardware Viewer – Session Tasks)

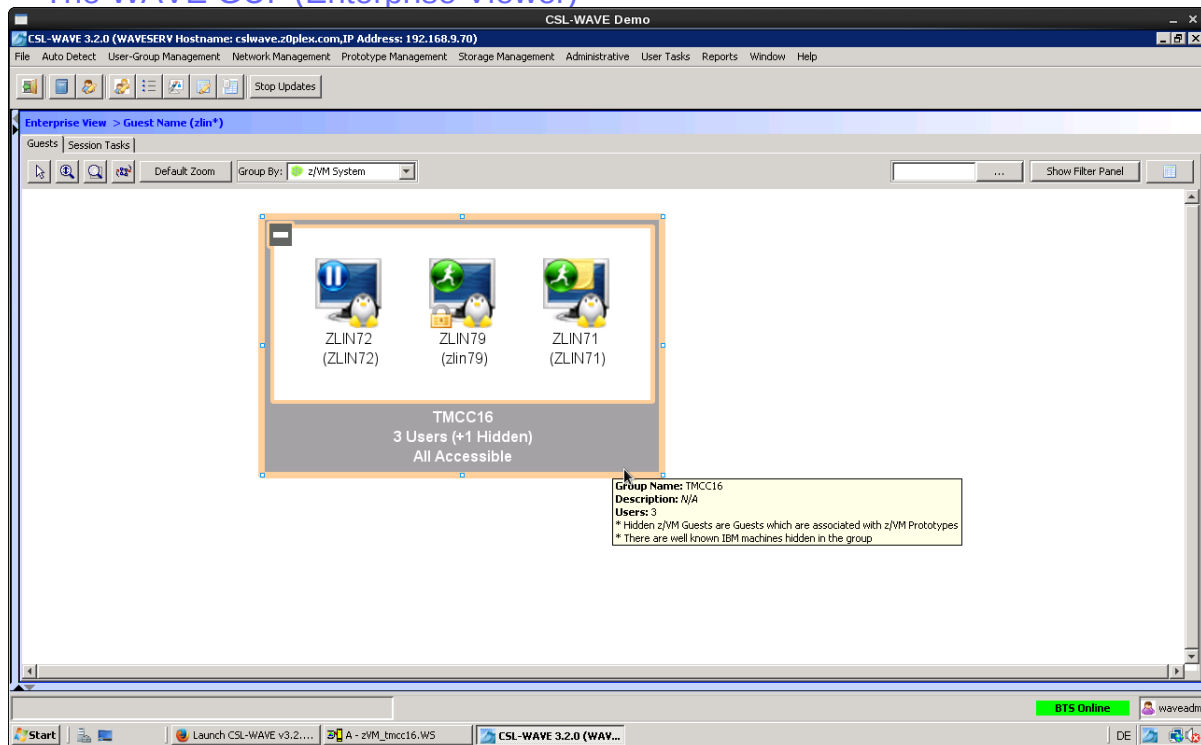
The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled 'Current System View - "TMCC16"'. It features a menu bar with options like File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. Below the menu is a toolbar with icons and a 'Stop Updates' button. The interface is divided into several panels:

- Hardware Viewer:** Shows a graphical representation of the system hardware.
- Property Viewer:** Displays system properties for 'TMCC16', including Name (ZLIN72), Status (Active), Eligible (Yes), Group (USER-LOCAL), Type (Linux), Distribution (SLES11 - 64 Bit), 1st IP Address (192.168.9.73), Project (CSL-WAVE Demo), and Functionality (N/A).
- Session Tasks (1):** A table showing the current task being performed. The task is 'Deactivate z/VM Users', which started on Aug 23, 2013, at 10:03:00 and is currently at 100% progress.
- CSL-WAVE Log:** A detailed log of system operations, including tasks like 'Deactivate z/VM Guests', 'Disassociate z/VM Prototype', 'Activate z/VM Guests', 'Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN72 (TMCC16)', 'Clone z/VM Guest ZLIN79 (TMCC16) -> ZLIN71 (TMCC16)', 'Conditional DASD update', 'Create z/VM Prototype', and 'Deactivate z/VM Guests'. Each log entry includes the initiator (wavedm), start and end times, duration, status (Done), and progress (100%).

The bottom of the window shows a Windows taskbar with the Start button, several open applications, and system tray icons. The status bar at the bottom right indicates 'BTS Online' and 'wavedm'.

Session Tasks view will show all long-running tasks until you commit the status of the task result – to do this simply click on the line

## The WAVE GUI (Enterprise Viewer)

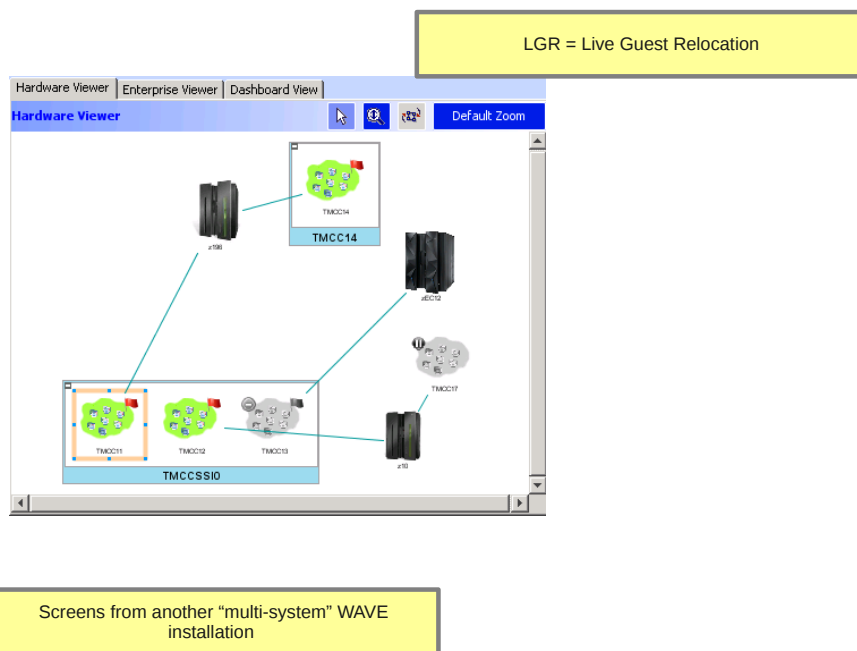


'Enterprise View' is another representation of grouping the CSL-WAVE managed guests – this is an enterprise wide view.

In the 'Hardware View' you only see the guests per z/VM system.

The 'Enterprise View' enables you to have the view across all z/VM systems – you can see all the Linux guests running on all managed z/VMs.

## The WAVE GUI (Enterprise Viewer - LGR)



30.09.13

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'Enterprise View' of another CSL-WAVE instance with several managed z/VM systems. Here we show the Live Guest Relocation (LGR) capability graphically initiated via CSL-WAVE GUI drag & drop.

## The WAVE GUI (Enterprise Viewer - LGR)

The screenshot displays the WAVE GUI (Enterprise Viewer - LGR) interface. The main window is titled "Display ZLIN119 Details" and shows the configuration for a z/VM system named "ZLIN119". The system is currently active in the "TMCC11" z/VM system.

**z/VM Data Table:**

z/VM System	Status	Connectable	SDG	Eligible	Profile	CPUs	Mem. Min	Mem. Max	Disk Space	Auth Class	Account
TMCC13	Inactive	Yes	USER-LOCAL	Yes		1	1024 MB	1024 MB	0.02 GB	G	N/A
TMCC11	Active	Yes	USER-LOCAL	Yes		1	1024 MB	1024 MB	0.02 GB	G	N/A
TMCC12	Inactive	No	USER-LOCAL	Yes		1	1024 MB	1024 MB	0.02 GB	G	N/A

**Connection Availability from This Work Station:**

IP Address	VNS Name	Virtual Network Name	Status
192.168.9.119	Auto-created Virtual Network Segment (192.168.9.0)	DEMOLAN	Unreachable
9.152.123.119	Intranet_0	INTRANET	Reachable

The interface also shows a "z/VM Data" section with a table listing the status of various z/VM systems. The "z/VM System" column lists TMCC13, TMCC11, and TMCC12. The "Status" column shows TMCC13 as Inactive, TMCC11 as Active, and TMCC12 as Inactive. The "Connectable" column shows Yes for TMCC13 and TMCC11, and No for TMCC12. The "SDG" column shows USER-LOCAL for all three. The "Eligible" column shows Yes for all three. The "Profile" column is empty. The "CPUs" column shows 1 for all three. The "Mem. Min" and "Mem. Max" columns show 1024 MB for all three. The "Disk Space" column shows 0.02 GB for all three. The "Auth Class" column shows G for all three. The "Account" column shows N/A for all three.

The interface also shows a "Connection Availability from This Work Station" section with a table listing the status of various connections. The "IP Address" column lists 192.168.9.119 and 9.152.123.119. The "VNS Name" column lists Auto-created Virtual Network Segment (192.168.9.0) and Intranet\_0. The "Virtual Network Name" column lists DEMOLAN and INTRANET. The "Status" column lists Unreachable and Reachable.

The interface also shows a "z/VM Data" section with a table listing the status of various z/VM systems. The "z/VM System" column lists TMCC13, TMCC11, and TMCC12. The "Status" column shows TMCC13 as Inactive, TMCC11 as Active, and TMCC12 as Inactive. The "Connectable" column shows Yes for TMCC13 and TMCC11, and No for TMCC12. The "SDG" column shows USER-LOCAL for all three. The "Eligible" column shows Yes for all three. The "Profile" column is empty. The "CPUs" column shows 1 for all three. The "Mem. Min" and "Mem. Max" columns show 1024 MB for all three. The "Disk Space" column shows 0.02 GB for all three. The "Auth Class" column shows G for all three. The "Account" column shows N/A for all three.

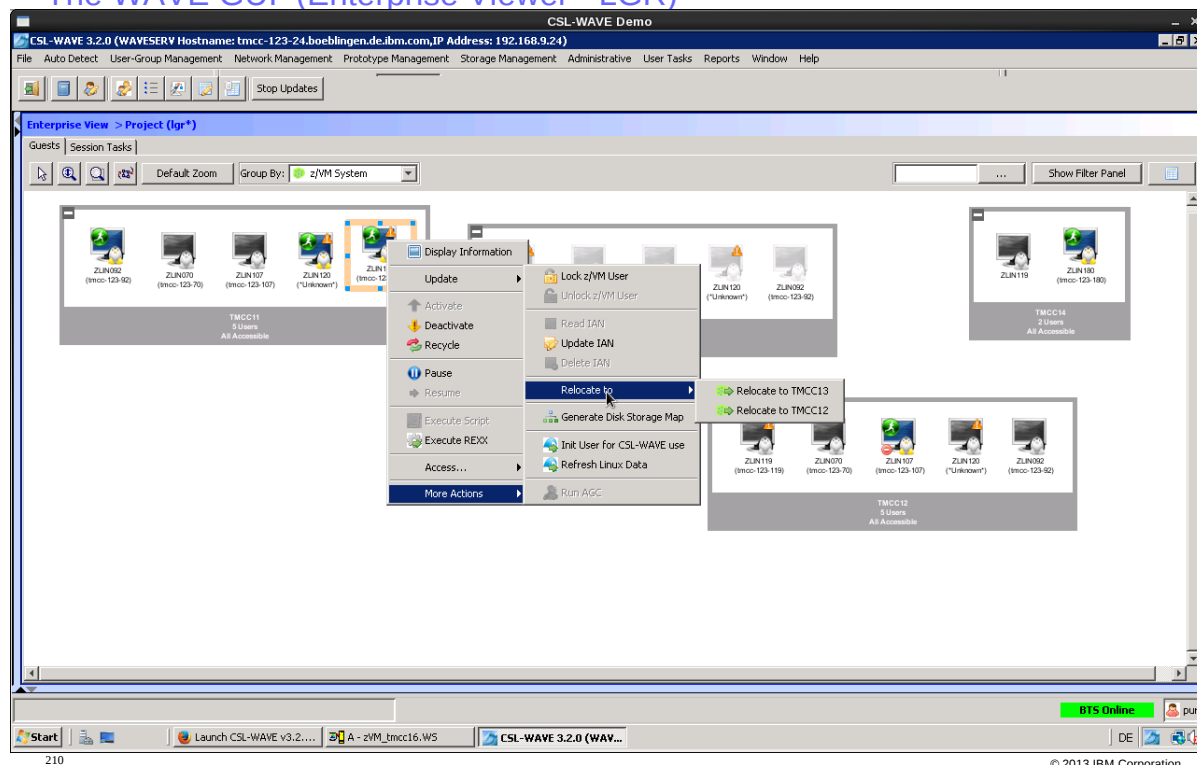
The interface also shows a "Connection Availability from This Work Station" section with a table listing the status of various connections. The "IP Address" column lists 192.168.9.119 and 9.152.123.119. The "VNS Name" column lists Auto-created Virtual Network Segment (192.168.9.0) and Intranet\_0. The "Virtual Network Name" column lists DEMOLAN and INTRANET. The "Status" column lists Unreachable and Reachable.

The interface also shows a "z/VM Data" section with a table listing the status of various z/VM systems. The "z/VM System" column lists TMCC13, TMCC11, and TMCC12. The "Status" column shows TMCC13 as Inactive, TMCC11 as Active, and TMCC12 as Inactive. The "Connectable" column shows Yes for TMCC13 and TMCC11, and No for TMCC12. The "SDG" column shows USER-LOCAL for all three. The "Eligible" column shows Yes for all three. The "Profile" column is empty. The "CPUs" column shows 1 for all three. The "Mem. Min" and "Mem. Max" columns show 1024 MB for all three. The "Disk Space" column shows 0.02 GB for all three. The "Auth Class" column shows G for all three. The "Account" column shows N/A for all three.

The interface also shows a "Connection Availability from This Work Station" section with a table listing the status of various connections. The "IP Address" column lists 192.168.9.119 and 9.152.123.119. The "VNS Name" column lists Auto-created Virtual Network Segment (192.168.9.0) and Intranet\_0. The "Virtual Network Name" column lists DEMOLAN and INTRANET. The "Status" column lists Unreachable and Reachable.

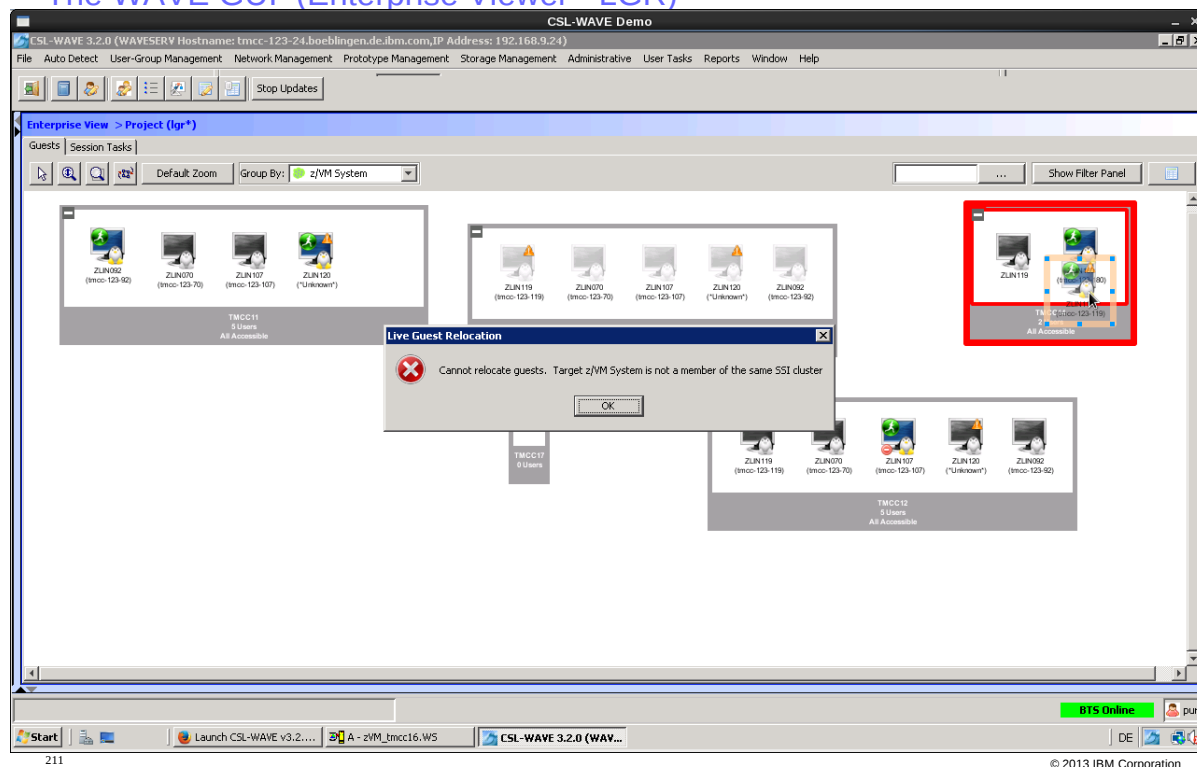
Linux guest 'ZLIN119' has been defined in multiple z/VM systems 'TMCC11','TMCC12','TMCC13' - whereas it is shown as active only in 'TMCC11'

## The WAVE GUI (Enterprise Viewer - LGR)



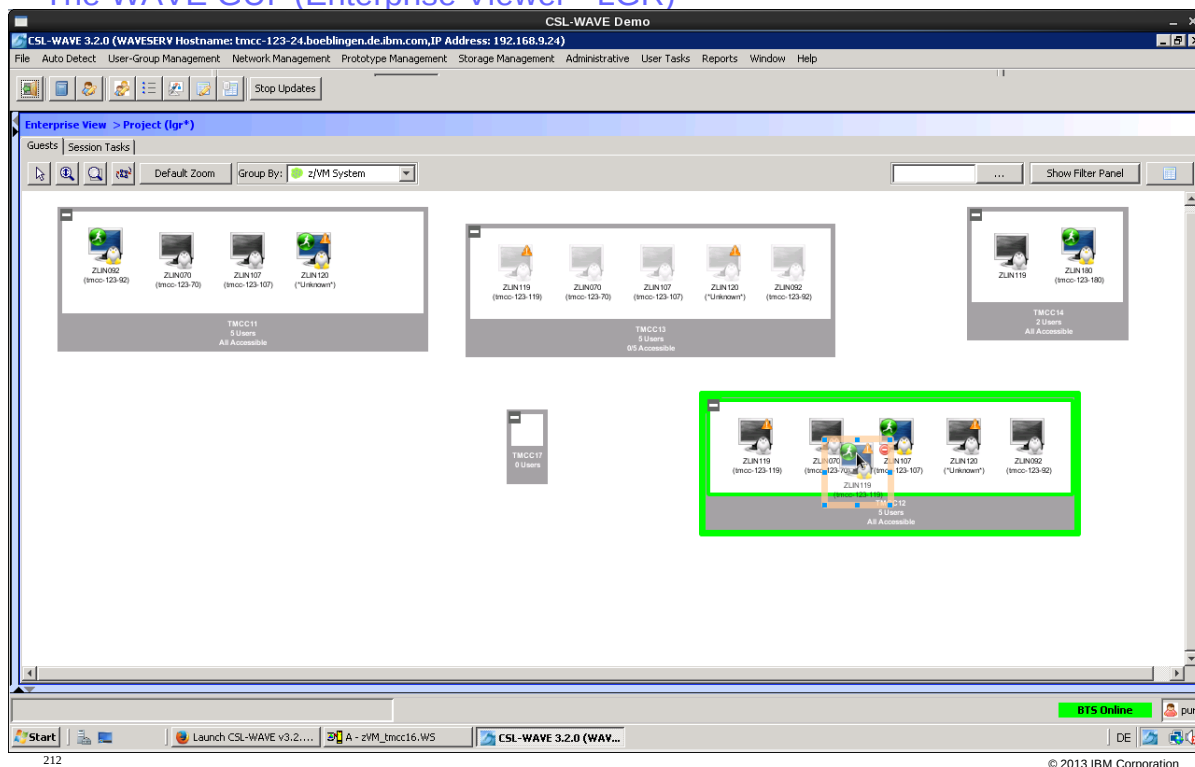
Relocation options for ZLIN119' offered via context menu: 'TMCC12','TMCC13'.

## The WAVE GUI (Enterprise Viewer - LGR)



Relocation will warn you if the target z/VM is not valid – the z/VM box will be highlighted red.

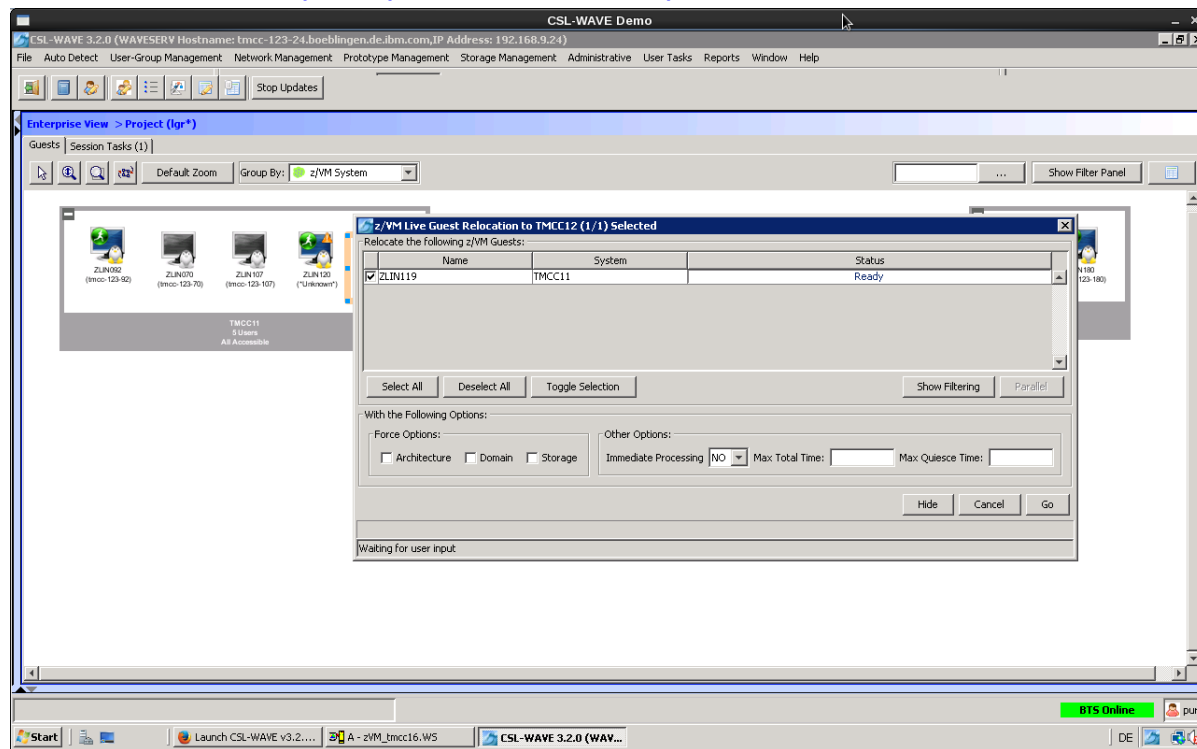
## The WAVE GUI (Enterprise Viewer - LGR)



Valid z/VM target for relocation will show green boundary – you can drop the guest into it and relocation will start



## The WAVE GUI (Enterprise Viewer - LGR)



The relocation will first prompt you for parameter you want to set or leave defaults

## The WAVE GUI (Dashboard Viewer)

CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)

Enterprise Dashboard View

z/VM System Name	CPU Utilization	Virtual to Real Ratio	Page Space Utilization	Spool Space Utilization
TMCC16	0%	204%	1%	1%

Double-click column 'z/VM System Name' -> object will expand/collapse

Property Viewer

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB

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Dashboard viewer will show nearly all information about monitoring you normally get out of z/VM Performance Toolkit. This is a much nicer view compared to the PERFSVM Web GUI

Each z/VM is shown in one line – if you doubleclick the line the view changes as seen next page

## The WAVE GUI (Dashboard Viewer)

The screenshot displays the CSL-WAVE 3.2.0 GUI Dashboard Viewer. The main window title is "CSL-WAVE Demo" and the address bar shows "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70)". The interface includes a menu bar (File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help) and a toolbar with icons and a "Stop Updates" button.

The dashboard is divided into several sections:

- Enterprise Status Viewer:** A filter selection area with a dropdown menu set to "CPC" and a search field containing "z10".
- Enterprise Dashboard View:** A grid of four gauges for system TMCC16:
  - z/VM CPU Utilization:** 5.0%
  - Virtual to Real Ratio:** 204.0%
  - z/VM Page Space Utilization:** 1.0%
  - z/VM Spool Space Utilization:** 1.0%
- Property Viewer:** A table listing system properties for TMCC16.

A yellow callout box in the center of the dashboard states: "Double-click on one of the column objects will give more details – see next page".

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
...	...

The Windows taskbar at the bottom shows the Start button, a search bar, and several open applications: "Launch CSL-WAVE v3.2.0...", "CSL-WAVE 3.2.0 (WAV...", "BTS Online", and "waveadm". The system tray includes "DE" and "Waveadm".

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More details if you double click on a gauger - Each of the 4 columns can be selected.

## The WAVE GUI (Dashboard Viewer – CPU Utilization)

The screenshot displays the WAVE GUI interface for monitoring CPU utilization. The main window is titled "CSL-WAVE Demo" and shows the "Enterprise Dashboard View" for system "TMCC16". A pop-up window titled "TMCC16 CPU Utilization Statistics" is open, showing a graph of "Total CPU Utilization" and a table of "Individual CPU Utilization".

z/VM System Name	TMCC16
Filter selection	CPC = z10

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB

Individual CPU Utilization	Utilization
00 CP	2%
01 CP	1%
02 CP	1%
03 CP	0%

The CPU Utilization Statistics window also includes a graph showing "Total CPU Utilization" and a "Paging" section displaying "0 Pages/Second". The interface includes a menu bar (File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help) and a toolbar with various icons and a "Stop Updates" button. The status bar at the bottom shows "BTS Online" and "waveadm".

You can configure the refresh interval of the screen

## The WAVE GUI (Dashboard Viewer – CPU Utilization)

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows the "TMCC16 CPU Utilization Statistics" for the system "TMCC16". The statistics are presented in a textual view, showing various performance metrics.

FCX100	CPU	2097	SER	CB440	Interval	18:47:06 - 18:48:06	Remote Data
CPU Load							
PROC	TYPE	%CPU	%CP	%EMU	%MT	%SYS	%SP
P00	CP	2	0	1	98	0	0
P01	CP	1	0	1	99	0	0
P02	CP	1	0	0	86	0	0
P03	CP	0	0	0	0	0	0
Total SSCH/RSCH 24/s Page rate .0/s Priv. instruct. 151/s							
Virtual I/O rate 25/s XSTORE paging .0/s Diagnose instr. 127/s							
Total rel. SHARE 250 Tot. abs SHARE 0%							
Queue Statistics: Q0 Q1 Q2 Q3 User Status:							
VMDBKs in queue 0 1 3 0 # of logged on users 41							
VMDBKs loading 0 0 0 0 # of dialed users 0							
Eligible VMDBKs 0 0 0 0 # of active users 24							
El. VMDBKs loading 0 0 0 0 # of in-queue users 4							
Tot. WS (pages) 0 122980 256756 0 % in-0 users in PGWALT 0							
Reserved % in-0 users in IOWAIT 0							
85% elapsed time 2.508 .418 3.344 20.06 % elig. (resource wait) 0							
Transactions Q-Disp trivial non-trv User Extremes:							
Average users .1 .5 3.6 Max. CPU % CSLWAVE 1.3							
Trans. per sec. 1.4 4.8 2.7 Reserved							
Av. time (sec) .076 .107 1.364 Max. IO/sec CSLWAVE 10.0							
UP trans. time .100 .525 Max. PGS/s .....							
MP trans. time .115 1.607 Max. RESPG XCAT 231810							
System ITR (trans. per sec. tot. CPU) 300.2 Max. MDCIO .....							
Emul. ITR (trans. per sec. emul. CPU) 405.4 Max. XSTORE .....							

The Property Viewer shows the following details for TMCC16:

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB

Select 'Textual View' to get the original Performance Tool Kit view which is the source for the CSL-WAVE GUI 'Graphical View' - (PERFSVM screen 1).

## The WAVE GUI (Dashboard Viewer – CPU Utilization)

The screenshot displays the WAVE GUI interface for monitoring CPU utilization. The main window is titled "TMCC16 CPU Utilization Statistics" and shows a table of virtual machine utilization data. The table includes columns for User Name, Share Type, Share Value, # Of CPUs, and %CPU. The user "CSLWAVE" is highlighted, showing a share value of 100 and 2 CPUs. Below the table, there are sections for "User Detailed Information" and "Shared Details".

User Name	Share Type	Share Value	# Of CPUs	%CPU
CSLWAVE	RELATIVE	100	2	0%
OPMGRM1	RELATIVE	100	1	0%
OPMGRS1	RELATIVE	100	1	0%
OPMGRS2	RELATIVE	100	1	0%
PURIT	RELATIVE	100	1	0%
WAVEADM	RELATIVE	100	1	0%
WAVEWRKC	RELATIVE	100	1	0%
WAVEWRKL	RELATIVE	100	1	0%
WAVEWRKS	RELATIVE	100	1	0%
XCAT80	RELATIVE	100	2	0%
XVMON	RELATIVE	100	1	0%
ZHCP16	RELATIVE	100	1	0%
ZHCP16	RELATIVE	100	1	0%

**User Detailed Information for User : CSLWAVE**

Summary	Total %Util.	Supervisor %Util.	Emulated %Util
	0%	0%	0%

**Shared Details**

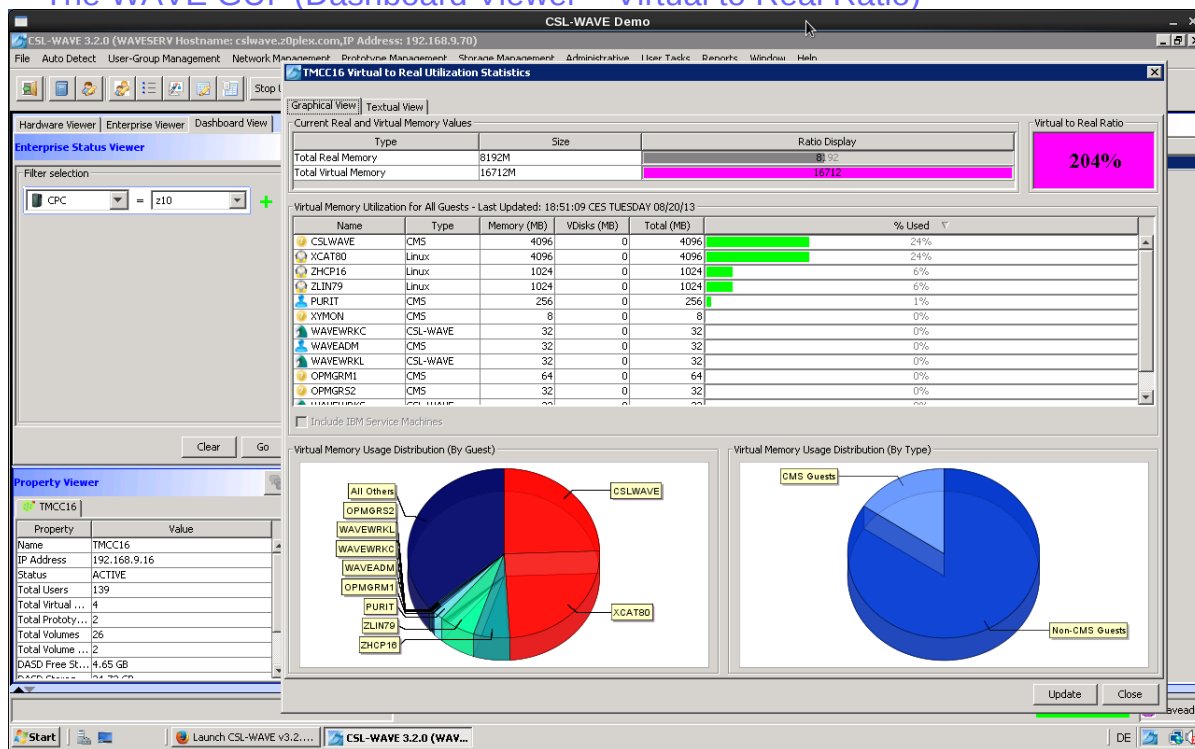
Share Type :	RELATIVE
Share :	100
Max Share Type:	N/A
Max Share :	N/A

**Storage Details**

Defined Storage :	4096MB
Storage < 2GB :	0 Pages
Storage > 2GB :	221334 Pages

Details about resource usage of the Linux guest systems - (Performance Tool Kit - PERFSVM screen 21). Columns can be sorted. Further guest details via double click.

## The WAVE GUI (Dashboard Viewer – Virtual to Real Ratio)



Storage monitoring GUI

# The WAVE GUI (Dashboard Viewer – Virtual to Real Ratio)

The screenshot displays the CSL-WAVE GUI interface. The main window title is "CSL-WAVE Demo" and the address bar shows "CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave-z0plex.com, IP Address: 192.168.9.70)". The interface includes a menu bar (File, Auto Detect, User-Group Management, Network Management, Distribution Management, Storage Management, Administration, User Tasks, Reports, Windows, Help) and a toolbar with icons for Home, Refresh, and Stop.

The main content area is titled "TMCC16 Virtual to Real Utilization Statistics" and has two tabs: "Graphical View" and "Textual View". The "Textual View" is active, displaying the following system statistics:

```

TIME: TIME IS 18:51:09 CES TUESDAY 08/20/13
CONNECT= 01:08:20 VIRTCPU= 000:02.49
TOTCPU= 000:03.30

TOTAL REAL STORAGE: 8192M
TOTAL FRAMES: 7920M
TOTAL XSTORAGE: 4M
TOTAL VDISK: 0B
USERS START
ZHCP16 1024M NONCHS 0100
XYH0M 8M CHS CHS
PERFSVM 128M CHS CHS
OPNGRS2 32M CHS CHS
OPNGRS1 32M CHS CHS
OPNGRM1 64M CHS CHS
XCAT 2048M NONCHS 000C
ZHCP 1024M NONCHS 000C
LOHCOST 768M NONCHS 000C
VSNVSRV 128M CHS CHS
VSNREQIU 128M CHS CHS
VSNREQI6 128M CHS CHS
VSNREQIN 128M CHS CHS
OPERATNS 128M CHS 0190
DTCSMAP1 32M CHS CHS
PERSMAP1 128M CHS CHS
VSNWORK3 128M CHS CHS
VSNWORK2 128M CHS CHS
VSNWORK1 128M CHS CHS
VSNWARD 128M CHS CHS
DIPMAINT 128M CHS CHS
FTFSERVE 32M CHS CHS
TCTIP 128M CHS CHS
DTCVSW2 32M CHS CHS
DTCVSW1 32M CHS CHS
VNSERV 64M CHS 0190
    
```

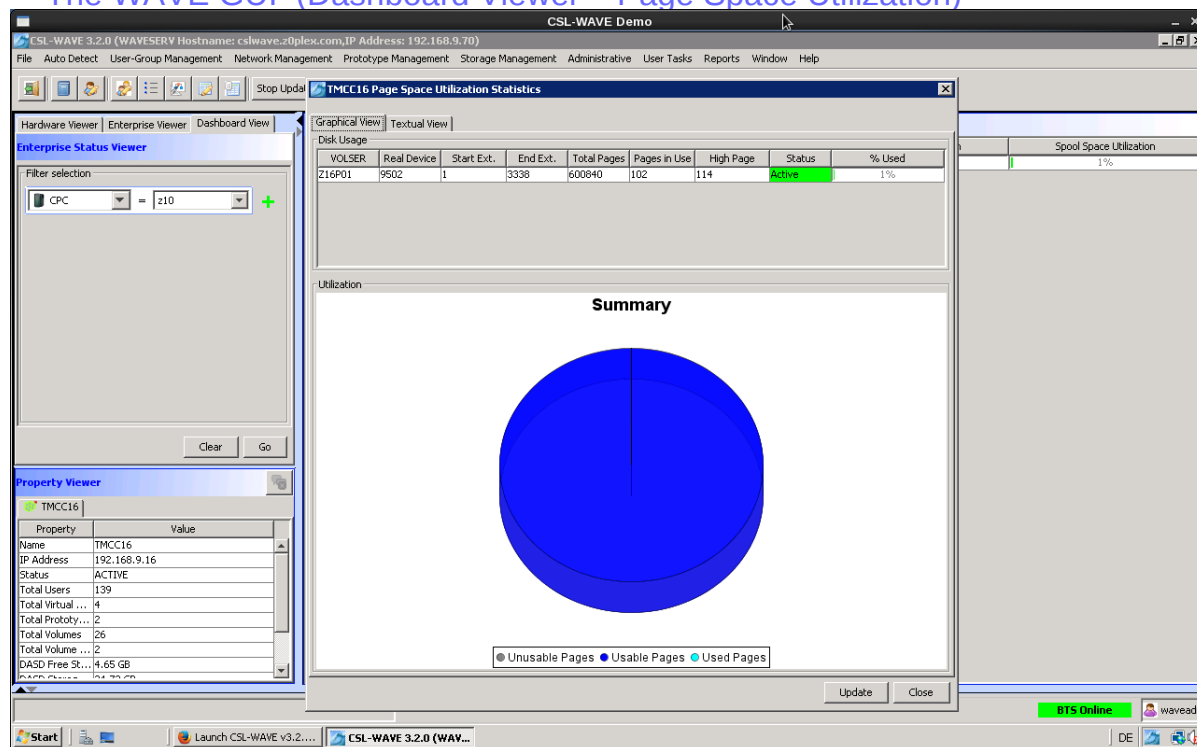
On the left side, there is a "Filter selection" section with a dropdown menu set to "CPC" and a search field containing "z10". Below this is a "Property Viewer" for the selected object "TMCC16", showing the following properties:

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB
DASD Free St...	14.32 GB

At the bottom right of the main window, there are "Update" and "Close" buttons. The Windows taskbar at the bottom shows the Start button, a taskbar with "Launch CSL-WAVE v3.2.0..." and "CSL-WAVE 3.2.0 (WAV...)", and system tray icons for "DE" and "lveadm".



## The WAVE GUI (Dashboard Viewer – Page Space Utilization)



Real time page space information

## The WAVE GUI (Dashboard Viewer – Page Space Utilization)

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "CSL-WAVE Demo" and shows a "TMCC16 Page Space Utilization Statistics" dialog box. The dialog has two tabs: "Graphical View" and "Textual View". The "Textual View" is active, showing a table of utilization statistics.

VOLID	RDEV	EXTENT START	EXTENT END	TOTAL PAGES	PAGES IN USE	HIGH PAGE	% PAGE USED
216P01	9502	1	3338	600840	102	114	1%
SUMMARY				600840	102		1%
USABLE				600840	102		1%

Below the table, there are "Update" and "Close" buttons. To the right of the dialog, a "Pool Space Utilization" chart shows a bar representing 1% utilization.

The background interface includes an "Enterprise Status Viewer" with a filter selection (CPC = z10) and a "Property Viewer" showing details for TMCC16, such as Name, IP Address (192.168.9.16), Status (ACTIVE), Total Users (139), Total Virtual (4), Total Protocols (2), Total Volumes (26), Total Volume (2), and DASD Free St... (4.65 GB).

## The WAVE GUI (Dashboard Viewer – Spool Space)

The screenshot displays the 'TMCC16 Spool Space Utilization Statistics' window. It features a table of disk usage, a 3D pie chart titled 'Summary', and a property viewer on the left.

VOLSER	Real Device	Start Ext.	End Ext.	Total Pages	Pages in Use	High Page	Status	% Used
Z16501	9501	1	3338	600840	11633	150377	Active	1%

**Summary**

Utilization

Legend: Unusable Pages (grey), Usable Pages (blue), Used Pages (cyan)

Property Viewer:

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes	26
Total Volume ...	2
DASD Free St...	4.65 GB

Real time spool space information

## The WAVE GUI (Dashboard Viewer – Spool Space)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERY) interface. The main window is titled "TMCC16 Spool Space Utilization Statistics" and shows a table of utilization data. The table has columns for VOLID, RDEV, EXTENT START, EXTENT END, TOTAL PAGES, PAGES IN USE, HIGH PAGE, and %. The data row shows VOLID Z16801, RDEV 9501, EXTENT START 1, EXTENT END 3338, TOTAL PAGES 600840, PAGES IN USE 11633, HIGH PAGE 150377, and % 1%. Below the table, there is a "SUMMARY" section with "USABLE" entries.

VOLID	RDEV	EXTENT START	EXTENT END	TOTAL PAGES	PAGES IN USE	HIGH PAGE	%
Z16801	9501	1	3338	600840	11633	150377	1%
<b>SUMMARY</b>				600840	11633		1%
<b>USABLE</b>				600840	11633		1%

The interface also includes a "Filter selection" section with "CPC" and "z10" filters, a "Property Viewer" for TMCC16 showing details like IP Address (192.168.9.16) and Status (ACTIVE), and a "Spool Space Utilization" graph on the right. The bottom of the window shows a Windows taskbar with the Start button, application icons, and system tray.

## The WAVE GUI (Log Viewer)

The screenshot displays the CSL-WAVE GUI Log Viewer window. The main area shows a list of log records with the following columns: WAVESRV Time, User, System, Code, Type, and Message. The records include various system events such as user logins, updates, and scheduling entries. A 'Save Log As...' dialog box is open, allowing the user to filter logs by User and System, and to select the log levels to display (All, Information, Error, Warning, Severe).

WAVESRV Time	User	System	Code	Type	Message
2013-08-20 19:04:57	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 19:02:29	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged off from tmcc-123-88(192.168.9.88).
2013-08-20 19:01:19	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 19:01:15	waveadm	WAVE	WAVSEC...	E	Error logging in WAVE user waveadm , user already logged on from tmcc-123-88(192.168.9.88).
2013-08-20 18:59:45	waveadm	WAVE	WAVREP...	I	Global WAVE report "zvm_users_2013_08_20" created successfully (report type is: zVM User Repo...
2013-08-20 18:20:51	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 18:13:31	waveadm	TMCC16	WAVGEN...	I	IAN for zVMASDVolume Z6REL1 was updated successfully.
2013-08-20 18:13:21	waveadm	TMCC16	WAVGEN...	I	IAN for zVMASDVolume Z6COM2 was updated successfully.
2013-08-20 18:13:10	waveadm	TMCC16	WAVGEN...	I	IAN for zVMASDVolume Z6W02 was updated successfully.
2013-08-20 17:58:05	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 17:57:53	waveadm	WAVE	WAVSEC...	E	Error logging in WAVE user waveadm , user already logged on from tmcc-123-88(192.168.9.88).
2013-08-20 17:56:55	waveadm	WAVE	WAVWIN...	I	Update scheduled for All Aspects.
2013-08-20 17:55:59	waveadm	WAVE	WAVSEC...	I	Administrator waveadm logged in from tmcc-123-88(192.168.9.88).
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateConnectabl...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateSystemRes...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateSystemStat...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateLicense was...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateCPUNumber...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestCheckServiceMachi...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestSearchAPIUsers w...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateActiveUsers...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestSearchAPIUsers w...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestCheckServiceMachi...
2013-08-20 17:18:46	WAVEBT...	WAVE	WAVBTS...	I	Scheduling Entry com.CSL.WAVE.BTS.Request.Queueable.BTSQueueableRequestUpdateActiveUsers...

Log viewer – the information you find here depends on the log levels you define in the Administration task.

# The WAVE GUI (Log Viewer – BTS Workunit Logs)

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave-z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Stop Updates

Hardware Viewer  
**Hardware View**  
 General Information  
 BTS Version 3.2.0

General Information | Scheduling | **Internal BTS Requests Statistics** | BTS Log

Type	Parameters	# of Runs (Stats)	# of Errors (Stats)	# of Runs (Saved)	# of Errors (Saved)	Last Run	Last Error	Last Reset
Update Resource Utilization for z/VM System	z/VM System: TMCC16	1238	476	1238	476	2013-08-20 19:10:14.7	2013-08-20 19:10:14.7	2013-08-20 08:00:00
Update Status for z/VM System	z/VM System: TMCC16	1237	26	1237	26	2013-08-20 19:10:14.7	2013-08-20 17:05:02	2013-08-20 08:00:00
Clean BTS Workunits		5	0	2	0	2013-08-20 19:10:14.7	No Errors Found	N/A
Update CSL-WAVE Server Status		9546	0	2565	0	2013-08-20 19:10:14.7	No Errors Found	N/A
Update CSL-WAVE User Status		93	0	44	0	2013-08-20 19:10:14.7	No Errors Found	N/A
Check License for z/VM CPC	CPC: z10	230	0	233	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-19 17:05:02
Update Guest status for z/VM System	z/VM System: TMCC16	1238	0	1238	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 08:00:00
Update Connectable Guests for z/VM System	z/VM System: TMCC16	1238	0	1238	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 08:00:00
Update License for z/VM System	z/VM System: TMCC16	120	0	120	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 08:00:00
Update CPU Count for z/VM System	z/VM System: TMCC16	120	0	120	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 08:00:00
Check CSL-WAVE Service Machine for z/VM System	z/VM System: TMCC16	826	0	826	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 08:00:00
Check TVP API Status for z/VM System	z/VM System: TMCC16	798	0	798	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 08:00:00
Update Guest Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 11:00:00
Update Prototype Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 11:00:00
Update Network Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 11:00:00
Update Storage Aspect for z/VM Directory or z/VM System	Directory: New Directory for TMCC16	8	0	8	0	2013-08-20 19:10:14.7	No Errors Found	2013-08-20 11:00:00

Legend  
 No Errors Reported Since Last Reset  Errors Reported  Temporarily Ignored  Permanently Ignored

Execute REIX on  
 Update All z/VM A  
 Delete z/VM Gues  
 Update All z/VM A  
 Activate z/VM Gu  
 Deactivate z/VM C

Create New DASD Partition	waveadm	2013-08-20 17:04:40	2013-08-20 17:05:02	22 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%
Update Distribution to z/VM Guests	waveadm	2013-08-20 16:56:37	2013-08-20 16:56:37	0 seconds	Done	<div style="width: 100%; height: 10px; background-color: green;"></div> 100%

Start | Launch CSL-WAVE v3.2.2... | CSL-WAVE 3.2.0 (WAV... | DE | waveadm

226 © 2013 IBM Corporation

## The WAVE GUI (User Tasks – Show Changes Log)

The screenshot shows the CSL-WAVE GUI interface. The main window is titled 'Current System View - TMCC16'. A dialog box titled 'ACS Log (0 currently in queue)' is open, displaying a list of changes. The list has the following columns: Change #, Object Type, Object ID, and Change Type. Below the list is a 'Changes statistics' table.

Change #	Object Type	Object ID	Change Type
0	z/VM Guest	ZLIN79 (TMCC16)	Update
1	z/VM System	TMCC16	Update
2	z/VM Guest	ZLIN79 (TMCC16)	Update
3	z/VM Guest	ZLIN79 (TMCC16)	Update
4	z/VM System	TMCC16	Update
5	z/VM Guest	ZLIN79 (TMCC16)	Update
6	z/VM System	TMCC16	Update
7	z/VM Guest	XVMON (TMCC16)	Update
8	z/VM Guest	ZLIN79 (TMCC16)	Update
9	z/VM Guest	XVMON (TMCC16)	Update
10	z/VM Guest	ZLIN79 (TMCC16)	Update
11	z/VM Guest	ZLIN79 (TMCC16)	Update
12	z/VM Guest	ZLIN79 (TMCC16)	Update
13	z/VM Guest	PURIT (TMCC16)	Update
14	z/VM Guest	ZLIN79 (TMCC16)	Update
15	Virtual Network Connection	Network connection (TMCC16.TCPIP to DEMOLAN) (TMCC16)	Update
16	Virtual Network Segment	DEMOLAN	Update
17	z/VM Guest	BACKUPVM (TMCC16)	Update
18	z/VM Guest	BACKUPVM (TMCC16)	Update
19	Virtual Network Connection	Network connection (TMCC16.TCPIP to DEMOLAN) (TMCC16)	Delete

Object Type	Change Type	Count
z/VMUser	Add	0
z/VMUser	Delete	0
z/VMUser	Update	14
VNS	Add	0
VNS	Delete	0
lvms	Initiate	1

At the bottom of the dialog, there is a 'Changes statistics' table and a 'Close' button. The main GUI also shows a 'Property Viewer' for 'USER-LOCAL (TMCC16)' and a 'Workunit Log' table.

Workunit Name	Initiator
Activate z/VM Guests	waveadm
Delete CSL-WAVE Managed Entity	waveadm
Delete CSL-WAVE Managed Entity	waveadm
Delete CSL-WAVE Managed Entity	waveadm
Update All z/VM Aspects	waveadm
Delete Device Pool	waveadm
Delete Device Pool	waveadm
Update All z/VM Aspects	waveadm

Changes done during a CSL-WAVE GUI session are also reported in a log file.

## The WAVE GUI (Reporting)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled "Current System View - 'TMCC16'" and shows a "System Status" tab. A "Manage Saved Reports" dialog box is open, showing a list of available reports:

Report Name	Created By	Created At	Last Modified By	Last Modified	Global	Locked	IAN
z/VM CPC Report							
z/VM System Report							
z/VM User Report							
z/VM GLAN/NSWITCH Report							

The "z/VM User Report" is selected. The background shows a "Property Viewer" for "TMCC16" with the following details:

Property	Value
Name	TMCC16
IP Address	192.168.9
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Protocols ...	2
Total Volumes ...	26
Total Volumes ...	2
DASD Free St...	4.65 GB

The Windows taskbar at the bottom shows the Start button, taskbar icons, and system tray with "BTS Online" and "Waveadm".

Several report options are available to summarize the information hold in the CSL-WAVE server database. Next slides are showing the 'z/VM User Report' option.



# The WAVE GUI (Reporting)

The screenshot displays the CSL-WAVE GUI interface. The main window is titled "Current System View - 'TMCC16'". A "Manage Saved Reports" dialog box is open, showing a list of available reports. The reports listed are:

- All Reports
- z/VM CPC Report
- z/VM System Report
- z/VM User Report (highlighted with a "New z/VM User Report" button)
- z/VM GLAN/NSWITCH Report

The dialog also includes checkboxes for "Show Private Reports" and "Show Global Reports". In the background, the "Property Viewer" shows details for system "TMCC16":

Property	
Name	TMCC16
IP Address	192.168.9
Status	ACTIVE
Total Users	139
Total Virtual ...	4
Total Prototy...	2
Total Volumes ...	26
Total Volume ...	2
DASD Free St...	4.65 GB

At the bottom of the main window, there is a "Free GB" input field with a plus sign and a "Reset" button. The taskbar at the bottom shows the Start button and open applications including "Launch CSL-WAVE v3.2..." and "CSL-WAVE 3.2.0 (WAV...".

# The WAVE GUI (Reporting)

The screenshot displays the CSL-WAVE 3.2.0 GUI. The main window is titled "CSL-WAVE Report Generator - z/VM User Report". It features a search and filter section at the top with fields for Name, Project, System, Distribution, and Group. Below this is a table of report results showing 7 records. The table columns include Name, z/VM System, Group, Status, Project, Description, Distribution, Function, Prototype, HCP, ZIPL, CPUs, Created By, Created On, Modified By, and Modified On. A "Property Viewer" sidebar on the left shows details for the selected system "TMCC16". At the bottom, there is a "Table Fields" section with checkboxes for various columns.

Name	z/VM Sy...	Group	Status	Project	Description	Distrib...	Function...	Prototype	HCP	ZIPL	CPUs	Created By	Created...	Modified...	Modified...
ZVMLXAPP	TMCC16	IBM-UTIL	Inactive			UNASSIG...	N/A		False	False	1	WAVE Da...	2013-08...	WAVE Da...	2013-08...
ZVMND	TMCC16	USER-LO...	Inactive			z/VM	N/A		False	False	2	WAVE Da...	2013-08...	WAVE Da...	2013-08...
ZHCP	TMCC16	IBM-UTIL	Active			UNASSIG...	N/A		False	False	2	WAVE Da...	2013-08...	WAVE Da...	2013-08...
ZVMLXTS	TMCC16	IBM-UTIL	Inactive			UNASSIG...	N/A		False	False	1	WAVE Da...	2013-08...	WAVE Da...	2013-08...
ZHCP16	TMCC16	USER-LO...	Active			SLES11...	N/A		False	False	1	WAVE Da...	2013-08...	WAVEInit	2013-08...
ZVMMAFLX	TMCC16	IBM-UTIL	Inactive			UNASSIG...	N/A		False	False	1	WAVE Da...	2013-08...	WAVE Da...	2013-08...
ZLIN79	TMCC16	DEMO LI...	Active			SLES11...	N/A		False	False	1	WAVE Da...	2013-08...	WAVEInit	2013-08...

# The WAVE GUI (Reporting)

**IBM-Germany**  
20-Aug-2013 07:02:49  
Printed By: wvadm

**CSL-WAVE - z/VM User Report**

Name	z/VM System	Group	Status	Project	Description	Distribution	Functionality	Prototype	HCP	ZIPL	CPUs
ZVMX3FF	TMCC16	IBM-UTLI	inactive			UNASSIGNED	N/A	-	false	false	1
WAVE Database Update	2013-08-10 11:23:24	WAVE Database Update	2013-08-10 11:23:24								
ZVMX1D	TMCC16	USER-LOCAL	inactive			Z/VM	N/A	-	false	false	2
WAVE Database Update	2013-08-10 11:23:24	WAVE Database Update	2013-08-10 17:01:17								
ZMCP	TMCC16	IBM-UTLI	ACTIVE			UNASSIGNED	N/A	-	false	false	2
WAVE Database Update	2013-08-10 11:23:24	WAVE Database Update	2013-08-10 11:23:24								
ZVMX1TS	TMCC16	IBM-UTLI	inactive			UNASSIGNED	N/A	-	false	false	1
WAVE Database Update	2013-08-10 11:23:24	WAVE Database Update	2013-08-10 11:23:24								
ZMCP16	TMCC16	USER-LOCAL	ACTIVE			SL8511-640	N/A	-	false	false	1
WAVE Database Update	2013-08-10 11:23:24	WAVE Database Update	2013-08-10 17:18:07								
ZVMAMA FLX	TMCC16	IBM-UTLI	inactive			UNASSIGNED	N/A	-	false	false	1
WAVE Database Update	2013-08-10 11:23:24	WAVE Database Update	2013-08-10 11:23:24								
ZL1777	TMCC16	DBAO LINUX	ACTIVE			SL8511-640	N/A	-	false	false	1
WAVE Database Update	2013-08-10 13:00:22	WAVE Database Update	2013-08-10 13:23:40								

1 / 1

# The WAVE GUI (Reporting)

The screenshot displays the CSL-WAVE 3.2.0 interface. The main window is titled "Current System View - 'TMCC16'" and shows various system metrics. A "Property Viewer" on the left lists details for the system "TMCC16".

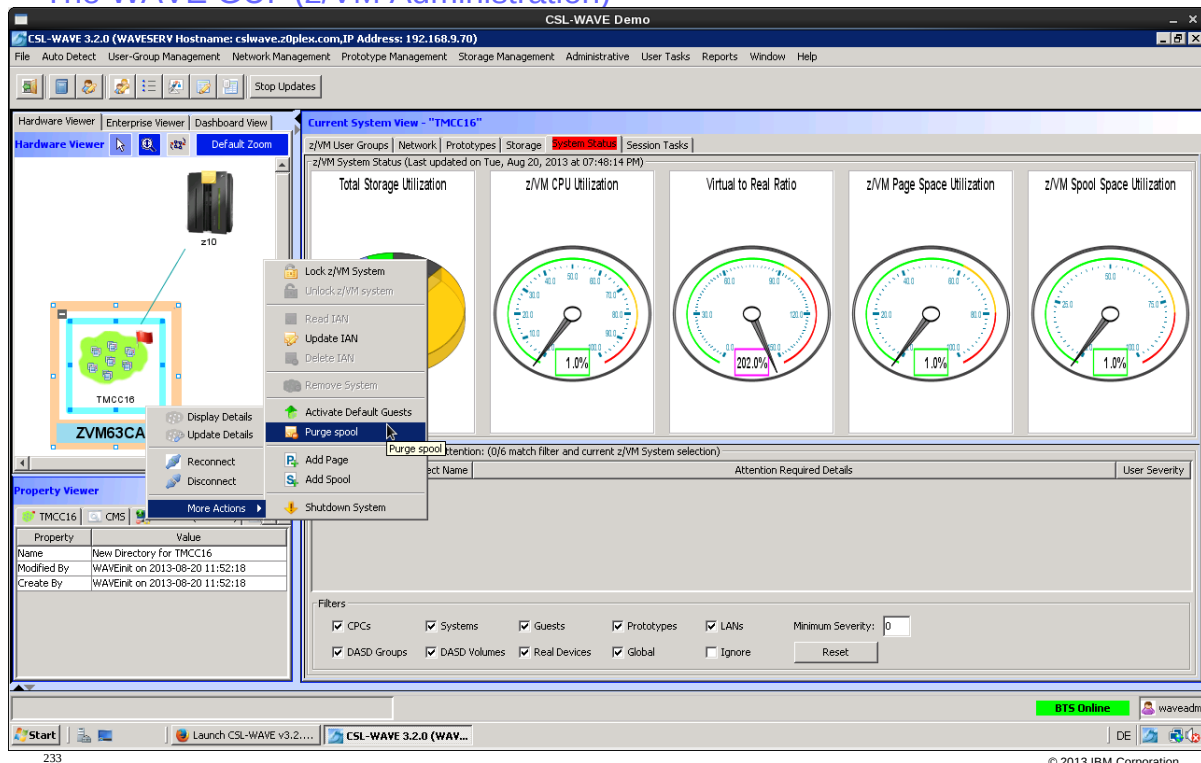
The "Manage Saved Reports" dialog box is open, showing a list of available reports:

Report Name	Created By	Created At	Last Modified By	Last Modified At	Global	Locked	IAN
zvm_users_2013_08_20	waveadm	2013-08-20...	waveadm	2013-08-20...	Yes		

Below the table, there are checkboxes for "Show Private Reports" and "Show Global Reports", both of which are checked. A "Cancel" button is located at the bottom right of the dialog.

The background interface includes a "Hardware Viewer" tab, a "Property Viewer" showing system details (Name: TMCC16, IP Address: 192.168.9, Status: ACTIVE, Total Users: 139, Total Virtual ...: 4, Total Protocols ...: 2, Total Volumes ...: 26, Total Volume ...: 2, DASD Free St ...: 4.65 GB), and a "Free GB" input field with a "Go" and "Reset" button.

## The WAVE GUI (z/VM Administration)

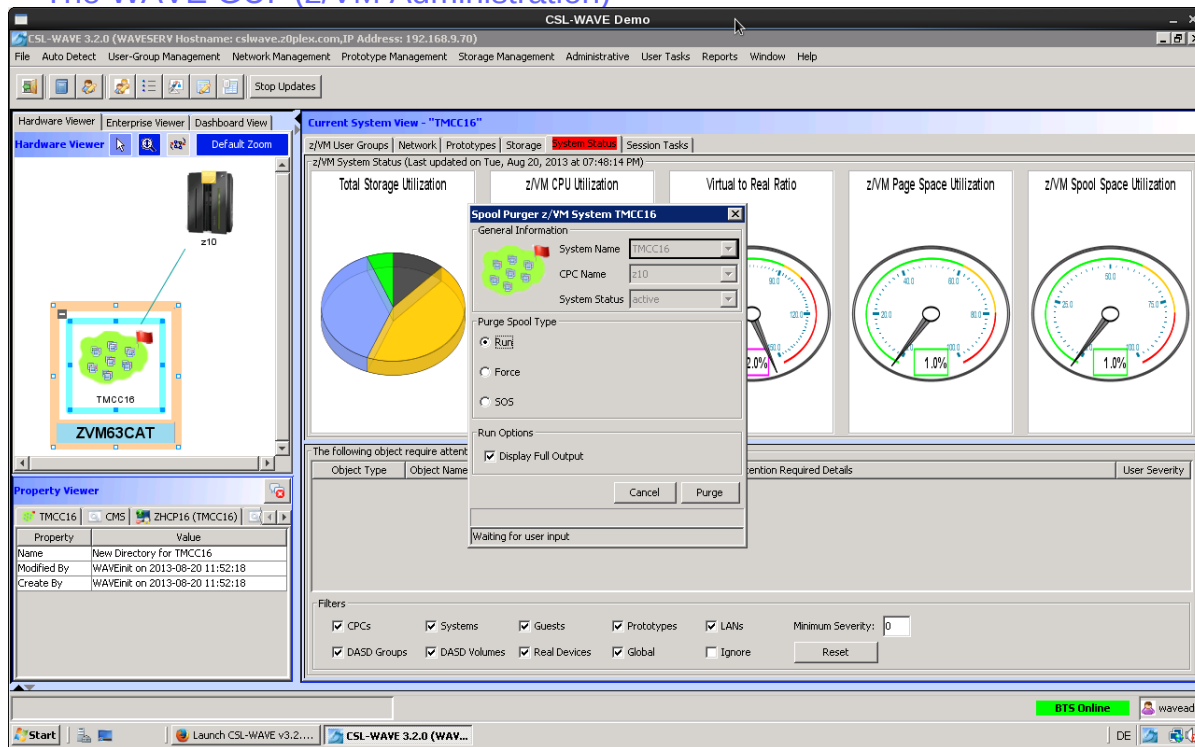


CSL-WAVE is a powerful management tool: you can not only manage z/VM guest systems, but also z/VM by itself!

For example:

- the z/VM spool gets filled up with console logs or other files no longer needed. The CSL-WAVE administrator can purge the z/VM spool out of the CSL-WAVE GUI - see slide 234 ff
- z/VM shutdown and re-IPL - see slide 236 ff.

## The WAVE GUI (z/VM Administration)



Screen 'Spool Purger z/VM System TMCC16' will call SFPURGER with the options you enter here.

# The WAVE GUI (z/VM Administration)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERY) Hostname: cslwave-z0plex.com, IP Address: 192.168.9.70. The main window is titled "Current System View - 'TMCC16'".

**Hardware Viewer:** Shows a physical server rack labeled "z10" and a virtual machine labeled "ZVM63CAT" with "TMCC16" inside.

**Property Viewer:** Lists properties for "TMCC16":

Property	Value
Name	New Directory for TMCC16
Modified By	WAVEint on 2013-08-20 11:52:18
Create By	WAVEint on 2013-08-20 11:52:18

**System Status:** Shows various utilization gauges:

- Total Storage Utilization
- z/VM CPU Utilization
- Virtual to Real Ratio
- z/VM Page Space Utilization (1.0%)
- z/VM Spool Space Utilization (1.0%)

**Log Window:** Displays system messages:

```

SFPURGER Run Results
DMSCYS2469I SFPURGER OPTIONS file processed ...
DMSCYS2452I SFPURGER starting at 19:49:27 on 20 Aug 2013.
DMSCYS2453I Running in FORCE mode - RUN13232.
DMSCYS2470I Using SFPURGER MODULE with SFPURGER CONTROL file.
DMSCYS2456I Erasing old output files till 2013229.
DMSCYS2496I Cont Spool Purger
Finished running spool purger, rc= 0
DMSCYS2459I Exas
DMSCYS2462I Spoc
DMSCYS2482I Exec
DMSCYS2482I Exec
DMSCYS2482I Executing: CP CHANGE DATAMOVE PRT 0145 HOLD
DMSCYS2482I Executing: CP CHANGE DIRMAINT PRT 1549 HOLD
DMSCYS2482I Executing: CP CHANGE DIRMAINT PRT 1645 HOLD
DMSCYS2482I Executing: CP CHANGE DIRMAINT PRT 1649 HOLD
DMSCYS2482I Executing: CP CHANGE DIRMAINT PRT 1653 HOLD
    
```

**Filters:** Includes checkboxes for CPCs, Systems, Guests, Prototypes, LANs, DASD Groups, DASD Volumes, Real Devices, Global, and Ignore. Minimum Severity is set to 0.

**Taskbar:** Shows "Start", "Launch CSL-WAVE v3.2...", "CSL-WAVE 3.2.0 (WAV...", "BTS Online", and "waveadm".

## The WAVE GUI (z/VM Administration)

The screenshot displays the CSL-WAVE GUI interface for z/VM administration. The main window is titled "Current System View - 'TMCC16'" and shows various system metrics and a shutdown dialog box.

**System Metrics:**

- Total Storage Utilization: Pie chart showing utilization across different storage categories.
- z/VM CPU Utilization: Gauge showing 2.0% utilization.
- Virtual to Real Ratio: Gauge showing 1.0% utilization.
- z/VM Page Space Utilization: Gauge showing 1.0% utilization.
- z/VM Spool Space Utilization: Gauge showing 1.0% utilization.

**Shutdown Dialog Box:**

**Shutdown z/VM System TMCC16**

General Information:

- System Name: TMCC16
- CPC Name: z10
- System Status: active

Shutdown options:

- Within (Sec): 65535
- Re-IPL The System after shutdown

Buttons: Cancel, Shutdown

Waiting for user input

**Property Viewer:**

Property	Value
Name	TMCC16
IP Address	192.168.9.16
Status	ACTIVE
Total Users	139
Total Virtual ...	3
Total Prototy...	2
Total Volumes	22
Total Volume ...	2
DASD Free St...	4.65 GB

**Filters:**

- CPCs
- Systems
- Guests
- Prototypes
- LANs
- Minimum Severity: 0
- DASD Groups
- DASD Volumes
- Real Devices
- Global
- Ignore

Buttons: Reset

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z/VM management capability: z/VM shutdown and re-IPL initiated from the CSL-WAVE GUI.

Attention: Don't initiate a z/VM shutdown during this demo!! The CSL-WAVE GUI server is running within the demo z/VM system - shutting him down means shutting down the demo as well.

The re-IPL consumes time which you might not have during your demo time slot.



## The WAVE GUI (Administration – Device Pools)

The screenshot shows the CSL-WAVE GUI Administration - Device Pools interface. The main window displays the Enterprise Dashboard View with five gauges: z/VM CPU Utilization, Virtual to Real Ratio, z/VM Page Space Utilization, and z/VM Spool Space Utilization. A 'Device Pool Manager' dialog box is open, displaying a table of existing device pools.

Name	Type	Description	Devices	Free Devices (Unique)	IAN
New OSA Device Pool for TMCC16	OSA	New Device Pool for OSA devices for z/VM System T...	64	52	
New FCP Device Pool for TMCC16	FCP	New Device Pool for FCP devices for z/VM System TM...	50	50	
New DASD Device Pool for TMCC16	DASD	New Device Pool for DASD devices for z/VM System T...	26	3	
New HIPER Device Pool for TMCC16	HIPER	New Device Pool for HIPER devices for z/VM System ...	0	0	

### 'Enterprise Status Viewer' - 'Dashboard View':

- Overview about the CSL-WAVE device pools and their administration options.

These are tasks which don't really need to be shown during your demo:

- The next slides show how you can move auto-discovered devices into your device pools (OSA, FCP, DASD, HIPER device pools) and how to customize those pools
- Starting slide 245: Backup and restore of the CSL-WAVE repository database
- Starting slide 252: Remove a specific z/VM system from the management scope of CSL-WAVE.

## The WAVE GUI (Administration – Device Pools)

**Create New Device Pool**

General Information

Device Pool Name:  Created By:

Type:  Modified By:

Descriptive | Devices | Connected CSL-WAVE Resources

Descriptive Information

Default Virtual Device:

Description:

Cancel Create

**Device Pool Manager**

Existing Device Pools

Name	Type	Description	Devices	Free Devices (Unique)	IAN
New OSA Device Pool for TMCC16	OSA	New Device Pool for OSA devices for z/VM System T...	64	52	
New FCP Device Pool for TMCC16	FCP	New Device Pool for FCP devices for z/VM System TM...	50	50	
New DASD Device Pool for TMCC16	DASD	New Device Pool for DASD devices for z/VM System T...	26	3	
New HIPER Device Pool for TMCC16	HIPER	New Device Pool for HIPER devices for z/VM System ...	0	0	
DEMOLAN	OSA		0	0	

Create New Device Pool Close

## The WAVE GUI (Administration – Device Pools)

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave-z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View

Enterprise Status Viewer

Filter selection: CPC = z10

Enterprise Dashboard View

z/VM System Name CPU Utilization Virtual to Real Ratio Page Space Utilization Spool Space Utilization

z/VM CPU Utilization Virtual to Real Ratio z/VM Page Space Utilization z/VM Spool Space Utilization

3.0%

Device Pool Manager

Existing Device Pools

Name	Type	Description	Devices	Free Devices (Unique)	IAN
New OSA Device Pool for TMCC16	OSA	New Device Pool for OSA devices for z/VM System T...	64	52	
New FCP Device Pool for TMCC16	FCP	New Device Pool for FCP devices for z/VM System TM...	50	50	
New DASD Device Pool for TMCC16	DASD	New Device Pool for DASD devices for z/VM System T...	26	3	
New HIPER Device Pool for TMCC16	HIPER	New Device Pool for HIPER devices for z/VM System ...	0	0	
DEMOLAN	OSA		0	0	

Display Details  
Update Details  
Update Details

Create New Device Pool Close

Property Viewer

ELVOL FR902F

Property Value

Start Launch CSL-WAVE v3.2.0... A - z/VM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... BTS Online waveadm

## The WAVE GUI (Administration – Device Pools)

Update Device Pool "DEMOLAN"

General Information

Device Pool Name: DEMOLAN Created By: WAVEinit on 2013-08-23 12:00:28

Type: OSA Modified By: WAVEinit on 2013-08-23 12:00:28

Descriptive | Devices | Connected CSL-WAVE Resources

Descriptive Information

Default Virtual Device: EA00

Description: OSA Pool for Demo-LAN z10, z196, zEC12

Update Device Pool "DEMOLAN"

General Information

Device Pool Name: DEMOLAN Created By: WAVEinit on 2013-08-23 12:00:28

Type: OSA Modified By: WAVEinit on 2013-08-23 12:00:28

Descriptive | Devices | Connected CSL-WAVE Resources

Waiting for user input

Associated z/VM Systems

Real Devices

Associate z/vm System with Device Pool

z/VM System selection

Select z/VM System to associate: TMCC16

Cancel Go

Associate System Cancel

Waiting for user input

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# The WAVE GUI (Administration – Device Pools)

CSL-WAVE 3.2.0 (WAVESERY Hostname: cslwave-z0plex.com, IP Address: 192.168.9.70)

File Auto Detect User-Group Management Network Management Prototype Management Storage Management Administrative User Tasks Reports Window Help

Hardware Viewer Enterprise Viewer Dashboard View **Enterprise Dashboard View**

Enterprise Status Viewer

Filter selection: CPC = z10

z/VM System Name CPU Utilization Virtual to Real Ratio Page Space Utilization Spool Space Utilization

z/VM CPU Utilization Virtual to Real Ratio z/VM Page Space Utilization z/VM Spool Space Utilization

3.0%

**Update Device Pool "New OSA Device Pool for TMCC16"**

General Information

Device Pool Name: New OSA Device Pool for TMCC16 Created By: WAVEinik on 2013-08-19 18:13:17

Type: OSA Modified By: WAVEinik on 2013-08-19 18:13:17

Descriptive Devices Connected CSL-WAVE Resources

Associated z/VM Systems

System Name	Address	Online Status	Dedicate Status	Details	Locked	IAN
TMCC16						
EB17		ONLINE	FREE			
EB18		ONLINE	FREE			
EB19		ONLINE	FREE			
EB1A		ONLINE	FREE			
EB1B		ONLINE	FREE			
EB1C		ONLINE	FREE			
EB1D		ONLINE	FREE			
EB1E		ONLINE	FREE			
EB1F		ONLINE	FREE			

Transfer to DEMOLAN

Associate System Cancel

Waiting for user input

Clear Go

Property Viewer

BLVOL FR902F

Property Value

Start Launch CSL-WAVE v3.2.0... A - z/VM\_tmcc16.WS CSL-WAVE 3.2.0 (WAV... BTS Online waveadm DE

## The WAVE GUI (Administration – Device Pools)

The screenshot displays the CSL-WAVE GUI Administration interface for Device Pools. The main window is titled "Enterprise Dashboard View" and contains several monitoring gauges. A "Device Pool Manager" dialog box is open, showing a table of existing device pools.

**Enterprise Dashboard View Gauges:**

- z/VM CPU Utilization: Gauge showing utilization levels.
- Virtual to Real Ratio: Gauge showing the ratio of virtual to real resources.
- z/VM Page Space Utilization: Gauge showing page space utilization.
- z/VM Spool Space Utilization: Gauge showing spool space utilization, currently at 3.0%.

**Device Pool Manager Dialog:**

Name	Type	Description	Devices	Free Devices (Unique)	IAN
DEMOSAN	FCP		50	50	
DEMOLAN	OSA		64	52	
DEMODISK	DASD		26	3	

The dialog also includes a "Create New Device Pool" button and a "Close" button.

---

The WAVE GUI (Administration – FCP Administration – to be done ...)

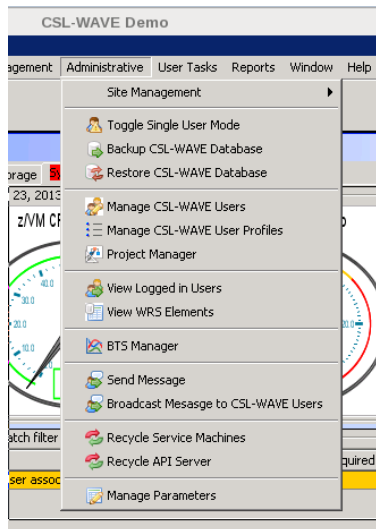
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Will be updated later ...

## The WAVE GUI (Administration)



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## Additional WAVE GUI Administration tasks



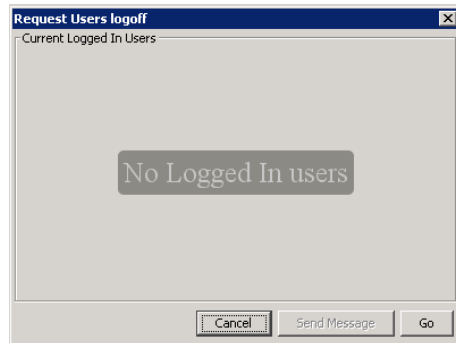
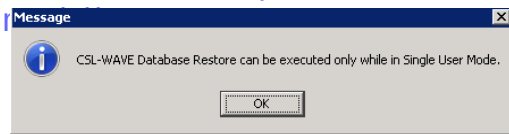
## The WAVE GUI (Administration – Backup CSL-WAVE Repository)

The screenshot displays the CSL-WAVE 3.2.0 GUI interface. A dialog box titled "CSL-WAVE Database Backup" is open, showing a message: "CSL-WAVE Database was successfully backed up into backup file /usr/wave/DBBackup/CSL-WAVE-DB-Backup-Fri-Aug-23-12-42-46-CEST-2013". Below the dialog, a table shows the CSL-WAVE Log with columns for Workunit Name, Initiator, Start At, End At, Duration, Status, and Progress.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

The CSL-WAVE repository (MySQL database) can be dumped. The backup file will be stored in /usr/wave/DBBackup and can be used for restore tasks. Make sure the z/VM configurations doesn't change a lot if you need to restore an old backup.

## The WAVE GUI (Administration – Toggle Single User Mode (maintenance



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Restore can only be done in “Single-User-Mode”

## The WAVE GUI (Administration – Restore Backup)

The screenshot displays the CSL-WAVE 3.2.0 administration interface. A modal dialog box titled "Restore the CSL-WAVE Database" is open, requiring the user to specify the full path of the database backup file. The path entered is "usr/wave/DBBackup/C...". The background interface shows the "Current System View - TMCC16" with tabs for z/VM User Groups, Network, Prototypes, Storage, System Status, and Session Tasks. A task log table is visible at the bottom, showing a list of completed operations.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

Select the backup file

## The WAVE GUI (Administration – Restore Backup)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERY) interface. The main window shows the 'Current System View - "TMCC16"' with tabs for z/VM User Groups, Network, Prototypes, Storage, System Status, and Session Tasks. A 'Hardware Viewer' on the left shows a physical server rack labeled 'ZVM63CAT' and a virtual machine icon labeled 'TMCC16'. A 'Property Viewer' at the bottom left shows the selected system 'TMCC16'.

A modal dialog box titled 'CSL-WAVE Database Restore' is open in the center, displaying the message: 'CSL-WAVE Database was successfully restored from file /usr/wave/DBBackup/CSL-WAVE-DB-Backup-Fri-Aug-23-12-42-48-CEST-2013. The application will now shutdown.' with an 'OK' button.

At the bottom, the 'CSL-WAVE Log' table shows a list of completed operations:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

The taskbar at the bottom shows the system is 'BTS Online' and the user is 'waveadm'. The taskbar also includes 'Start', 'Launch CSL-WAVE v3.2...', 'A - z/VM\_tmcc16.WS', and 'CSL-WAVE 3.2.0 (WAV...'.

Shutdown will be done automatically and you have to restart the GUI and re-login

## The WAVE GUI (Administration – Recycle CSL-WAVE Service Machines)

The screenshot shows the CSL-WAVE GUI interface. A dialog box titled "Recycle CSL-WAVE Service Machines" is displayed in the center, with a progress bar and the text "Waiting for Service Machines to load...". The background shows the "Current System View - 'TMCC16'" with a "No Session Tasks Exist" message. The bottom of the screen features a log table with the following data:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

If needed the CSL-WAVE service (worker) machines can also be restarted out of the CSL-WAVE GUI.

## The WAVE GUI (Administration – Recycle API Servers) - don't do it!!!

The screenshot shows the CSL-WAVE 3.2.0 GUI interface. The 'Site Management' menu is open, and the 'Recycle API Server' option is highlighted. The main window displays the 'Current System View - TMCC16' with various charts and gauges. A table at the bottom shows a log of system events.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

The z/VM SMAPI server machine can also be restarted out of the GUI.  
 Don't do it during the demo – you will lose the connection to the z/VM SMAPI for some time – you will not be able to “manage” anything during the outage.

## The WAVE GUI (Administration – Recycle API Servers) - don't do it!!!

The screenshot shows the CSL-WAVE 3.2.0 GUI interface. The main window title is "CSL-WAVE Demo". The interface includes a menu bar (File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, Help) and a toolbar with icons and a "Stop Updates" button. The main area is divided into three panels: "Hardware Viewer" (left), "Enterprise Viewer" (top), and "Dashboard View" (right). The "Hardware Viewer" panel shows a diagram of a system with components labeled "z10", "TMCC16", and "ZVM63CAT". Below it is a "Property Viewer" panel with the text "No Object Selected". The "Enterprise Viewer" panel contains a large text box that reads "Select A System from the Hardware View panel on the left". At the bottom, there is a "CSL-WAVE Log" table with columns for Workunit Name, Initiator, Start At, End At, Duration, Status, and Progress. The log shows several completed operations with a status of "Done" and 100% progress. A "BTS Online" indicator is visible in the bottom right corner of the log area.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

Don't do it during the demo – you will loose the connection to the z/VM SMAPI for some time – you will not be able to “manage” anything during the outage.

# The WAVE GUI (Administration – Recycle API Servers) - back again!!!

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The main window is titled "Current System View - 'TMCC16'".

**System Status Overview:**

- Total Storage Utilization:** Pie chart showing storage usage distribution.
- z/VM CPU Utilization:** Gauge showing 1.0% utilization.
- Virtual to Real Ratio:** Gauge showing 282.0% ratio.
- z/VM Page Space Utilization:** Gauge showing 1.0% utilization.
- z/VM Spool Space Utilization:** Gauge showing 3.0% utilization.

**Attention Required:** A table lists objects requiring attention:

Object Type	Object Name	Attention Required Details	User Severity
zVMPrototype	ZLIN79	No z/VM User associated	50

**Filters:** Includes checkboxes for CPCs, Systems, Guests, Prototypes, LANs, DASD Groups, DASD Volumes, Real Devices, Global, and Ignore. Minimum Severity is set to 0.

**Log Table:**

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

The interface also shows a hardware viewer on the left, a property viewer at the bottom left, and a task log at the bottom right. The system is currently online.





# The WAVE GUI (Administration – Unmanage a z/VM System)

The screenshot displays the CSL-WAVE 3.2.0 (WAVESERV Hostname: cslwave.z0plex.com, IP Address: 192.168.9.70) interface. The main window is titled 'CSL-WAVE Demo' and features a menu bar with options like File, Auto Detect, User-Group Management, Network Management, Prototype Management, Storage Management, Administrative, User Tasks, Reports, Window, and Help. Below the menu is a toolbar with icons and a 'Stop Updates' button.

The interface is divided into several panels:

- Hardware Viewer:** Shows a tree view of hardware components. A system named 'TMCC16' is selected, and a tooltip displays its details:
  - System Name:** TMCC16
  - Status:** suspend
  - Description:** Demo zVM z10 LPC
  - System Type:** Other
- Property Viewer:** Shows a message: 'Error: Virtual to Real Ratio critical (232%) Warning: Some z/VM Objects require attention'.
- Log Panel:** A table showing the execution history of various tasks. The table has columns for Workunit Name, Initiator, Start At, End At, Duration, Status, and Progress.

A text box in the center of the main area reads: 'Select A System from the Hardware View panel on the left'.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

The bottom of the window shows a taskbar with the Start button, several open applications, and system tray icons including 'BTS Online' and 'waveadm'. The Windows taskbar at the very bottom shows the date and time as 254.

## The WAVE GUI (Administration – Unmanage a z/VM System)

System is suspended, No data may be displayed

Workunit Name	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

Suspend – z/VM icon turns from “green” to “grey”

## The WAVE GUI (Administration – Unmanage a z/VM System)

The screenshot shows the CSL-WAVE GUI interface. A dialog box titled "Remove z/VM system 'TMCC16' from CSL-WAVE management" is displayed in the center. The dialog box contains the following text:

This will completely erase the selected z/VM System (TMCC16) from the CSL-WAVE Knowledgebase. All relevant data including Guests, Virtual Networks, Prototypes and Storage will be permanently erased from the Knowledgebase.

NOTE: In no way will this action delete actual z/VM entries. Only the CSL-WAVE meta-data will be erased.

Are you sure you want to continue?

Buttons: Yes, No

The background interface shows a hardware viewer with a z/VM system (TMCC16) highlighted. Below the viewer is a log table with the following data:

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

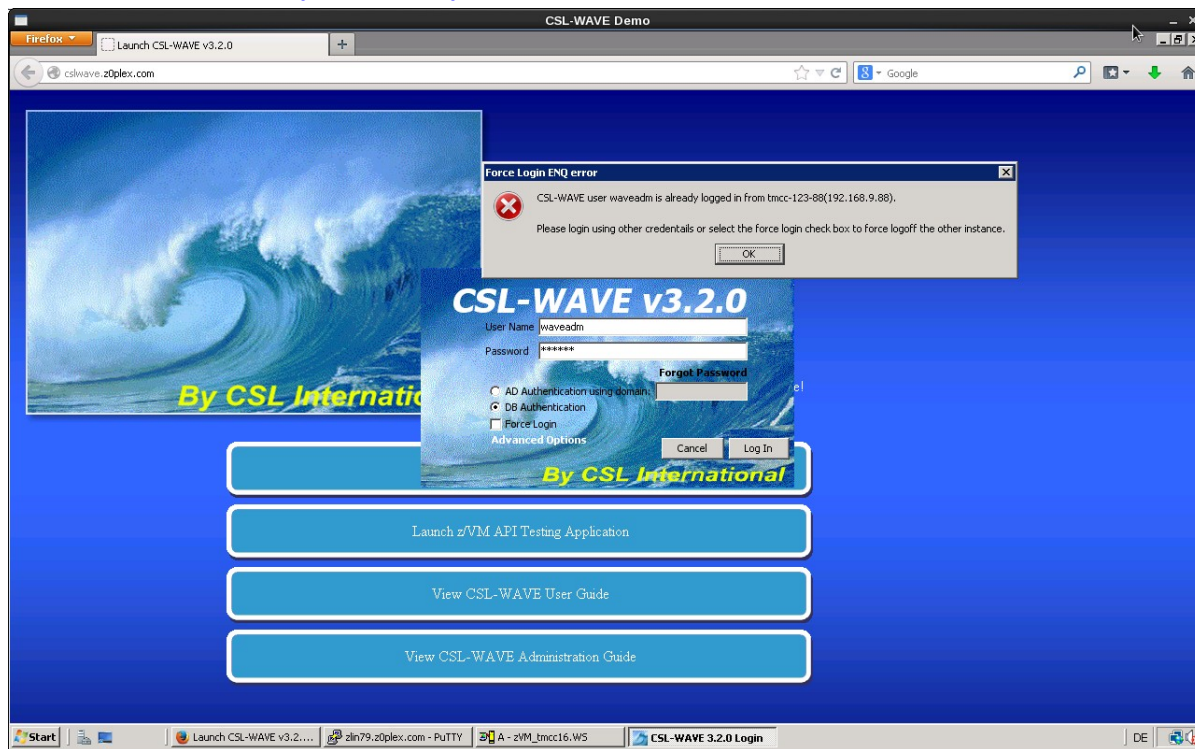
Removing z/VM from CSL-WAVE management scope: this only removes objects from the CSL-WAVE repository database. Don't be afraid: there are no changes in the z/VM system by itself.

# The WAVE GUI (Administration – Unmanage a z/VM System)

The screenshot displays the CSL-WAVE GUI interface. The main workspace shows a dialog box with the message: "z/VM System TMCC16 deleted successfully." Below this, a log table provides details of the operations performed.

Workunit Name	Initiator	Start At	End At	Duration	Status	Progress
Update All z/VM Aspects	waveadm	2013-08-23 12:13:40	2013-08-23 12:13:58	18 seconds	Done	100%
Update z/VM Storage Aspect	waveadm	2013-08-23 12:12:14	2013-08-23 12:12:23	9 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:08:00	2013-08-23 12:08:01	1 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:54	2013-08-23 12:07:55	1 seconds	Done	100%
Transfer z/VM Real Devices	waveadm	2013-08-23 12:07:48	2013-08-23 12:07:49	1 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:35	2013-08-23 12:07:35	0 seconds	Done	100%
Delete Device Pool	waveadm	2013-08-23 12:07:29	2013-08-23 12:07:29	0 seconds	Done	100%
Disassociate z/VM System from Device Pool	waveadm	2013-08-23 12:07:18	2013-08-23 12:07:18	0 seconds	Done	100%

## The WAVE GUI (reconnect)



The CSL-WAVE GUI allows a user id to reconnect a session.

This means you can take-over sessions from another workstation.

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