



IBM / Tivoli Systems Management zSeries Tools Customer Briefing

Brian Starr
Tracy Dean
Gina Hellmann-Richer
Trish Cescolini
Michael Bacon

May 14, 2003

IBM Software Group





IBM Automated Tape Allocation Manager (ATAM) (5697-H62)

Brian Starr May 2003

Automated Tape Allocation Manager (ATAM)

- IBM Alternative to ISV Products Such As CA-MIA Tape Sharing (Multi-image Allocation)
- Attractive Pricing and Terms & Conditions
- Superior functionality
 - ► Communicates directly with devices instead of relying on constant updates to a shared control file
 - ► Provides VTS Load Balancing
 - ► Supports plex and nonplex configurations



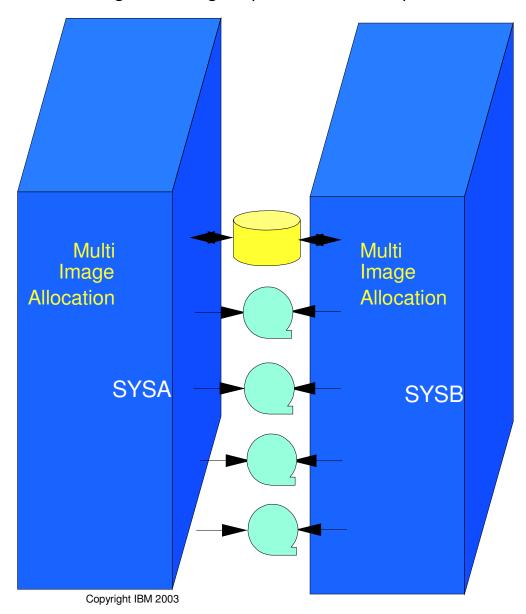
Automated Tape Allocation Manager (ATAM)

- Do You Need ATAM?
 - ► Do you want to save money?
 - ► Do you need to share tape devices between multiple OS/390 or z/OS systems?
 - ► Do you operate combinations of plex, nonplex or multiple sysplexes?



Multi Image Allocation

■ Multi Image Manager (MII, MIC, MIA)

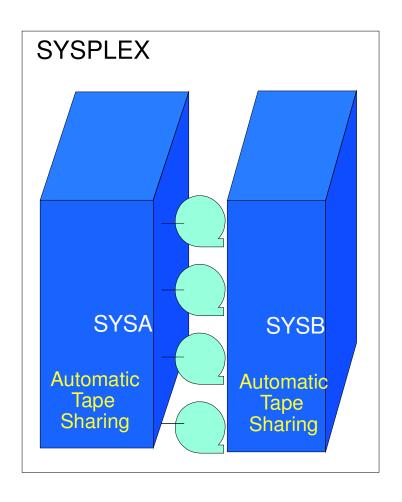


- Update shared Control File with every allocation and deallocation event
- Check for new information on a regular interval
- Sit in Allocation and Allocation Recovery to determine which system can use which devices



Tape Sharing in a Sysplex

zSeries Resource Sharing

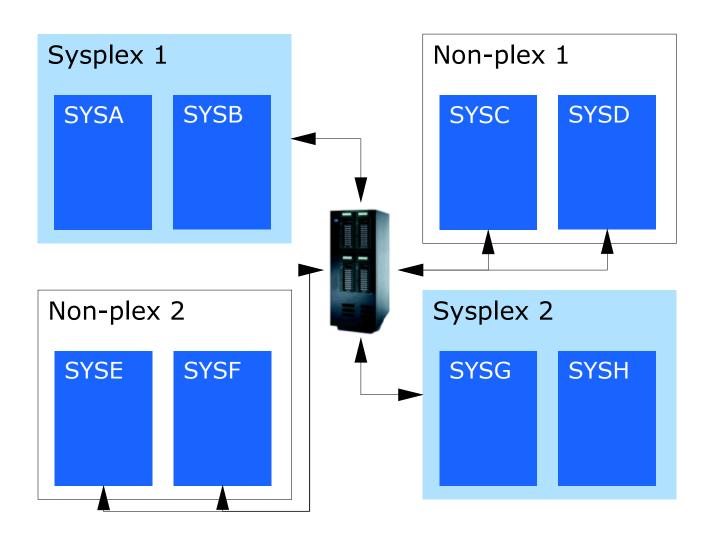


- Assign-capable devices (i.e., 3480's and up)
- Beginning with MVS/ESA Version 5.2, tape units no longer need to be dedicated to a single system
- Initially, via the IEFAUTOS CF structure
- Rewritten to use GRS and XCF services in z/OS 1.2 (IEFAUTOS dropped)
- ATS Star replaces IEFAUTOS



Automated Tape Allocation Manager

Sharing Tape devices in an "xplex"





ATAM Product Futures

- Tapeplex-wide display and action commands via TCP/IP
- Support for non-switchable tape devices (e.g., 3420's)
- Extend WTOR processing to include WTOs
- Enhanced device preferencing to include jobname
- Reporting enhancements



ATAM Benefits

- Cost-effective alternative to existing product
- Mix and match Sysplex and nonplex systems
- Hardware-centric vs. single point of failure from shared control file
- VTS Load Balancing, LRU logic, ..., ongoing enhancements





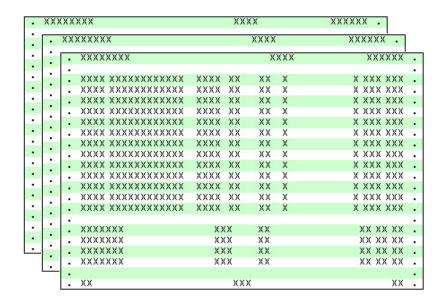


IBM Output Manager for z/OS (5655-J20)

Brian Starr May 2003

History of Output Management

- Transactions are entered throughout the day
- Production batch jobs run in the evening
- Reports are sent to the printer
 - ► Pull reports off the printer
 - ► Separate reports from one another
 - ► Remove carbon paper
 - ► Burst some reports, not others
 - ► Manually scan through pages and stack into
 - Separate bundles
 - ► Box bundles for shipment
 - ► Deliver boxes to different buildings
 - ► Deliver bundles to individual departments





History of Output Management

- Things changed about 20 years ago ...
- ... two trends began almost simultaneously
 - ► Online Viewing
 - ► Report Distribution



History of Output Management

Online Viewing

- Paper is bad, save the trees
- Access your reports immediately
- Look at only the pages you are interested in
- Reports can't get lost if they are never sent to the printer
- If you have to print, print only the pages that you need
- Online reports can be archived and viewed later

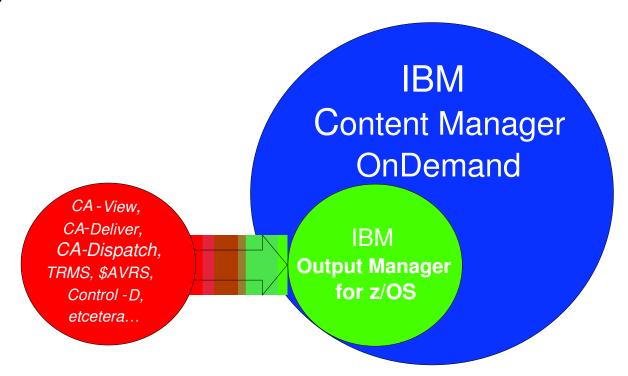
Report Distribution

- People still need hardcopy reports
- Manual report distribution is time-consuming and error prone
- Print all of the reports for a given department or user at the same time in one bundle
- If different people are to receive different pages of a report, then separate these pages automatically



Product Positioning

- Which IBM solution do you need?
 - ► If you need an IBM replacement solution or Report Distribution/Viewing
 - -Buy Output Manager
 - ► If you need an Enterprise Content Management solution
 - -Buy OnDemand





Output Manager vs. "The Others"

Existing products from other vendors	Output Manager
Proprietary viewer	ISPF Browse/View, Edit as appropriate
Proprietary database for object definitions	DB2 Tables
Proprietary database to store reports	SMS-managed sequential data sets
Proprietary mechanism to archive reports to disk, tape, tape duplexing	Function of HSM
Proprietary retention definitions	Function of SMS
Internal security used to determine access to reports	Function of system security product



Output Manager Benefits

- Cost-effective alternative to existing products
- OM leverages common IBM installed products in your shop
- OM has a comfortable "look and feel" to users of ISV products







IBM Storage Administration Workbench for z/OS and OS/390 (5697-H61)

Brian Starr May 2003

Storage Administration Workbench (SAW)

- Provide an IBM alternative to existing storage tools
 - ► An IBM alternative to ISV products such as CA-Vantage
 - ► Attractive Pricing
 - ► Simplifies Storage Administration tasks
- Version 1 introduced February 2002



Introducing Storage Administration Workbench (SAW)

- Extends Storage Administration to Multiple Sites
- Facilitates Effective Management and Planning
- Improves Administrator Productivity
- Increases Resource Efficiency
- Monitor & Control Focal Point





Challenges for the Storage Administrator

- "Congratulations! You are a Storage Administrator."
 - ► Human Capital Management Challenge
 - ► JCL does not mean Just Call Linus [Torvalds]

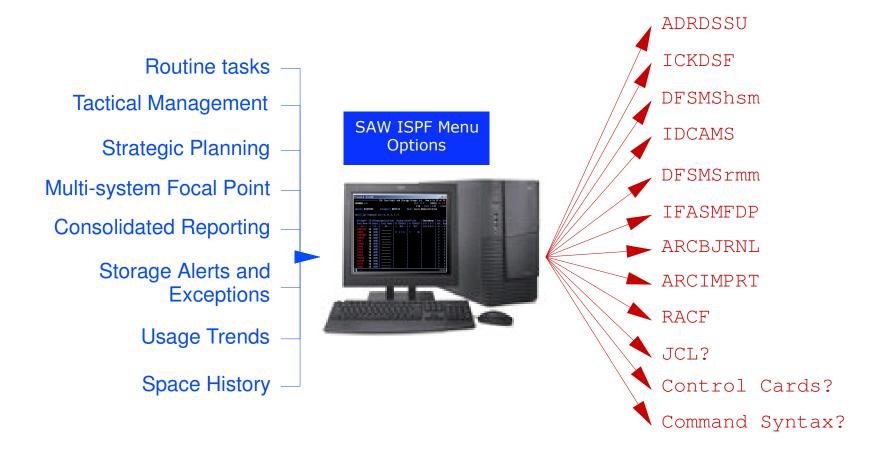
It's clear that there's a human-resources problem when it comes to the mainframe.

InformationWeek, Mainframe Talent: An Endangered Species, March 4, 2002



IBM Storage Administration Workbench

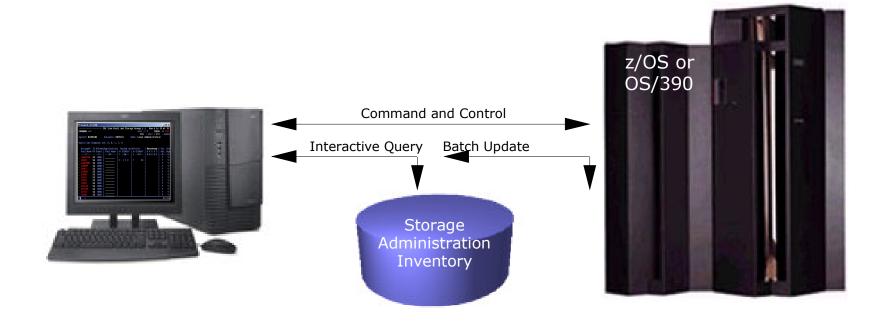
■ Centralize and Simplify Storage Administration tasks to improve efficiency





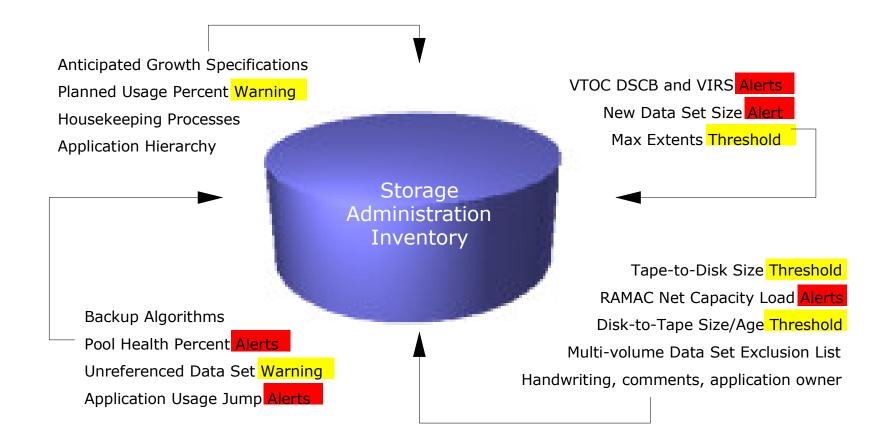
SAW: Functional Overview

- Storage Administration Inventory
- Centralized Administration
- Intuitive ISPF Interface



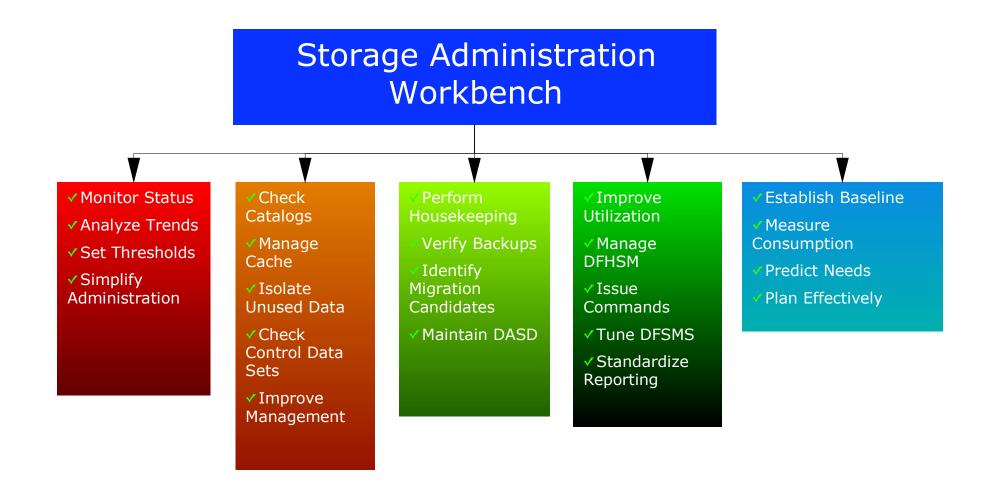


Storage Administration Inventory





Centralized Storage Administration Solution





SAW Version 2 Product Futures

- Neartime Performance Monitoring
- Event and Threshold-driven Automation
- Support for Third Party Storage Tools
- Extend Notification Capabilities
- Enhanced Reporting
- Adhoc Queries
- Java GUI





SAW Benefits

- Simplifies storage administration
- Provides single control point for administering multiple MVS system images
- Provides extensive storage management reporting capabilities
- Provides easy invocation of various storage management actions
- Cost-effective alternative to existing product



We're Here to Help You!

■ IBM Product Manager

► Brian Starr

Icing Business Executive

Lotus Notes Address: Brian Starr/Santa Teresa/IBM@IBMUS

Email Address: bstarr@us.ibm.com

Phone: 408 463 4199

Technical Marketing & Sales Support

► Steve Bice

Email Address: stephen.bice@rocketsoftware.com

Phone: 603 673 5386

► Christy Lofink

Email Address: christy.lofink@rocketsoftware.com

Phone: 408 528 0771







Application Workload Modeler

Network Performance and Capacity Planning

Tracy Dean May 2003

Overview

- What is it?
 - ► An application workload simulation tool for measuring and modeling the performance of the network infrastructure, end-to-end
 - -Can model and simulate the client, or the client and server
 - -Generates real traffic on the network
 - Can simulate large numbers of end-users
- Ability to model the impact of various types of workloads on communications servers and networks
 - ► Evaluate the impact of a change *before* the change is deployed in a production environment
 - Do network components need to be upgraded to meet performance objectives?
 - Is the existing network infrastructure sufficient?
 - Is this the right communications model for an application?
- Multiplatform support
 - ► z/OS and OS/390 V2 R10
 - ► Linux on zSeries
 - ► Linux on Intel



Two Modes of Operation

Client/Server Mode

- ► Generates real network traffic between AWM client and AWM server
- ► Can help analyze network impact of a new application prior to application development/deployment
- ► Focuses on performance measurements of end-to-end network communication paths
 - Application-specific bottlenecks eliminated
- ► Allows modeling of common application workload patterns, including SSL
 - -Connection-Intensive Workload: Connect/Request/Response (CRR), e.g. Web-like traffic
 - -Interactive workload: Request/Response workload (RR), e.g. Telnet traffic pattern
 - -Streaming data: Bulk data transfer (STREAMS), in either direction, e.g. FTP traffic
- ► Supports SNA and TCP/IP

Application Client Mode

- ► Generates real network traffic between AWM client and standard TCP/IP server applications
- ► Allows testing of existing application with new client workload conditions
 - -Number of clients, rates of requests, etc.
- ► Supports FTP, HTTP, HTTPS, CICS Sockets, DNS, DHCP, SAP ICLI, SMTP, TN3270, TN3270E, TN3270E SSL, Express Logon
- ► Includes performance characteristics of a real server application
- ► Supports TCP/IP



TN3270(E) Server Placement - How AWM Can Help

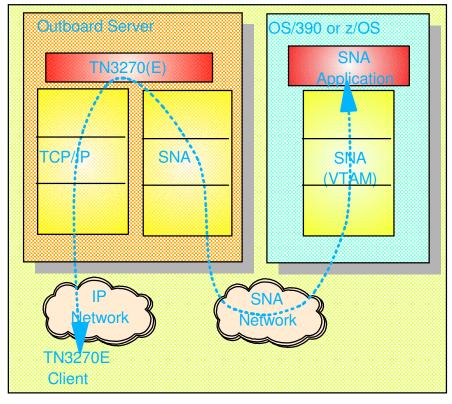
Which is better: Inboard or Outboard TN3270(E) Server?

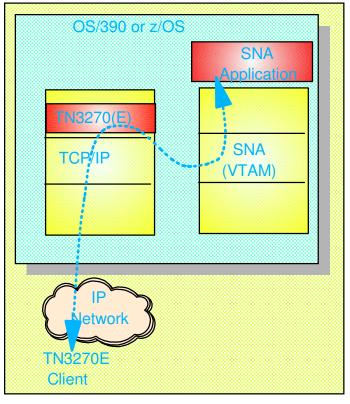
Outboard Solution

IP and SNA Connections

Inboard Solution

End-to-end IP connection



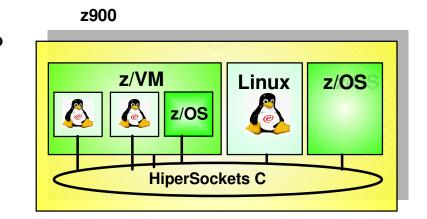


- ► Use Application Client Mode to simulate a large number of TN3270(E) client/activity
- ► Run against inboard and outboard server
- ► Determine cost/performance/scalability characteristics of each solution

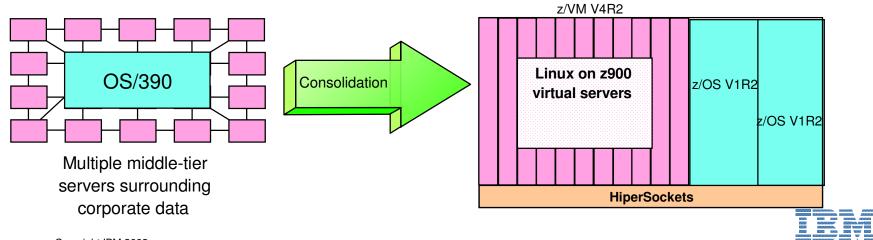


Server Consolidation with HiperSockets - How AWM Can Help

- HiperSockets Overview
 - ► High speed, low latency, any-to-any TCP/IP network within a z900 processor
 - ► Among virtual servers and LPARs (z/OS, Linux, and z/VM)
 - Cost savings no adapters, network boxes, or cabling
 - ► Transparent to applications



- How will my applications perform over HiperSockets vs.. existing external network?
 - ▶ Use Client/Server mode to simulate existing application workloads
 - ► Run on traditional external network and on z900 processor with HiperSockets
 - ► Determine cost, performance, and scalability characteristics of each solution



Additional Usage Scenarios

- Enterprise Extender
 - ► Determine if IP network can handle new SNA traffic
- Secure Sockets Layer (SSL) or Virtual Private Network (VPN)
 - ► Determine impact of implementing SSL in an application or VPN for all communications
- SAP R/3 consolidation on zSeries
 - ► Evaluate the performance characteristics of consolidation
 - Evaluate network communications between SAP R/3 Applications servers on Linux for zSeries and a database server on z/OS
- Policy / Quality of Service Modeling
 - ► Prioritize some network traffic over others
 - ► Model and measure the effect of a QoS policy prior to deployment
- Load Balancing
 - ► Assist with capacity planning how many target servers are needed?
 - ► Where to put load balancer on the network or on zSeries?
 - ► Analyze effect on end-user response time
- System and Network Connectivity Changes
 - ► Migrating from Channel Attached routers to OSA Express
 - ► Router upgrades
 - ► Protocol changes, etc.



Product Positioning - Complementary Products

- IBM Application Workload Modeler
 - ► Infrastructure testing (networks, systems, communications servers)
 - ► Use to create representative application workloads on the <u>network</u>
 - ► Generates real network traffic
 - ► Simple configuration
 - ► Test network load before application is developed or before usage of an existing application is increased
- IBM TPNS or IBM Workload Simulator for z/OS and OS/390
 - ► Application testing
 - ► Scripting support allows testing of <u>applications</u>
 - ► Measurements captured by other tools on the server
- IBM WebSphere Studio Workload Simulator for z/OS and OS/390
 - ► Web application testing
 - ►GUI based
 - ► Real-time graphing



For More Information

- http://www.ibm.com/software/network/awm/index.html
 - ► Product publications
 - ► Product brochure
 - ► Technical presentation (CMG 2002)
- awm@us.ibm.com



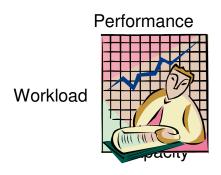




IBM Tivoli Performance Modeler for z/OS (5655-J63)

Gina Hellmann-Richer May 2003

The IBM Tivoli Performance Modeler for z/OS provides an easy to use, workstation-based capacity planning tool for analyzing and planning zSeriesTM and S/390[®] workload, capacity and performance.



Service Level Reporting



http://www.tivoli.com/products/index/perf-model-zos/



- Why is Capacity Planning Important?
 - Ensuring Service Levels (SLAs) are met
 - ► Timely and Proactive
- Why do Modeling?
 - ► Costs connected to available capacity
 - ► Despite shrinking hardware costs, software costs are increasing
- **■** Hurdles for Capacity Planners:
 - ► Performance is the key metric (not utilization)
 - ► Performance is difficult to predict
- Management Needs Data for Critical Decisions
 - ► How bad will things get if we don't upgrade?
 - ► How much better will it get if we do upgrade?
 - ► How long will it last before next upgrade?
- Tools are needed to get the answers



- Uses simulation to model performance based on processor(s) and workload(s)
- **✓** Model input can be entered manually or captured from your existing tools like RMF[™] and CMF[®]
- **✓** Charts and graphs resource utilization via either Lotus® 1-2-3® or Microsoft® Excel[™]

Service Level Reporting

Respond to the tough questions in a format management understands!

Workload





Capacity



Product Includes:

- Easy to use interface for model building
- Simulation engine
 - Current environment
 - What-if scenarios
- Works with Lotus 1-2-3 or Microsoft Excel to produce reports, charts and graphs showing CPU utilization and performance, by LPAR, and by workload.

Product technical reqs:

- **✓** Microsoft Windows® 98 or later
- ✓ One of the following supported spreadsheet products is required for charting and reports:
 - **✓** Lotus 1-2-3 or
 - ✓ Microsoft Excel
- ✓ IBM RMF (Resource Measurement Facility) or equivalent software (like CMF) to produce reports that simplify the creation of performance models.

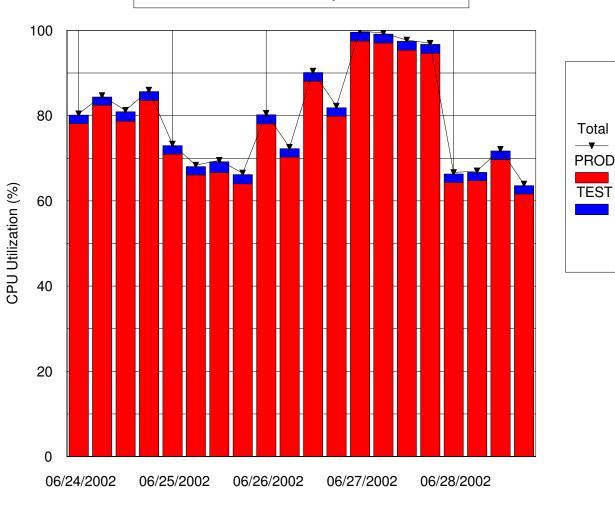




CPU Utilization by LPAR

9672-R46 CPU Utilization by LPAR for 10 AM thru 11 AM each day in 15 minute intervals

- High level view of CPU Utilization by LPAR (peek hour per day)
- Easily identify where/when the most processor capacity is required

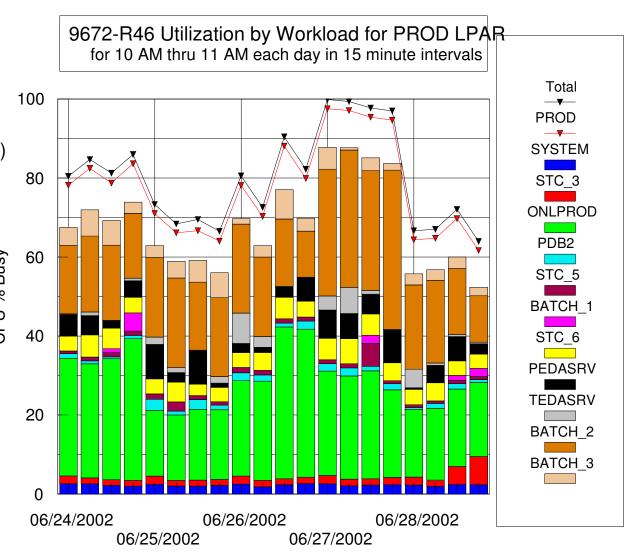




CPU Utilization by Workload

High level view of CPU
 Utilization by LAPR per workload (peek hour per day)

 Easily identify where/when the most processor capacity is required and which are the most CPU consuming workloads





Simulator Results Summary

<u>Run Description</u>	Total MIPS	MIPS <u>per CPU</u>	Total CPU <u>%Bus</u> y	PROD <u>%Bus</u> y	<u>ONLPROD</u>	<u>PEDASRV</u>	BATCH 2	BATCH 3
Base Run on 9672-P46	448.32	11208	97.55	95.21	0.16	0.36	5.69	14.48
Plus 30% Growth on R46	448.32	112.08	99.98	96.94	0.17	0.38	12.96	812.01
%change=>	0.00%	0.00%	2.49%	1.82%	2.14%	5.41%	127.65%	5506.63%
Base Run on 9672-R76	730.87	104.41	61.94	60.51	0.16	0.37	5.35	8.84
%change=>	63.02%	-6.84%	-36.50%	-36.45%	-0.01%	2.22%	-6.05%	-38.98%
Plus 30% Growth on R76	730.87	104.41	80.47	78.60	0.16	0.36	5.36	8.83
%change=>	63.02%	-6.84%	-17.52%	-17.45%	-0.50%	0.63%	-5.82%	-39.06%



IBM Tivoli Performance Modeler for z/OS Benefits

- ✓ The IBM Tivoli Performance Modeler for z/OS provides an easy to use yet sophisticated tool for analyzing and planning S/390 workload, capacity and performance.
- ✓ Use your workstation to model S/390 performance based on capacity and workload, identify the impact of workload changes as well as future processor types or upgrades
 - Load base modeling data from existing mainframe tools(RMF, CMF), or create your own
- ✓ Perform what-if analyses to determine exactly when and what type of processor upgrades are needed
- ✓ Optimize mainframe system resources to deliver optimum/agreed level of service
- ✓ Generate easy to understand charts and graphs to visually describe your current environment and the effect of changes
- Competitive Products
 - BMC's Mainview Predict and old Best/1
 - Metron Technology Athene for OS/390



IBM Tivoli Performance Modeler Version 2

- Tivoli Performance Modeler V1 Pricing
 - ► Currently IPLA OTC, per system pricing
- Tivoli Performance Modeler V2 Pricing
 - ► Will be IPLA OTC, Value Unit Pricing
- Tivoli Performance Modeler V2 Enhancements
 - Multi Image Modeling Capability
 - model up to 10 LPAR's on same processor
 - Interactions between models based on LPAR weighting factor
 - ► Workload / LPAR Editing feature
 - -Select workload / LPAR model, copy to another



For More Information

Product Information

- ► http://www-3.ibm.com/software/sysmgmt/products/perf-model-zos.html
 - Product announce, Product brochure, Publications and Product demos are available

■ IBM Product Manager

► Gina Hellmann-Richer, Icing Business Development Manager Lotus Notes Address: Gina Hellmann-Richer/Santa Teresa/IBM@IBMUS

Email Address: ginahr@us.ibm.com

Phone: 408 463-4166

Marketing Support

► Bruce Villard, Marketing Manager

Lotus Notes Address: Bruce Villard/Poughkeepsie/IBM@IBMUS

Email Address: brucev@us.ibm.com

Phone: 410 332-2375

Sales Enablement

► Douglas Gibbs, Technical Evangelist

Lotus Notes Address: Douglas Gibbs/Austin/IBM@IBMUS

Email Address: dgibbs@us.ibm.com

Phone: http://doi.org/10.286-2274



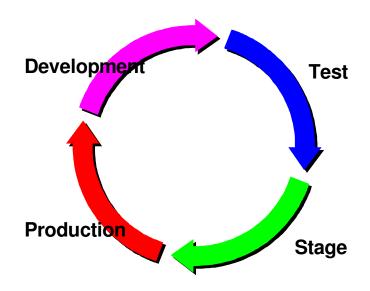




IBM JOB/SCAN and DOCU/TEXT (5620-FIB / 5620-FLJ)

Trish Cescolini May 2003

JCL Life Cycle Management



JCL is an asset and it has a lifecycle.

This asset must be managed, just as any other asset in the corporation.

So what can go wrong?

As JCL changes occur, they must be tested and moved into production in a process that parallels application code. Care must be taken not to introduce errors at any point. One JCL error in production can cause catastrophic problems and take down entire mission critical applications.

This places an appropriate emphasis on the automation of the promotion process and the definition and enforcement of JCL and other data center standards.



Customer JCL Management Issues

- Errors introduced during creation or modification of JCL
- JCL coding standards are non-existent or not enforced
- Potential sequencing and scheduler variable resolution errors
- Use of "old" JCL; JCL not optimized
- Daily changes or massive one-time change projects can introduce numerous errors into JCL
- Maintenance problems due to inconsistent JCL format

Any error that reaches production can be very expensive!



JOB/SCAN Functions

JCL Validation

Automatically detects any JCL errors that may cause JOBs not to execute properly

JCL Standards

Automates and enforces site-specific JCL standards with the most efficient, powerful, flexible and easy to use method

JCL Intellegent Change

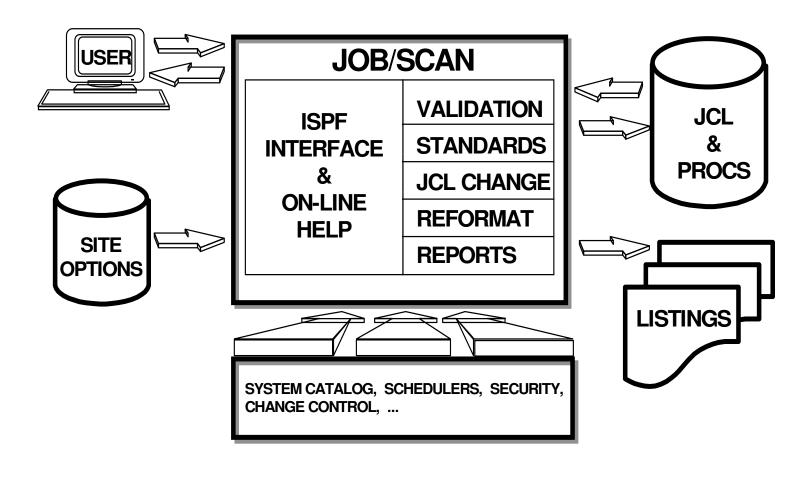
Automates JCL Changes for virtually any JCL maintenance requirement

Reformatter

Automates JCL formatting to make JCL more readable



JOB/SCAN Process





JOB/SCAN Benefits

- Eliminate costly reruns due to production abends
- Meet Service Level Agreements
- Reduce time spent dealing with JCL issues
- Eliminate backlog at Production Turnover
- Enforce site standards automatically
- Reduce manual efforts and associated mistakes by using JOB/SCAN intelligent JCL Change facility
- Improve JCL maintenance cycle



JOB/SCAN vs. CA-JCL Check or ASG-JCLPREP

- JOB/SCAN has more third-party interfaces resulting in more thorough validation
- JOB/SCAN offers a unique extended message text facility (includes cross-reference to IBM error message numbers along with detailed explanation; ability to store standards manual online)
- JOB/SCAN accepts four SAA-compliant languages for defining standards (COBOL, REXX, PL/I or Assembler)
- JOB/SCAN provides a unique Standards Prompter to aid non-programmers
- JOB/SCAN Change rules are much easier to write
- JOB/SCAN provides several unique administrative product usage reports
- JOB/SCAN is easier to install, implement and administer
- Over 1,000 JOB/SCAN licenses installed world-wide market share leader
- DSSI offers a full range of customized services to complement JOB/SCAN



Documentation Issues

- Gathering information
- Deciding what is current, what is outdated
- Manually analyzing the JCL
- Preparing documentation
 - Modify existing
 - Create new
 - Discard old
 - Distribute new

All of this is time consuming and costly!



DOCU/TEXT Functions

Automated Run Books

Automatically Producted On-Line Job Documentation Site-specific Categories of Narrative User Text for Multi-platform entities

Application System Documentation

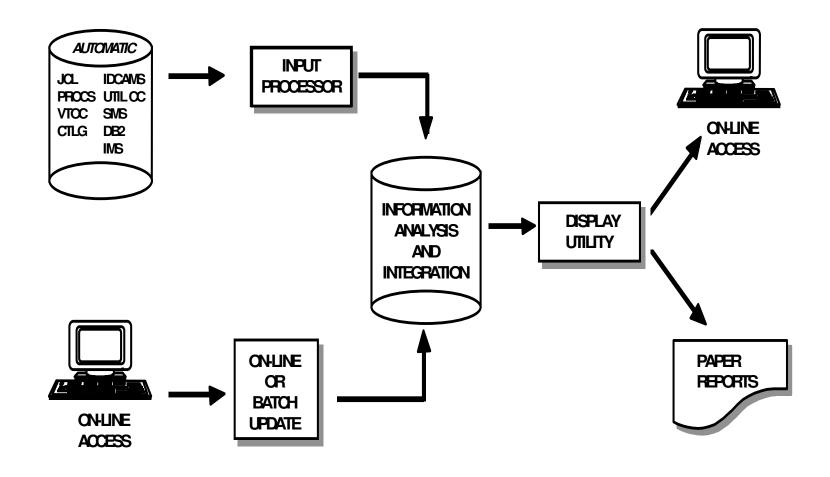
System Overview, Job Detail, Flow Charts and Application cross reference Information

Global Cross-Reference

On-line production-wide cross reference information on Programs, PROCs, Data Sets and SYSOUTs



DOCU/TEXT Process





DOCU/TEXT Benefits

- Review critical operations information online
- React immediately to system/operations problems
- Document production jobs automatically
- Reduce production turnover time
- Analyze relationships between jobs or applications
- Understand the impact of proposed changes
- Research and make changes to a system quickly



DOCU/TEXT vs. CA-APCDOC or ASG-DOCAID

- DOCU/TEXT has more IBM and third-party interfaces resulting in more thorough documentation than either competitive product.
- DOCU/TEXT offers both application-level and system wide cross-references. Competitive products have limited cross-reference facilities
- DOCU/TEXT provides easy online viewing of both automated job documentation and user narratives in one central location.
- DOCU/TEXT provides detailed step-level flowcharts for batch system analysis.
- DOCU/TEXT is easier to install, implement and administer.
- Over 800 DOCU/TEXT licenses installed world-wide market share leader.
- DSSI offers a full range of customized services to complement DOCU/TEXT.



Who Benefits?

Chief Information Officer

- Quality is managed in a Best Practices environment
- Increased control and reduced risk of not meeting service level objectives
- Better management over resource utilization

Operations and Production Control

- Less risk of outages and increased ability to meet service level agreements
- Reduce manual effort required to prepare jobs for production
- Faster QA acceptance/certification; return jobs to production faster
- Fewer reruns
- Fast and easy review of resource documentation
- Reliable, accurate and complete job documentation

Application Development

- Fewer calls from Operations to assist with solving production problems
- Simplifies conversion and installation of purchased application software
- Less need for developing in-depth JCL knowledge
- Automatically generated job documentation eliminates the manual work necessary to complete a project
- Reduces research and analysis time



Contacts

- Dot Alexander (IBM-Japan)
 - ► Phone: 81-3-5572-8030
 - ► dotalex@jp.ibm.com
- Craig Jelinek (Diversified Software)
 - ► (408) 778-0759 x236
 - ► craig.jelinek@diversifiedsoftware.com
- Trish Cescolini (Diversified Software)
 - ► (408) 778-0759 x342
 - ► trish.cescolini@diversifiedsoftware.com







Tivoli Information Managment with Web Access

Michael Bacon May 2003

Disclaimer

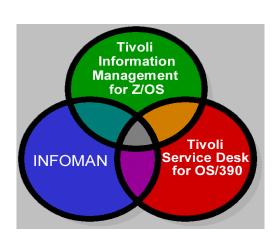
IBMs plans are subject to change. Nothing in this document is intended to create any representations or warranties. IBM warranties are contained in the applicable IBM license agreements.



Product Information

- Product debuted in 1981.
- Information/Management became a Tivoli product in February 1997
- Renamed to TME 10 Information/Management in March 1997
- Renamed to Tivoli Service Desk for OS/390 1.1, September 1998
- **■** Product renamed to Tivoli Information Management for z/OS 7.1 August 2001
- Shipped IBM Tivoli Web Access, May 2002
- Product is best known and most popularly known as InfoMan







What is InfoMan?

- An S/390 systems management application
- Automated problem management
 - ► Integration with Netview Autobridge allows for trouble tickets to be automatically opened
 - **►** Escalation
 - **►** Notification
- Change control
 - ► Integration with SCLM Suite
- Inventory management
 - **►** Hardware
 - **► Software**
 - ► Physical Assets
 - **►** System
 - ► Financial
- Helpdesk
 - ► Solutions to repetitive problems
 - ► Self help
 - **►** Document attachments



The Value of Tivoli Information Management

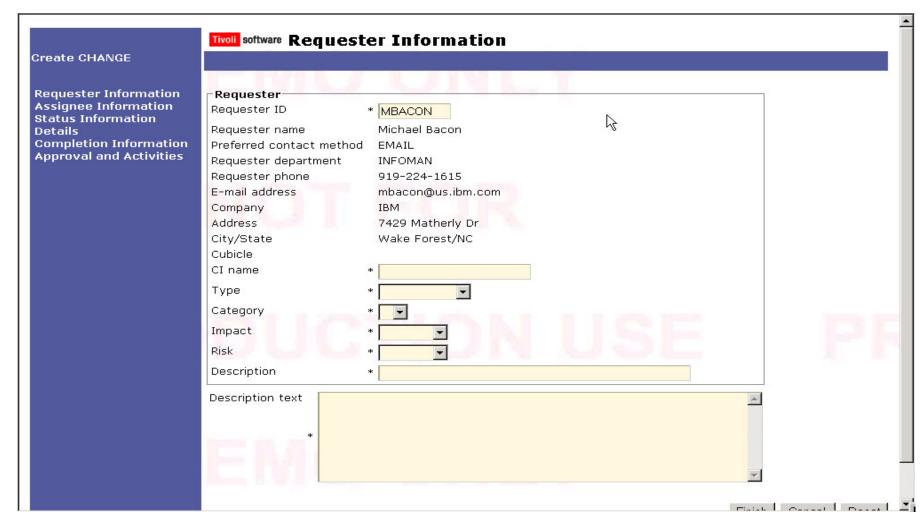
- Out of the Box Functionality
 - Ready to use with 90% of most required functions
- Low Cost
 - NO per seat costs to the customer
- Key On going benefits
 - High Performance and capacity
 - Ease of maintenance
 - Reliable, Secure = Stable
 - Scalable to 400 GB
 - Availability 24 hours a day and 7 days a week with online backups and recovery
- Full audit trails
- 24x7 Support
- Easily customizable to do just about anything!







IBM Tivoli Web Access for Information Management





Web Access Interface Highlights

- An out of the box web solution!
- Reduces Web Access development time by 60%!
- Different home pages for different job roles
- Supports
 - Knowledge Base
 - Change Approvals through email links
 - File attachments
 - Saved searches
- HTML web page generator
- Toolkit for customization for new and existing users
- Smooth Start Services from \$10K





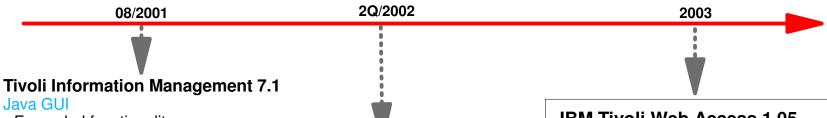
Web Access Benefits - Summary

- Global access to centralized, integrated database
- Fully customizable to fit business needs
- Reduces training and development expenses 80% typical
 - \$300K productivity savings per year one customer's experience
- Typical cost today is a modest investment against the ROI benefits





Tivoli Information Management & IBM Tivoli Web Access Roadmap



- Expanded functionality Universal Date & Time Support
- Ability to see records in local date and time zone

Knowledge Base

- Introduced new solution records
- Ranking of recommended solutions Parallel Sysplex
- Improved performance
- Replaces MSDA feature
- Easy to install and maintain Other
- Full text searching
- Parenthical search arguments

IBM Tivoli Web Access 1.0

Drop in web solution

- HTML and Javascript is automatically created for the administrator through a web administrator toolkit
- Knowledge base
- Helpdesk
- Problem, Change, and Incident management

Additional Features

- Document attachments
- Email notifications and approvals
- Customer profiles
- Self-help

IBM Tivoli Web Access 1.05

Enhancements

- Inventory management
 - Track:
 - √ Hardware
 - ✓ Software
 - √ System
 - √ Physical assets
 - √ Financial
 - Assign owners
- Other
 - Canned reports
 - Ad-hoc reporting
 - 2-way email support
 - Q&A support
 - Requirement gathering
 - Business process



Contacts:

Ed Oddo (Business Executive)

- San Jose, CA USA
- Presentations
- Ed Oddo/Santa Teresa/IBM@IBMUS
- **(408) 463-4167**

Michael Bacon (Product Manager)

- Raleigh, NC USA
- Marketing and Presentations
- mbacon@us.ibm.com
- **▶** (919) 224-1615

Jose Villa (Technical Evangelist)

- ► Austin, TX USA
- Presentations
- ➤ Jose Villa/Austin/IBM@IBMUS
- **(512) 286-2124**

Greg Herbert (Pre-Sales)

- Austin, TX USA
- Greg Herbert/Austin/IBM@IBMUS
- **(512)** 473-8076

