

# IBM iDoctor for i VIOS Investigator

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## Agenda

- What is IBM iDoctor for i ?
- What is VIOS Investigator ?
- Power Connections vs. IBM i Connections vs. launching separately
- Viewing configuration data and working with file systems
- Power Collection Wizard (VIOS Advisor, NMON, NPIV and SEA)

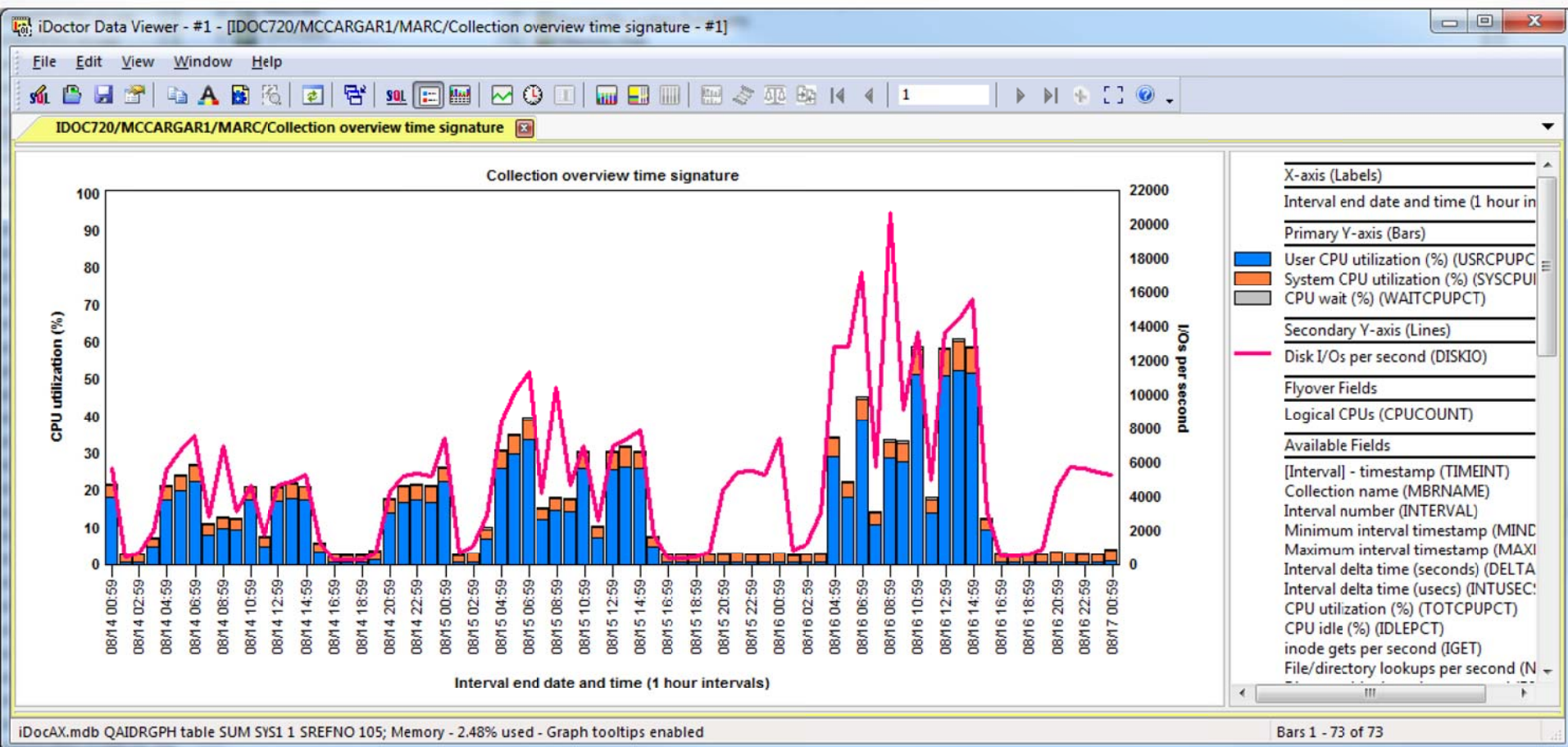


## Agenda

- Importing NMON, NPIV, SEA data
- Continuous Collection / Monitors
- NMON Graphs
- NPIV Graphs
- SEA Graphs
- PerfPMR
- Videos
  - <https://www.youtube.com/user/IBMiDoctorForIBMi>

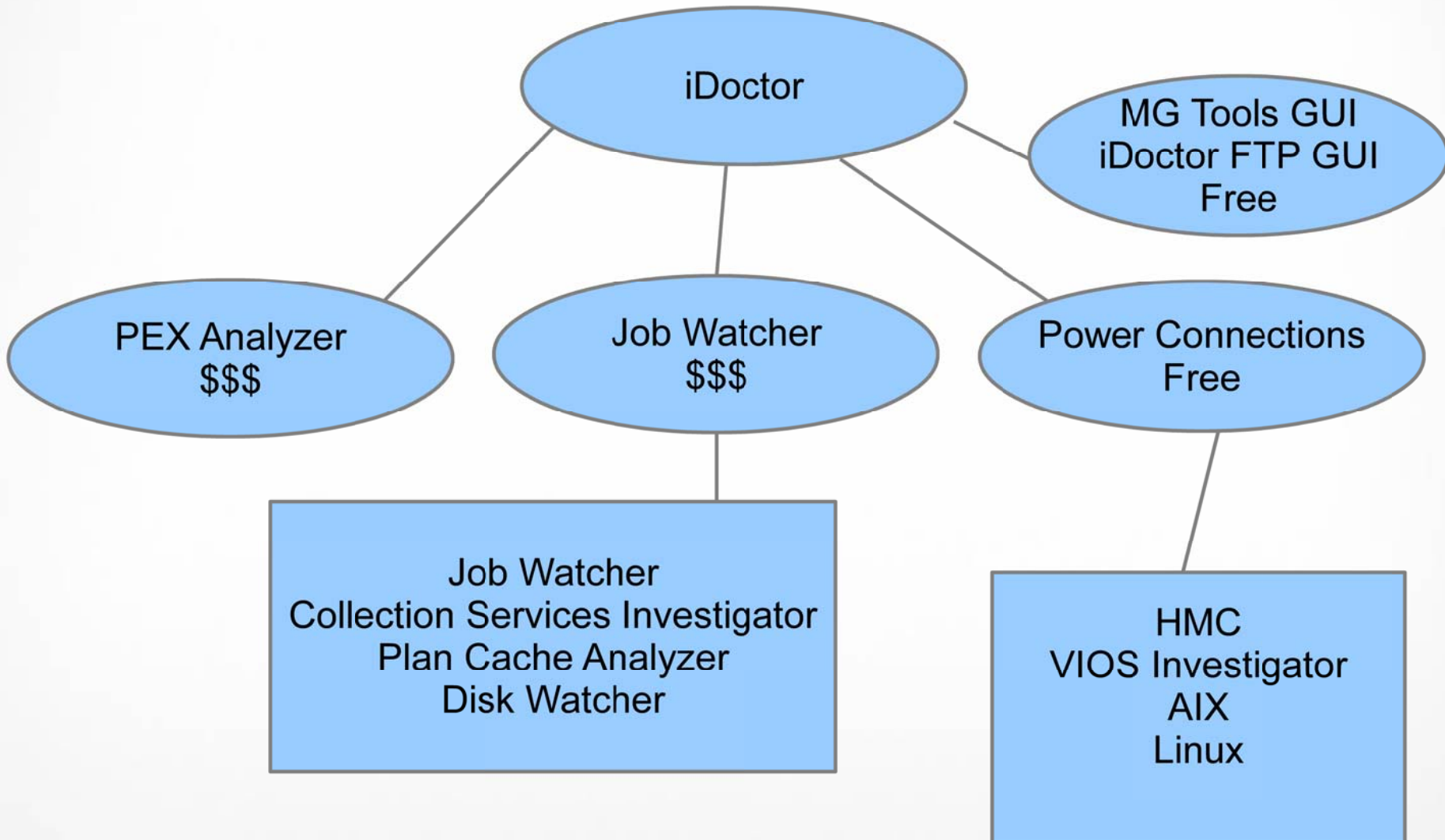
## What is IBM iDoctor for i?

- Performance analysis tool developed by the IBM i Global Support Center.
- Used by IBM Support, Lab Services, Development, and our clients.



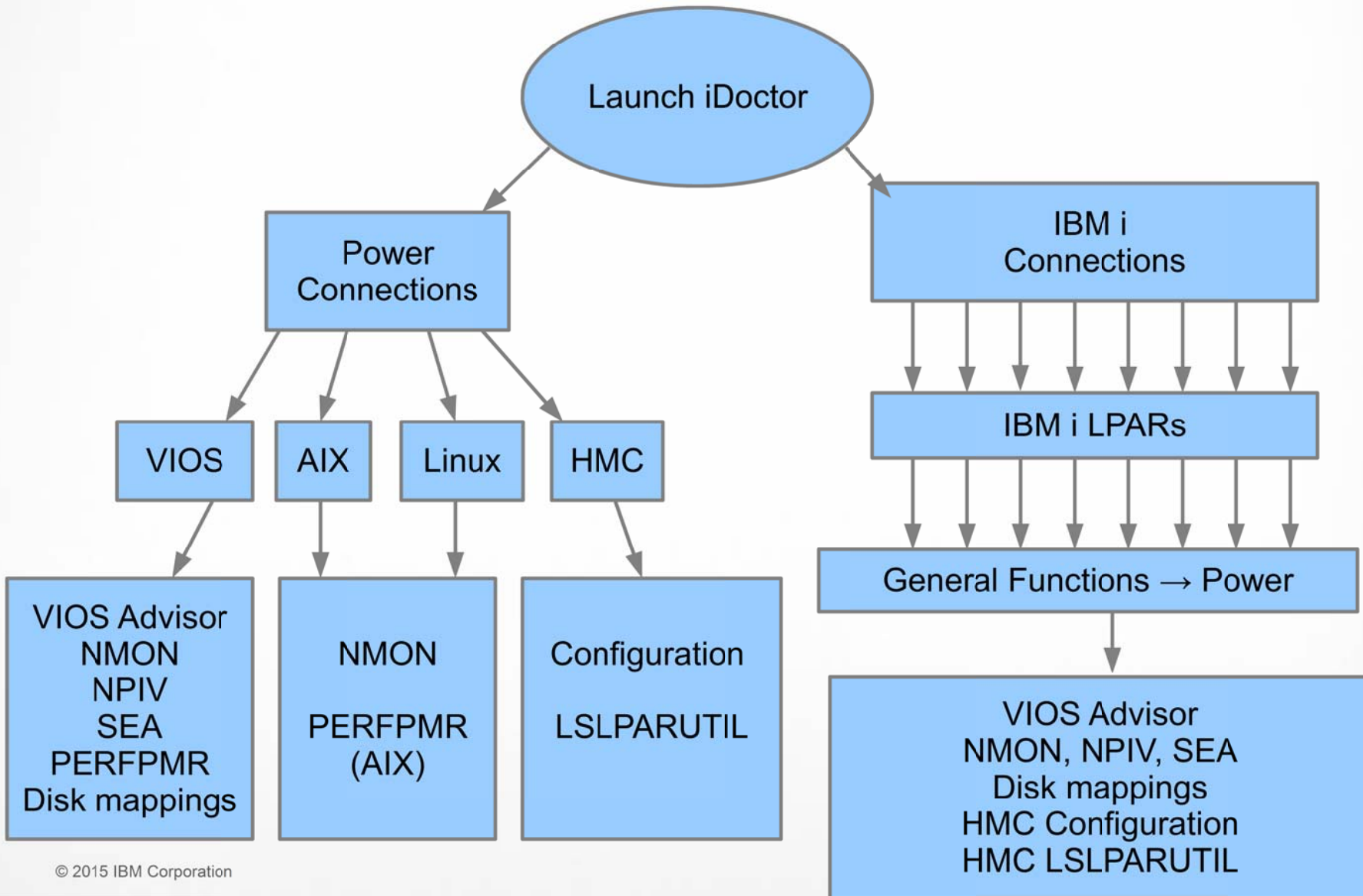


# Components of iDoctor





# VIOS Investigator integrated into iDoctor



# Launching iDoctor



**Power Connections**  
Work with the Power connections (non IBM i)

**IBM i Connections**  
Displays the list of available IBM i connections.

The screenshot shows the IBM iDoctor application window with the following details:

- Window Title: IBM iDoctor for IBM i C01142 [IDOCTOR.EXE 04/17/2015 15:10:42] CA 710-SI53584
- Menu Bar: File Edit View Window Help
- Toolbar: Contains icons for Power Connections, IBM i Connections, and other functions.
- Active Tabs: IBM i Connections (selected), Power Connections
- Main Content Area:
  - IBM i Connections**: A tree view showing a list of systems including Cctih, Idoc5, Idoc6, Idoc7, Lpda, Mcei, Mcei, Rch7, Rchc, Rche, and X051.
  - Power Connections**: A list of connections with columns for System name and Type.
 

System name	Type
Ctchmc04.rchland.ibm.com	HMC
Hmc795.rchland.ibm.com	HMC
Ctcvha9e.rchland.ibm.com	VIOS
Ctcvha9o.rchland.ibm.com	VIOS
Mtsviommb.rchland.ibm.com	VIOS
Rchut30v1.rch.stglabs.ibm.com	VIOS
Y0319av1.rch.stglabs.ibm.com	VIOS
Y0319av2.rch.stglabs.ibm.com	VIOS
Aix12.rchland.ibm.com	AIX
Mako10.rchland.ibm.com	Linux

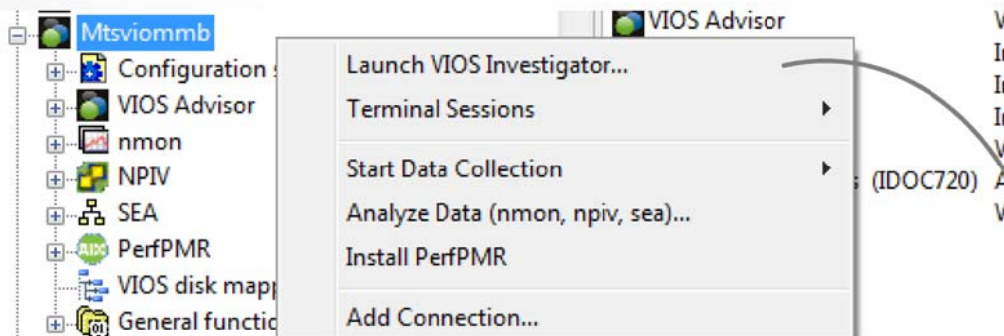
## Options when launching via Power Connections

Folder	Description
Configuration summary	Provides details about the system's configuration
VIOS Advisor	Work with available VIOS Advisor data found on this system.
nmon	Import and analyze nmon data
NPIV	Import and analyze NPIV data
SEA	Import and analyze SEA data
PerfPMR	Work with available PerfPMR data found on this system.
VIOS disk mappings (IDOC720)	Available VIOS to IBM i disk mappings found on this system.
General functions	Work with your home directory, the file systems, free disk space reports, and other

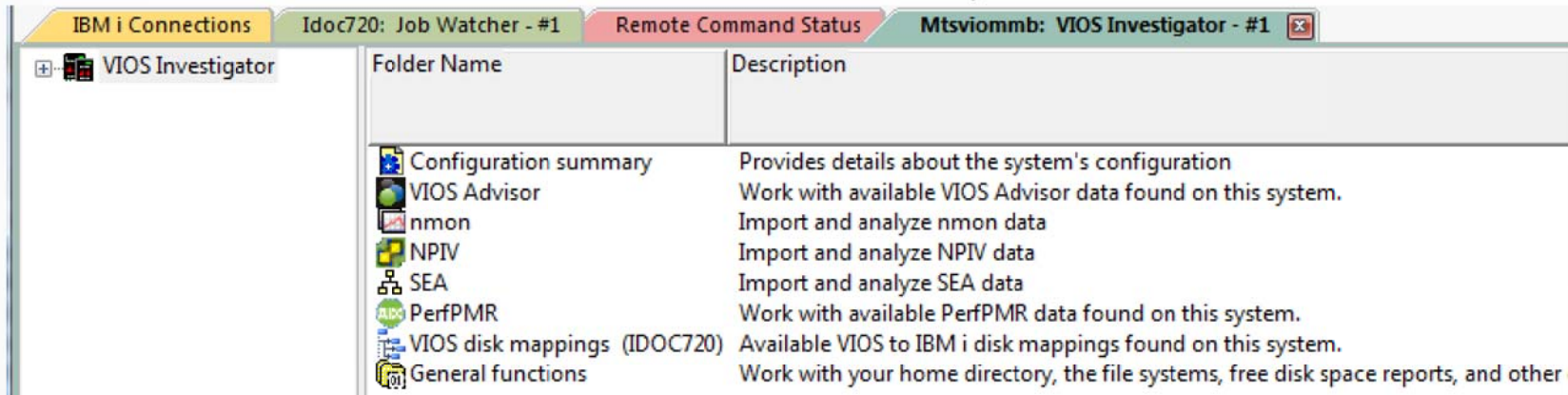
- Provides details about the system's configuration.
- Collect or work with available VIOS Advisor data found on the system.
- Collect, import and analyze nmon, NPIV or SEA data.
- Install, start or work with available PerfPMR data.
- Available VIOS to IBM i disk mappings found in the IBM i analysis DB.
- Work with your home directory, the file systems, free space disk reports, and other general purpose functions for Power systems.



# Launching VIOS Investigator into a separate tab



The same options are available when launching VIOS Investigator separately.



# Options when launching via IBM i Connections (JW,CS,PA,etc..) General functions folder

The screenshot shows the IBM i Connections interface with the 'General functions' folder expanded. The 'Power' sub-folder is selected, and a yellow box highlights the text 'General Functions → Power'. The right pane shows a table of folders and their descriptions.

Folder Name	Description
VIOS Advisor	Work with available VIOS Advisor data found on this system.
nmon	Import and analyze nmon data
NPIV	Import and analyze NPIV data
SEA	Import and analyze SEA data
VIOS disk mappings	Available VIOS to IBM i disk mappings found on this system.
HMC configurations	Analyze HMC configuration data on the system
HMC Isparutil	Analyze Isparutil data on the system

- Work with available VIOS Advisor data found on this system.
- Collect, import and analyze nmon, NPIV or SEA data.
- Available VIOS to IBM i disk mappings found on this system.
- Work with historical HMC configuration data.
- Work with HMC Isparutil statistics.

- Data previously transferred to the IFS will be available to import for analysis.

# Power Connections → Configuration Summary

IBM i Connections

Idoc720: Job Watcher - #1

Power Connections

Remote Command Status

- Mtsviommb
  - Configuration summary
  - VIOS Advisor
  - nmon
  - NPIV
  - SEA
  - PerfPMR
  - VIOS disk mappings (IDOC720)
  - General functions
- Rchcbvios
- Vio-soft
- Vios1-dilling
- Vaa
- Mako02
- Mako03
- Mako04
- Mako05
- Mako06
- Mako07
- Mako09
- Mako10
- Mako21

Description	Value
◆ Host Name	MTSVIOMmB.rchland.ibm.com
◆ Logical Partition	18 MTSVIOMMB
◆ Machine Type	IBM,9117-MMB
◆ VIOS	2.2.3.0
◆ AIX	6.1.9.15
◆ TL	08
◆ Processor	PowerPC_POWER7
◆ MHz CPU clock rate	3500 MHz
◆ Entitled Capacity	4.0
◆ Logical CPUs	16
◆ SMT threads	4
◆ Hardware	Architecture PowerPC Implementation POWER7_COMPAT_mode 64 bit
◆ Kernel	HW-type=CHRP=Common H/W Reference Platform Bus=PCI LPAR=Dynamic Multi-Processor 64 bit
◆ Memory	8192 MB
◆ Serial Number	102709P
◆ Node Name	MTSVIOMmB
◆ Firmware Version	IBM,AM730_142
📄 LPAR configuration	Additional details about shared processor pools, memory, etc.
📄 NPIV	Displays the server's physical and virtual fiber channel configuration.
📄 Physical volumes	Details about physical volumes
📄 SEA	Displays the server's shared ethernet adapters.

General information about the Power platform.

## Configuration Summary → LPAR configuration

The screenshot displays the IBM i Connections interface. The left pane shows a tree view under 'Mtsviommb' with 'LPAR configuration' selected. The right pane shows a table of configuration parameters for this LPAR.

Description	Value
LPAR number	18
LPAR name	MTSVIOMMB
CPU in sys	48
Virtual CPU	4
Logical CPU	16
Pool CPU	47
smt threads	4
capped	0
min Virtual	1
max Virtual	8
min Logical	1
max Logical	32
min Capacity	0.5
max Capacity	8.0
Entitled Capacity	4.0
Weight	128
min Memory MB	1024
max Memory MB	16384
online Memory	8192
pool id	0
LPAR Flags	LPARed DRable SMT Shared UnCapped Mover Not-Donating AMSable.

General information about the VIOS partition.

# Configuration summary → NPIV

Shows relationship between fcs → vfchost → VFC client

Virtual fiber channel	Logical partition	WWPN
vfchost12	ctciha9v	C0507600E4E60024
vfchost19	CTCISAP1	C0507600E4E6003A
vfchost21	CTCISAP2	C0507600E4E60046
vfchost23	ctciha9r	C0507600E4E60090
vfchost26	ctciha9s	C0507600E4E60098
vfchost28	ctciha9t	C0507600E4E600A4
vfchost3	ctciha9y	C0507600E4E60012
vfchost31	ctciha9u	C0507600E4E600B0
vfchost36	ctciha9o	C0507600E4E60118
vfchost38	ctciha9n	C0507600E4E60120
vfchost39	ctciha9e	C0507600E4E60128
vfchost6	ctciha9x	C0507600E4E60010
vfchost7	ctciha9w	C0507600E4E600E0

Name	Physloc	ClntID	ClntName	ClntOS
vfchost12	U8233.E8B.10001AP-V2-C80	8	ctciha9v	IBM i

Status: LOGGED\_IN  
 FC name: fcs0      FC loc code: U5877.001.D9BA108-P1-C5-T1  
 Ports logged in: 2  
 Flags: a < LOGGED\_IN, STRIP\_MERGE >  
 VFC client name:      VFC client DRC: U8233.E8B.10001AP-V8-C80

# Configuration summary → Physical volumes

Name	Description	Physical volume ID	Size (GB)	Device status	Device location	Physical location
hdisk0	MPIO IBM 2076 FC Disk	00f6001a207349a6	50	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W50050768023079C2-L2000000000000
hdisk1	MPIO 2810 XIV Disk	00f6001abe8d5e75	32	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-L10000000000000
hdisk2	MPIO 2810 XIV Disk	00f6001abe8d753b	32	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-L200000000000000
hdisk3	MPIO 2810 XIV Disk	00f6001abe8d8929	16	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-L300000000000000
hdisk4	MPIO 2810 XIV Disk	00f6001abe8d9992	16	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-L400000000000000
hdisk5	MPIO 2810 XIV Disk	00f6001abe8dad17	16	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-L700000000000000
hdisk6	MPIO 2810 XIV Disk	00f6001aa5f00db0	80	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-L800000000000000
hdisk7	MPIO 2810 XIV Disk	00f6001aa5f06b9a	80	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-L900000000000000
hdisk8	MPIO 2810 XIV Disk	00f6001aa5f00db0	80	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-LA000000000000000
hdisk9	MPIO 2810 XIV Disk	00f6001aa5f06b9a	80	Available	01-00-02	U5877.001.D9BA108-P1-C6-T1-W5001738012F00152-LB000000000000000

**Data**

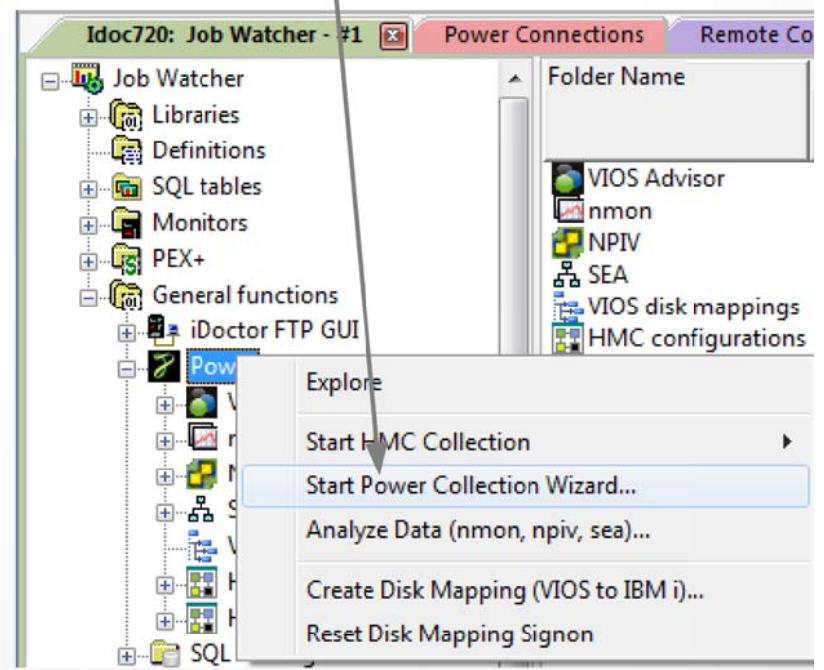
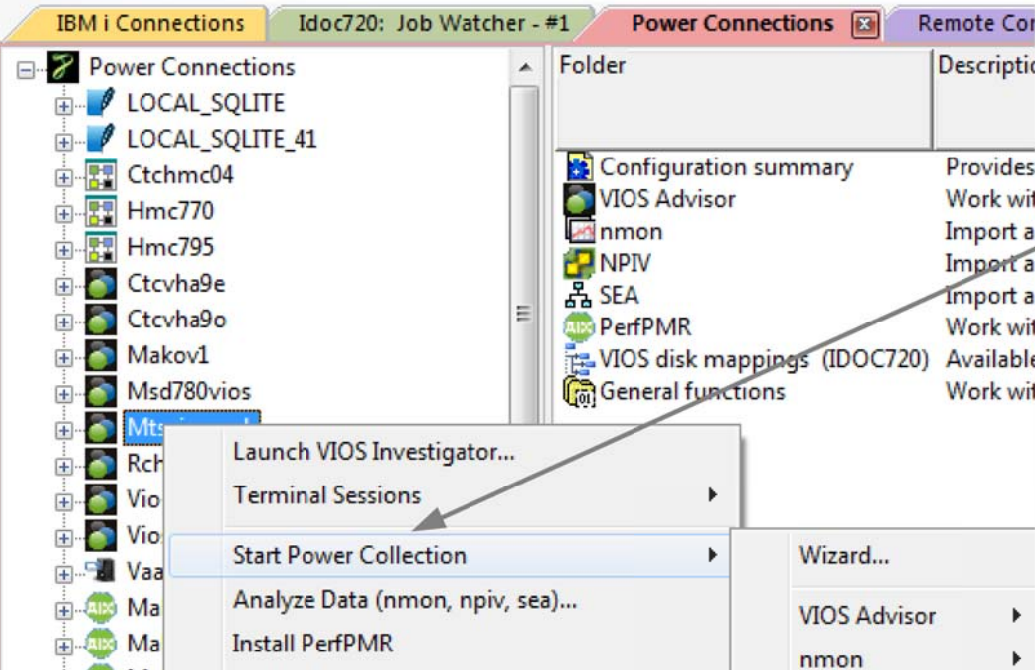
- PHYSICAL VOLUME: hdisk0 VOLUME GROUP: rootvg
- PV IDENTIFIER: 00f6001a207349a6 VG IDENTIFIER 00f6001a00004c00000001499fa33dea
- PV STATE: active
- STALE PARTITIONS: 0 ALLOCATABLE: yes
- PP SIZE: 64 megabyte(s) LOGICAL VOLUMES: 14
- TOTAL PPs: 799 (51136 megabytes) VG DESCRIPTORS: 2
- FREE PPs: 165 (10560 megabytes) HOT SPARE: no
- USED PPs: 634 (40576 megabytes) MAX REQUEST: 512 kilobytes
- FREE DISTRIBUTION: 00..00..00..05..160
- USED DISTRIBUTION: 160..160..159..155..00
- MIRROR POOL: None

Physical partitions  
 Logical volumes  
 Logical volume mapping  
 Device attributes  
 Configuration (VPD)  
 Paths

Additional drill downs

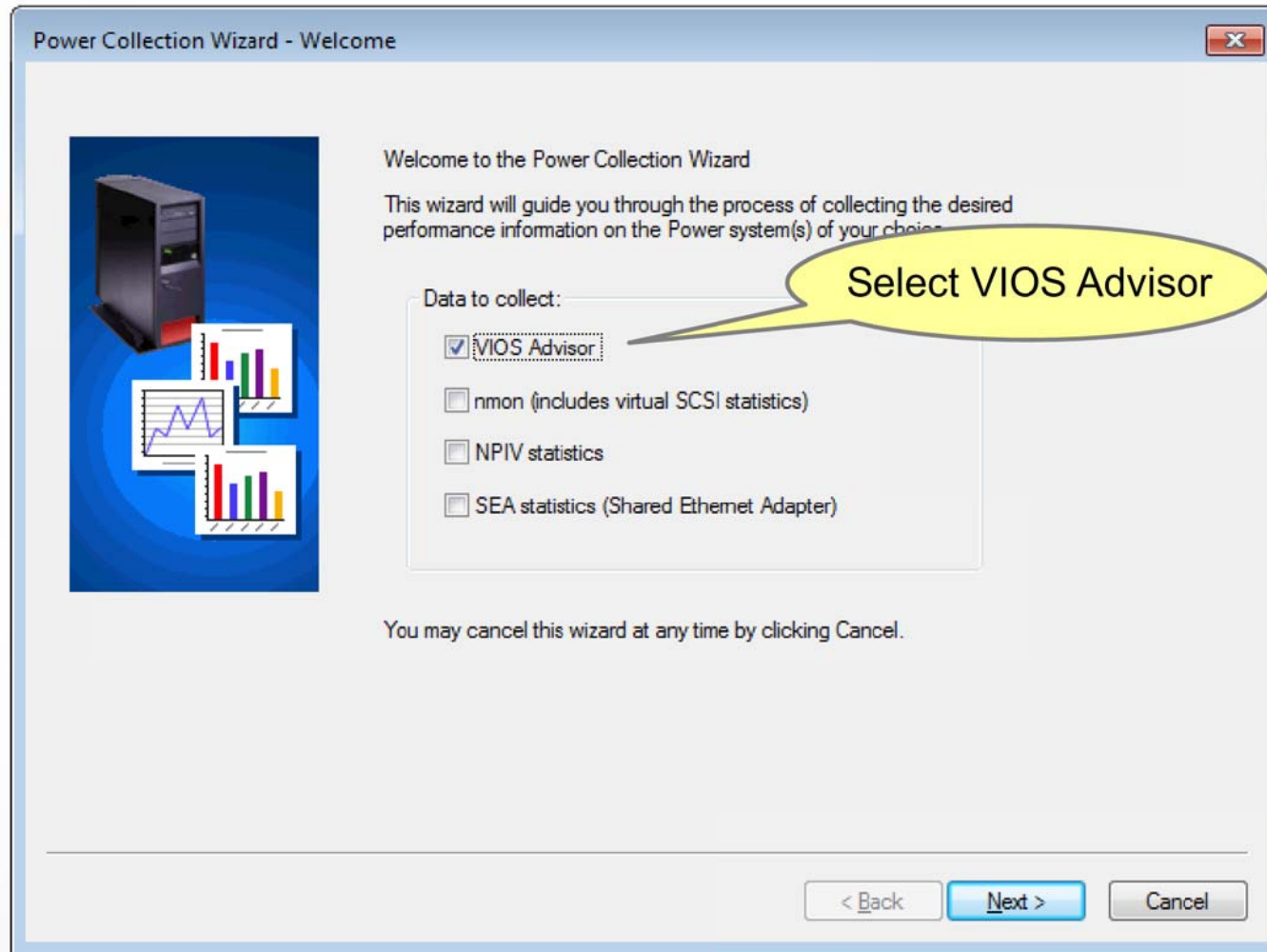
# Power Collection Wizard

Available under Power or IBM i Connections.



Allows collection of VIOS Advisor, NMON, NPIV and/or SEA data across one or multiple partitions.

# Power Collection Wizard: Welcome → VIOS Advisor





# Power Collection Wizard: Connections → VIOS Advisor

Power Collection Wizard - Connections

Select below the desired system(s) to collect data on or type in the desired system name(s).

System	Type	Description
CTCVHA9E.RCHLAND.IBM.COM	VIOS	
CTCVHA9O.RCHLAND.IBM.COM	VIOS	
MTSVIOMM8.RCHLAND.IBM.COM	VIOS	
RCHUT30V1.RCH.STGLABS.IBM.COM	VIOS	
Y0319AV1.RCH.STGLABS.IBM.COM	VIOS	
Y0319AV2.RCH.STGLABS.IBM.COM	VIOS	

Tip: Add additional systems by specifying them on the Connections view within the Main Window.

Data collection systems:

Note: SSH 2.0 or higher must be installed on these systems in order to use this function.

< Back   Next >   Cancel

Select one or more VIOS to collect from

## Power Collection Wizard: Basic Options → VIOS Advisor

Power Collection Wizard - Basic Options

This screen allows you to work with the common options for all types of data being collected (except where indicated.)


The data directory will be created on each system where data is being collected. Each type of data will exist under a /advisor, /nmon, /npiv or /sea subdirectories.

Data directory (will be created):

Collection duration:  

- hours
- minutes
- seconds

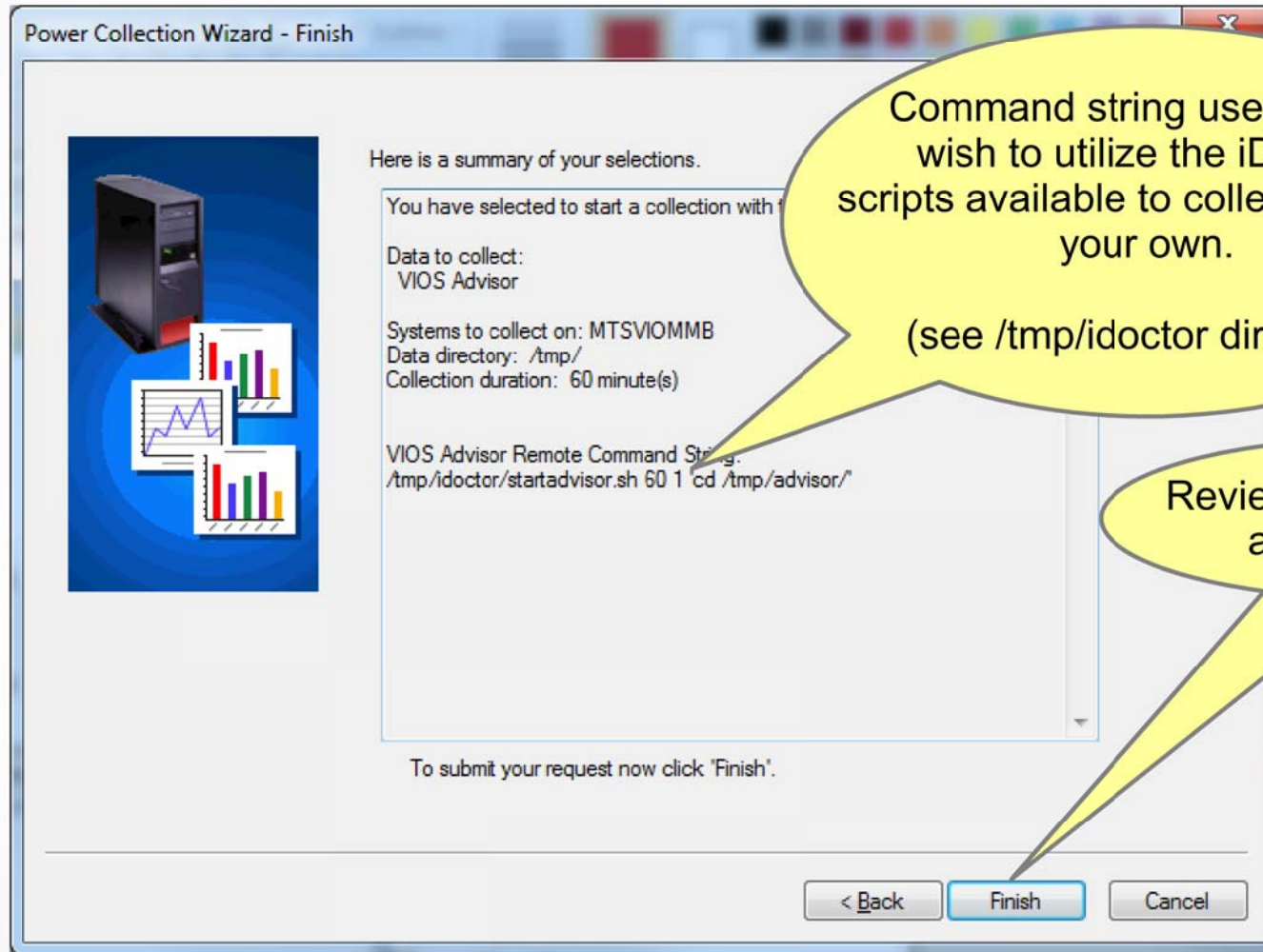
< Back   Next >   Cancel



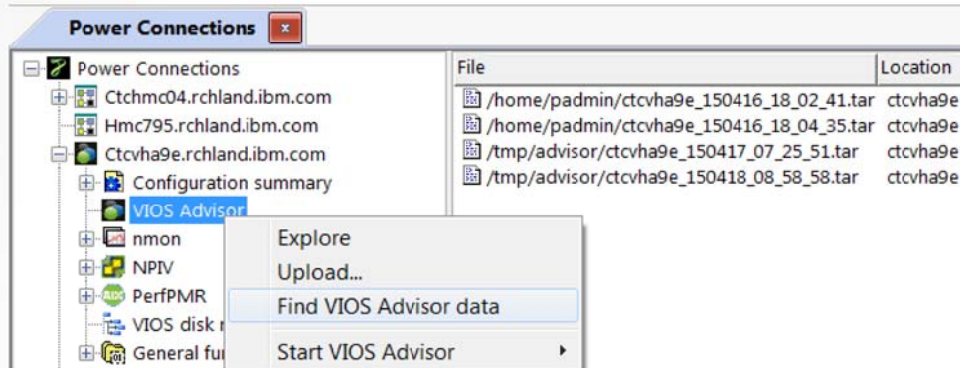
Override default directory if desired

Set collection duration

## Power Collection Wizard: Finish → VIOS Advisor

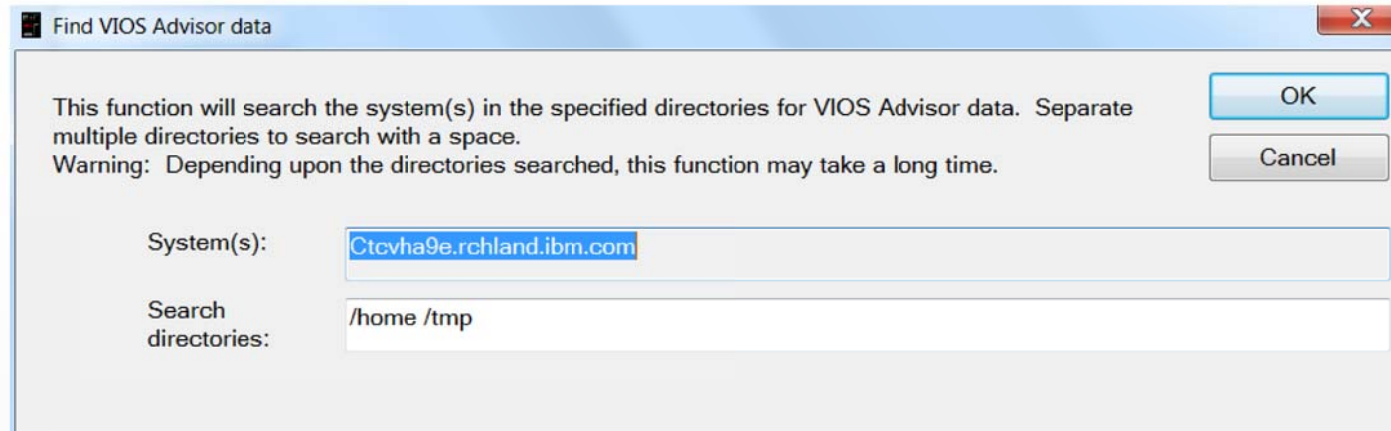


## Use 'Find VIOS Advisor data' to refresh collections



The screenshot shows the 'Power Connections' window. On the left, a tree view shows the hierarchy: Power Connections > Ctcvha9e.rchland.ibm.com > VIOS Advisor. A context menu is open over 'VIOS Advisor', with 'Find VIOS Advisor data' selected. The main pane shows a table of files and their locations.

File	Location
/home/padmin/ctcvha9e_150416_18_02_41.tar	ctcvha9e
/home/padmin/ctcvha9e_150416_18_04_35.tar	ctcvha9e
/tmp/advisor/ctcvha9e_150417_07_25_51.tar	ctcvha9e
/tmp/advisor/ctcvha9e_150418_08_58_58.tar	ctcvha9e



The dialog box 'Find VIOS Advisor data' contains the following text and fields:

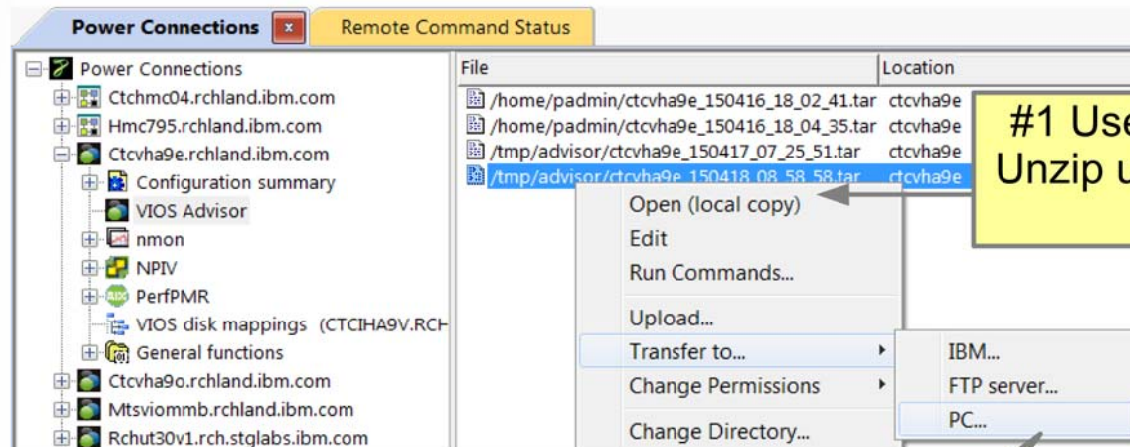
This function will search the system(s) in the specified directories for VIOS Advisor data. Separate multiple directories to search with a space.  
Warning: Depending upon the directories searched, this function may take a long time.

System(s):

Search directories:

Buttons: OK, Cancel

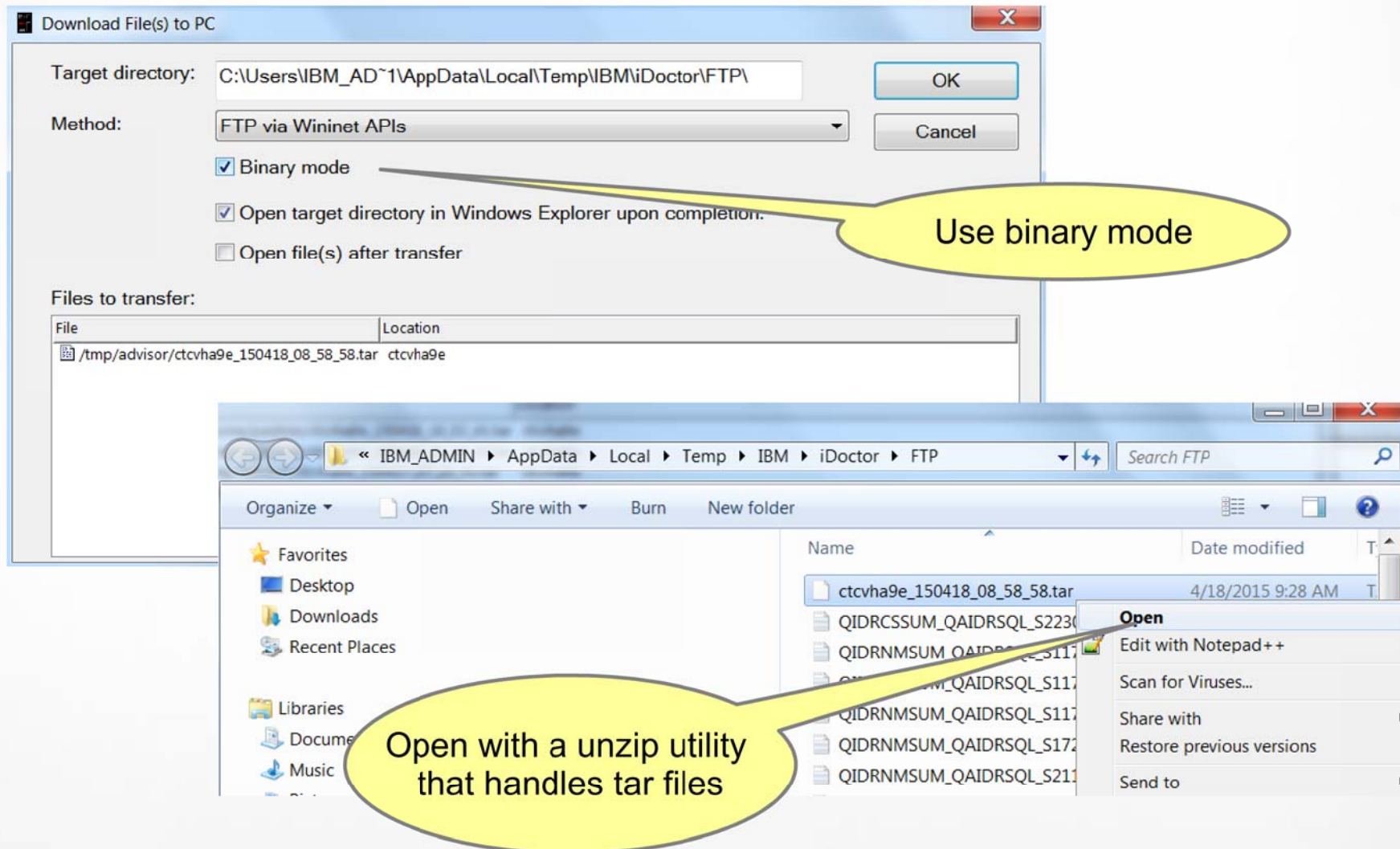
# VIOS Advisor: Two ways to view results



#1 Use this if your PC has a Unzip utility that is associated with tar files

#2 Transfer to PC and unzip / view the VIOS Advisor report manually.

# VIOS Advisor: Method #2 Download to PC and unzip the tar file



The image shows two overlapping windows from a Windows operating system. The top window is the 'Download File(s) to PC' dialog box. It has a title bar with a close button. The 'Target directory' field contains the path 'C:\Users\IBM\_AD~1\AppData\Local\Temp\IBM\iDoctor\FTP\'. The 'Method' dropdown is set to 'FTP via Wininet APIs'. There are 'OK' and 'Cancel' buttons. Under 'Options', the 'Binary mode' checkbox is checked, and a yellow callout bubble points to it with the text 'Use binary mode'. Other options include 'Open target directory in Windows Explorer upon completion.' (checked) and 'Open file(s) after transfer' (unchecked). The 'Files to transfer:' section shows a table with one entry: a file named '/tmp/advisor/ctcvha9e\_150418\_08\_58\_58.tar' located at 'ctcvha9e'.

The bottom window is a Windows Explorer window showing the same directory path: 'IBM\_ADMIN > AppData > Local > Temp > IBM > iDoctor > FTP'. The file list shows the downloaded tar file 'ctcvha9e\_150418\_08\_58\_58.tar' with a date modified of '4/18/2015 9:28 AM'. A context menu is open over the file, with the 'Open' option highlighted. A yellow callout bubble points to the 'Open' option with the text 'Open with a unzip utility that handles tar files'.



# VIOS Performance Advisor report

Open the  
vios\_advisor\_report.xml  
file

Name	Date modified	Type
images	4/18/2015 9:34 AM	File
logs	4/18/2015 9:34 AM	File
ctcvha9e_150418_0858.nmon	4/18/2015 9:09 AM	NMON
popup.js	4/18/2015 9:09 AM	JScript
style.css	4/18/2015 9:09 AM	Cascad
vios_advisor.xsl	4/18/2015 9:09 AM	XSL
<b>vios_advisor_report.xml</b>	4/18/2015 9:09 AM	XML
vios_advisorv2.xsl		

VIOS Performance Advisor



VIOS Performance Recording Summary  
 Hostname : ctcvha9e  
 PartitionID: 2  
[IBM Systems Workload Estimator \(VIOS Sizings\)](#)

- Open
- Edit

**Monitoring**  
 Start Time: 04/18/2015 08:58 AM  
 Stop Time: 04/18/2015 09:09 AM  
 Duration: 10 min

Advisory Report [Learn More](#)

Name	Value
Processor Family	Architecture PowerPC Implementation POWER7_COMPAT_mode 64 bit
Server Model	IBM 8233-E8B
Server Frequency	3550.0 MHz
Server - Online CPUs	2.0 cores
Server - Maximum Supported CPUs	2.0 cores
VIOS Level	2.2.3.3
VIOS Advisor Release	0.1

VIOS - Processor		Risk/Impact 1=lowest 5=highest					
Name	Measured Value	Suggested Value	First Observed	Last Observed	Risk	Impact	
CPU Capacity	0.5 ent		04/18/2015 08:58 AM				
CPU consumption	Average:6.3% (cores:0.1) High:94.0% (cores:0.5)		04/18/2015 08:58 AM	04/18/2015 09:09 AM			
Processing Mode	Shared CPU, (UnCapped)		04/18/2015 08:58 AM				
Variable Capacity Weight	128	129-255	04/18/2015 08:58 AM		1	5	
Virtual Processors	2		04/18/2015 08:58 AM				
SMT Mode	SMT4		04/18/2015 08:58 AM				

Name	Value
Disk I/O Activity	Average : 500 @ 22.00 KB Peak: 627 @ 29KB
Network I/O Activity	[ Average Send: 2 @ 0.2 MBps , Average Receive: 15 @ 0.9MBps ] [ Peak Send: 3 @ 0.3 MBps , Peak Receive: 18 @ 1.2MBps ]



# Scroll through and view the report in a web browser

Network I/O Activity ? Send: 3 @ 0.3 MBps , Peak Receive: 18 @ 1.2MBps ]

**VIOS - Disk Adapters** Risk/Impact 1=lowest 5=highest

Name	Measured Value	Suggested Value	First Observed	Last Observed	Risk	Impact
FC Adapter Count	4		04/18/2015 08:58 AM			
FC I/O Operations per second	500 @ 21 KB		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
FC Idle Port : ( fcs1 )			04/18/2015 08:58 AM	04/18/2015 09:09 AM	4	4
FC Idle Port : ( fcs2 )			04/18/2015 08:58 AM	04/18/2015 09:09 AM	4	4
FC Idle Port : ( fcs3 )			04/18/2015 08:58 AM	04/18/2015 09:09 AM	4	4
FC Adapter Utilization	optimal					
NPIV Client Utilization - fcs2	High: 0.13 % Average: 0.01 %		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
NPIV Client Utilization - fcs1	High: 0.83 % Average: 0.05 %		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
NPIV Client Utilization - fcs0	High: 1.59 % Average: 0.09 %		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
NPIV Client Utilization - fcs3	High: 1.81 % Average: 0.09 %		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
FC I/O Operations Blocked	optimal		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
FC Port Speeds	running at full speed		04/18/2015 08:58 AM	04/18/2015 09:09 AM		

**VIOS - Disk Drives** Risk/Impact 1=lowest 5=highest

Name	Measured Value	Suggested Value	First Observed	Last Observed	Risk	Impact
Physical Drive Count	10		04/18/2015 08:58 AM			
I/O Operations Blocked	pass		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
Long I/O Latency	pass		04/18/2015 08:58 AM	04/18/2015 09:09 AM		

**System - Shared Processing Pool** Risk/Impact 1=lowest 5=highest

Name	Measured Value	Suggested Value	First Observed	Last Observed	Risk	Impact
Shared Pool Monitoring	enabled		04/18/2015 08:58 AM			
Shared Processor Pool Capacity	14.0 ent.		04/18/2015 08:58 AM			
Free CPU Capacity	average_free:13.6 ent. lowest_free:13.0 ent.					

**VIOS - Memory** Risk/Impact 1=lowest 5=highest

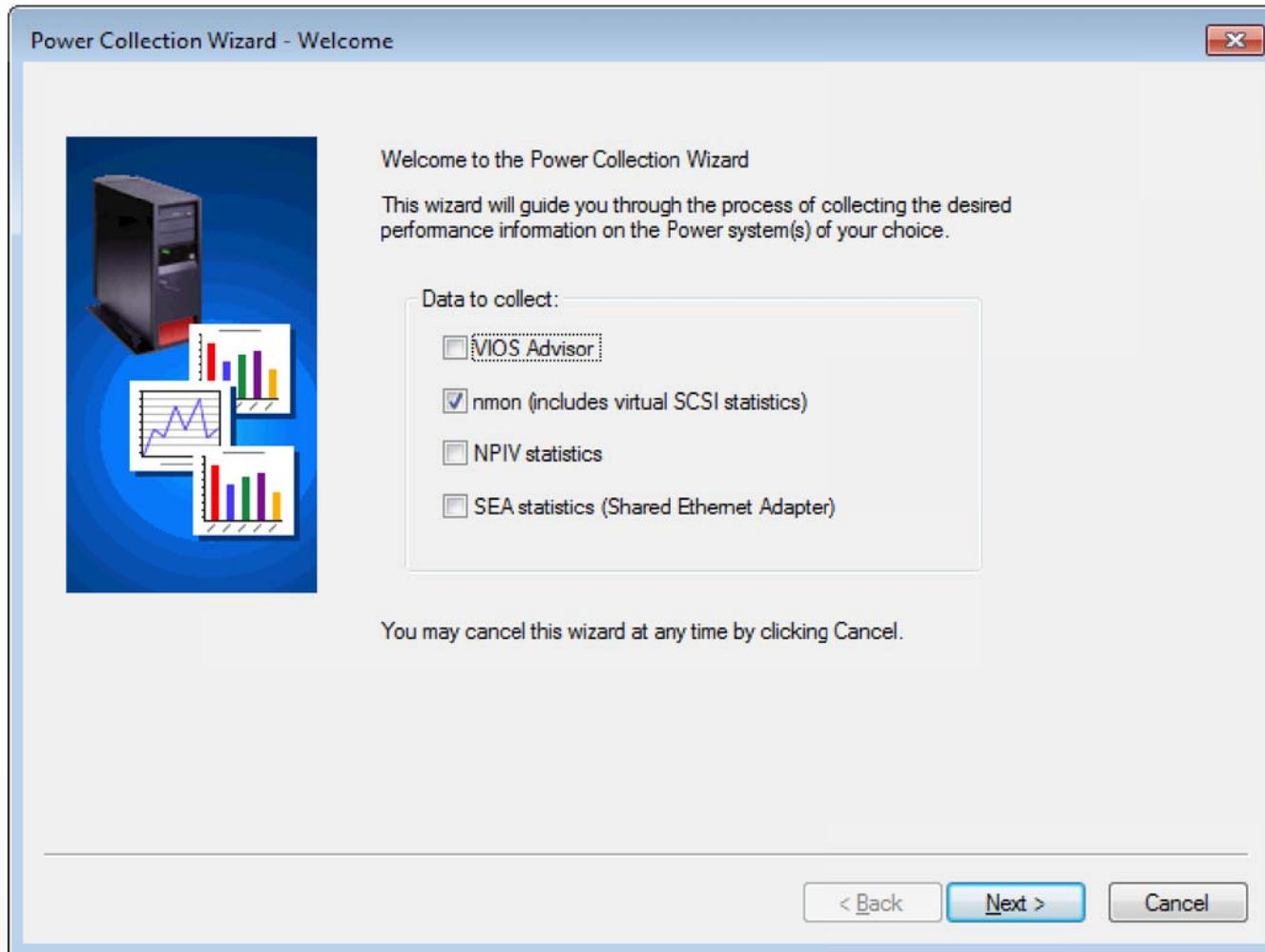
Name	Measured Value	Suggested Value	First Observed	Last Observed	Risk	Impact
Real Memory	4.000 GB		04/18/2015 08:58 AM			
Available Memory	1.633 GB		04/18/2015 08:58 AM			
Paging Rate	0.0 MBps Paging Rate		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
Paging Space Size	1.500 GB		04/18/2015 08:58 AM	04/18/2015 09:09 AM		
Free Paging Space	1.487 GB free		04/18/2015 08:58 AM			
Pinned Memory	1.452 GB pinned		04/18/2015 08:58 AM			

**VIOS - Shared Ethernet Adapters** Risk/Impact 1=lowest 5=highest

Name	Measured Value	Suggested Value	First Observed	Last Observed	Risk	Impact
SEA Adapter Count	1		04/18/2015 08:58 AM			
SEA (ent4)	Mapping: Physical : (ent0),Virtual : (ent2,ent3)		04/18/2015 08:58 AM			
SEA (ent4) Utilization	High: 17.39 % Average : 0.43 %		04/18/2015 08:58 AM	04/18/2015 09:09 AM		




# Power Collection Wizard: Welcome → nmon



# Power Collection Wizard: Connections → nmon

Power Collection Wizard - Connections

Select below the desired system(s) to collect data on or type in the desired system name(s).



System	Type	Description
CTCVHA9E.RCHLAND.IBM.COM	VIOS	
CTCVHA9O.RCHLAND.IBM.COM	VIOS	
MTSVIOMMB.RCHLAND.IBM.COM	VIOS	
RCHUT30V1.RCH.STGLABS.IBM.COM	VIOS	
Y0319AV1.RCH.STGLABS.IBM.COM	VIOS	
Y0319AV2.RCH.STGLABS.IBM.COM	VIOS	

Tip: Add additional systems by specifying them on the Connections view within the Main Window.

Data collection systems:

Note: SSH 2.0 or higher must be installed on these systems in order to use this function.

< Back   Next >   Cancel

# Power Collection Wizard: Basic Options → nmon

Power Collection Wizard - Basic Options

This screen allows you to work with the common options for all types of data being collected (except where indicated.)

The data directory will be created on each system where data is being collected. Each type of data will exist under a /advisor, /nmon, /npiv or /sea subdirectories.

Data directory (will be created):

Collection duration:

nmon, npiv, sea options:

Interval duration:  1 - 86,400 seconds

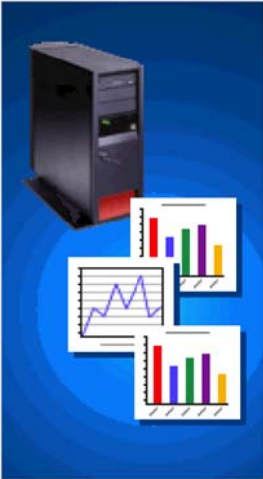
Description:

Show advanced options

< Back   Next >   Cancel

# Power Collection Wizard: nmon Advanced Options

Power Collection Wizard - nmon Advanced Options



Collection name:  Generate using default format:

Command to use:  topas\_nmon or nmon (older version)

Top processes options:

Include:  ▼

CPU Filter:  0 - 50 %


Disk options:

- [-d] Include disk service times
- [-V] Include disk volume group section
- [-k] Limit disks reported to:
- [-g] Use disk groups defined in file

< Back   Next >   Cancel

# Power Collection Wizard: nmon Additional Advanced Options

Power Collection Wizard - nmon Additional Advanced Options

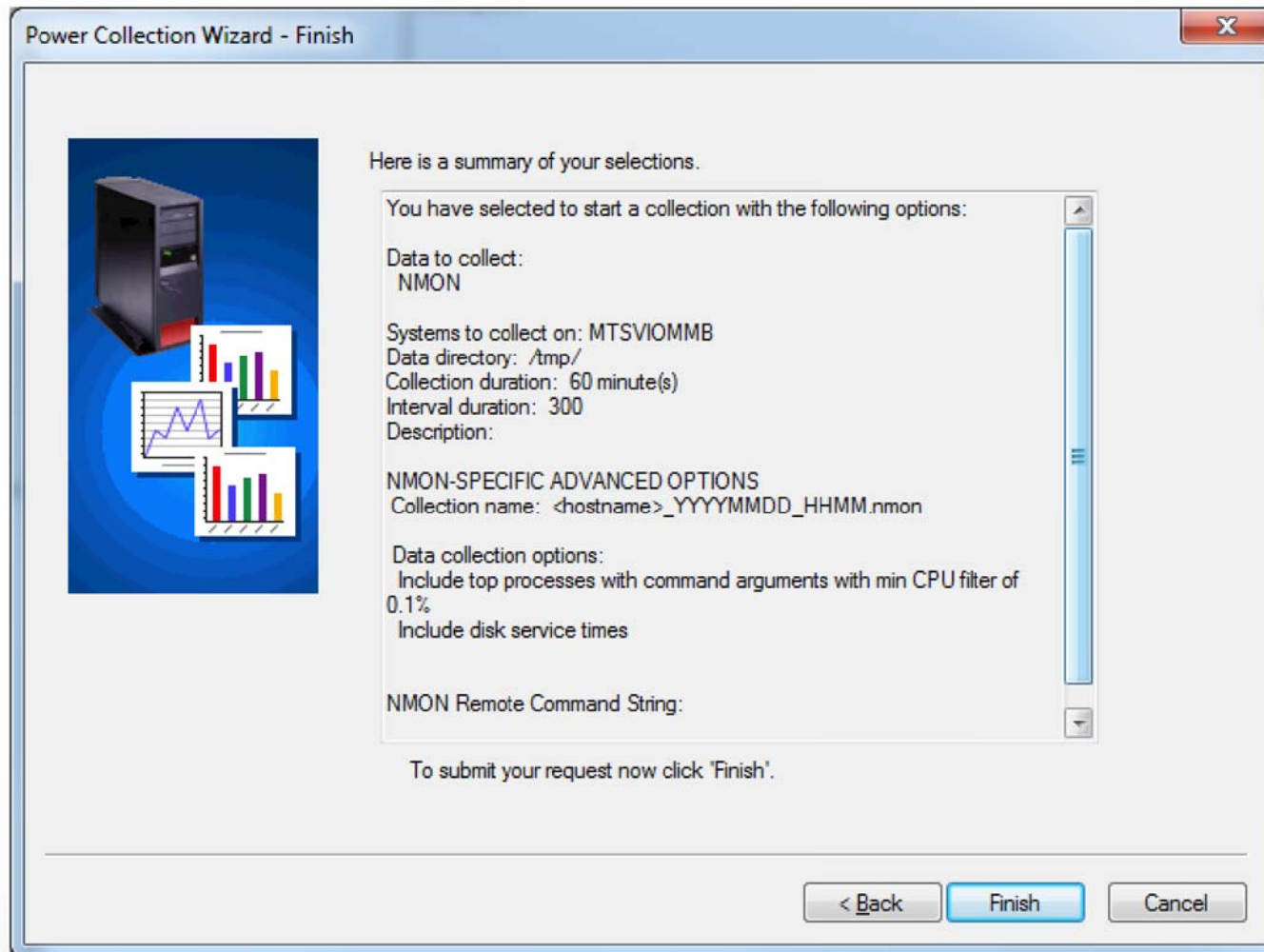


Advanced Options:

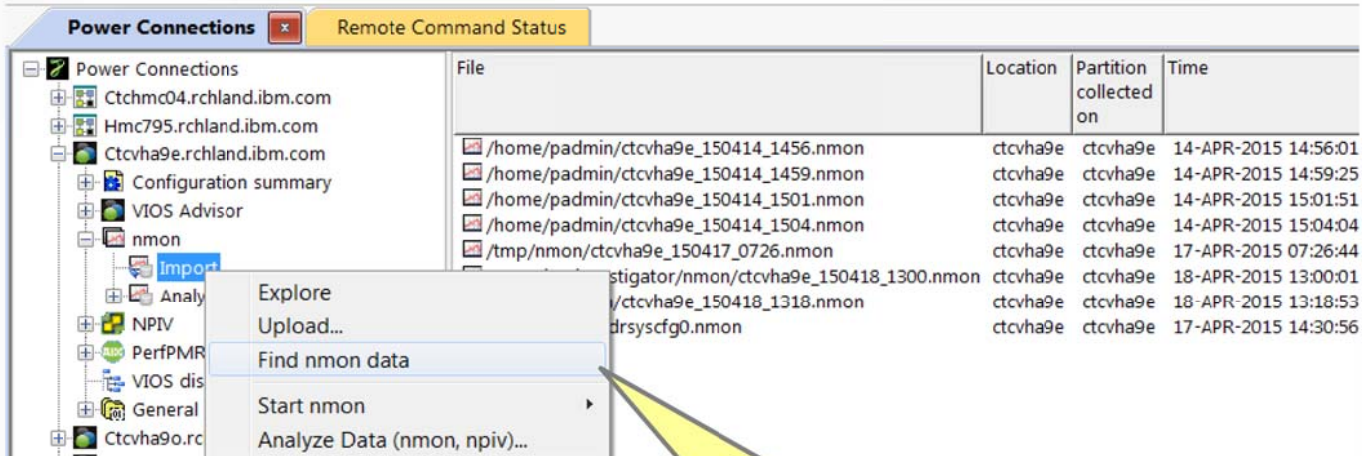
- [-G] Use UTC/GMT standard time (not local time)
- [-K] Include RAW Kernel and LPAR sections
- [-P] Include paging space section
- [-M] Include MEMPAGES section - detailed stats per page size
- [-N] Include NFS section
- [-NN] Include NFS section with NFSv4 stats
- [-W] Include WLM sections
- [-S] Include WLM sections with SubClasses
- [-^] Include Fiber Channel (FC) sections
- [-O] Include Shared Ethernet Adapter (SEA) VIOS only sections
- [-L] Include LARGE page section
- [-A] Include Async I/O section

< Back   Next >   Cancel

# Power Collection Wizard: Finish → nmon



## Find nmon data

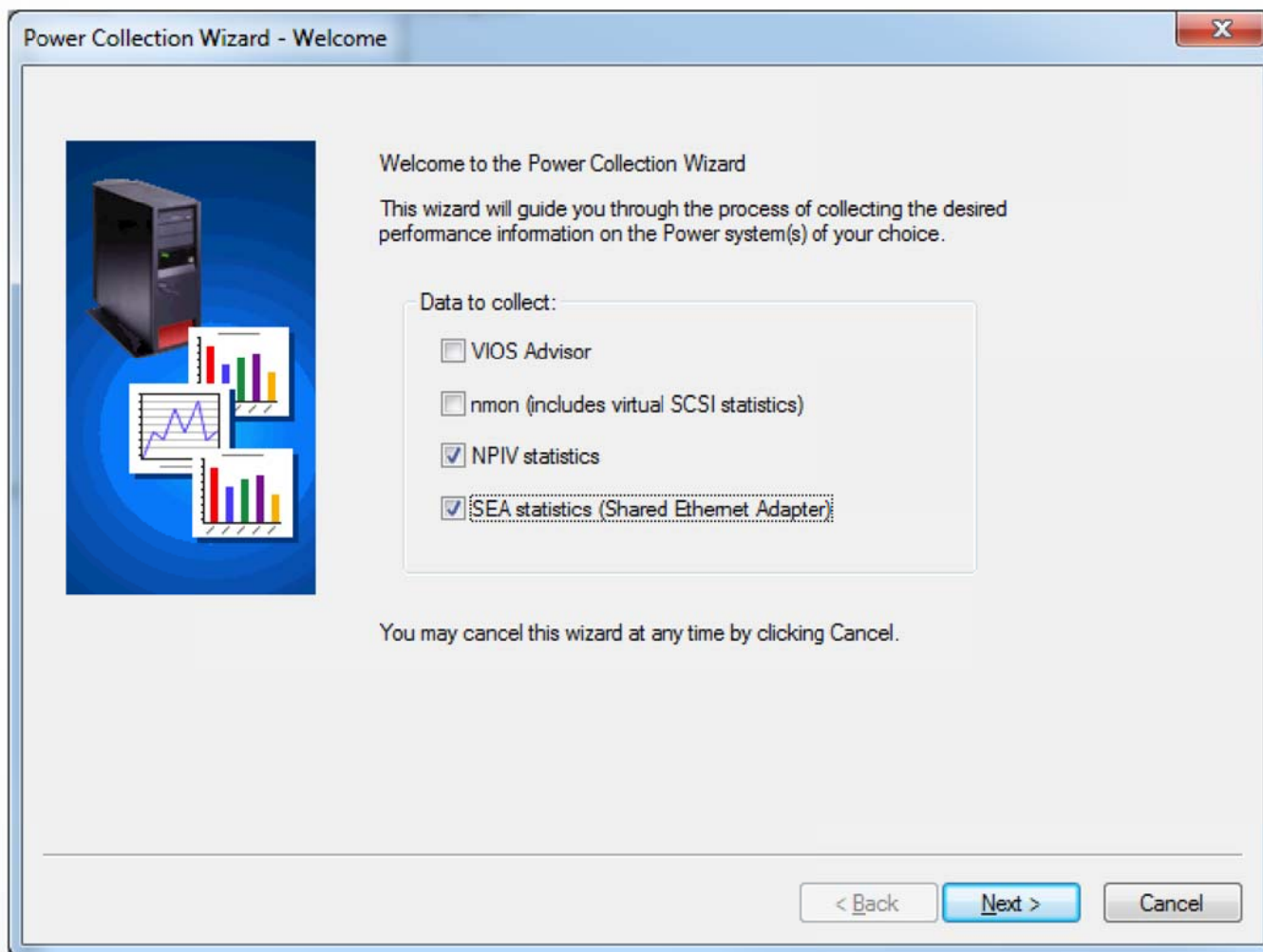


The screenshot shows the Power Connections interface with a context menu open over the 'nmon' folder. The menu options are: Explore, Upload..., Find nmon data, Start nmon, and Analyze Data (nmon, npiv).... The 'Find nmon data' option is highlighted. A yellow callout bubble points to this option.

File	Location	Partition collected on	Time
/home/padmin/ctcvha9e_150414_1456.nmon	ctcvha9e	ctcvha9e	14-APR-2015 14:56:01
/home/padmin/ctcvha9e_150414_1459.nmon	ctcvha9e	ctcvha9e	14-APR-2015 14:59:25
/home/padmin/ctcvha9e_150414_1501.nmon	ctcvha9e	ctcvha9e	14-APR-2015 15:01:51
/home/padmin/ctcvha9e_150414_1504.nmon	ctcvha9e	ctcvha9e	14-APR-2015 15:04:04
/tmp/nmon/ctcvha9e_150417_0726.nmon	ctcvha9e	ctcvha9e	17-APR-2015 07:26:44
stigator/nmon/ctcvha9e_150418_1300.nmon	ctcvha9e	ctcvha9e	18-APR-2015 13:00:01
/ctcvha9e_150418_1318.nmon	ctcvha9e	ctcvha9e	18-APR-2015 13:18:53
drsyscfg0.nmon	ctcvha9e	ctcvha9e	17-APR-2015 14:30:56

Use 'Find nmon data' or F5 to refresh if find was done previously

# Power Collection Wizard: Welcome → NPIV and/or SEA






# Power Collection Wizard: Connections → NPIV/SEA

Power Collection Wizard - Connections X

Select below the desired system(s) to collect data on or type in the desired system name(s).



System	Type	Description
CTCVHA9E.RCHLAND.IBM.COM	VIOS	
CTCVHA9O.RCHLAND.IBM.COM	VIOS	
MTSVIOMMB.RCHLAND.IBM.COM	VIOS	
RCHUT30V1.RCH.STGLABS.IBM.COM	VIOS	
Y0319AV1.RCH.STGLABS.IBM.COM	VIOS	
Y0319AV2.RCH.STGLABS.IBM.COM	VIOS	

Tip: Add additional systems by specifying them on the Connections view within the Main Window.

Data collection systems:


Note: SSH 2.0 or higher must be installed on these systems in order to use this function.

# Power Collection Wizard: Basic Options → NPIV/SEA

Power Collection Wizard - Basic Options

This screen allows you to work with the common options for all types of data being collected (except where indicated.)

The data directory will be created on each system where data is being collected. Each type of data will exist under a /advisor, /nmon, /npiv or /sea subdirectories.



Data directory (will be created):

Collection duration:

nmon, npiv, sea options:

Interval duration:  1 - 86,400 seconds


Description:

Show advanced options

< Back   Next >   Cancel

# Power Collection Wizard: NPIV Advanced Options

Power Collection Wizard - NPIV Advanced Options



A list of virtual fiber channel adapters must be built and stored in a file which could take a long time on systems with a very large configuration. By default this file is created each time you start an NPIV collection.

If desired use the option to specify a VFC list file in order to create a file by that name or reuse an existing file.


Use a virtual fiber channel configuration file (if it doesn't exist it will be created)

VFC list file:

< Back   Next >   Cancel

# Power Collection Wizard: SEA Advanced Options

Power Collection Wizard - SEA Advanced Options



Collecting shared ethernet adapter statistics requires a list of adapter names to be stored in a file. This file can either be supplied or created automatically.

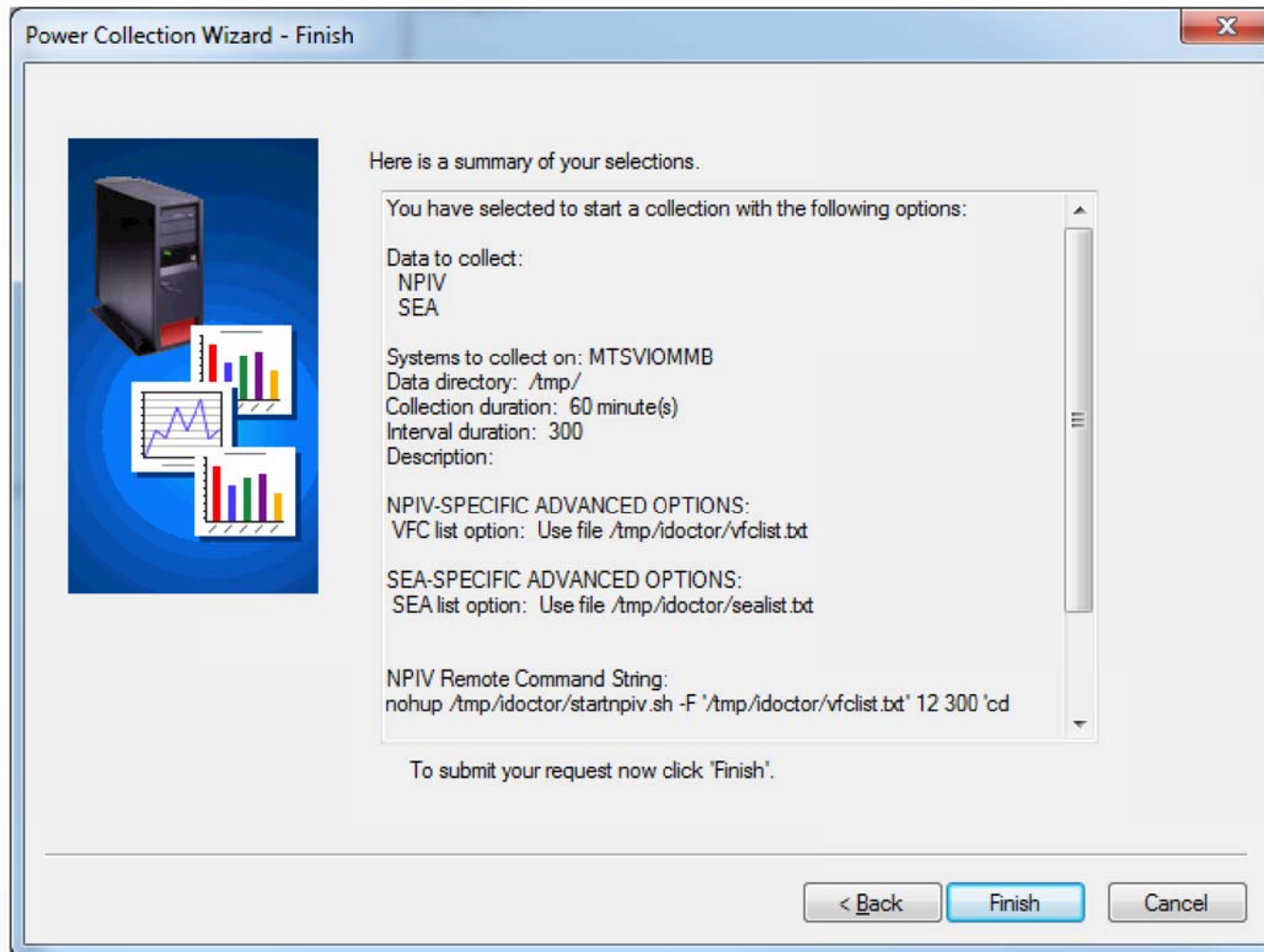
If desired use this option to specify a text file that contains a list of Shared Ethernet Adapter names.

Use a shared ethernet adapter list file (if it doesn't exist it will be created)

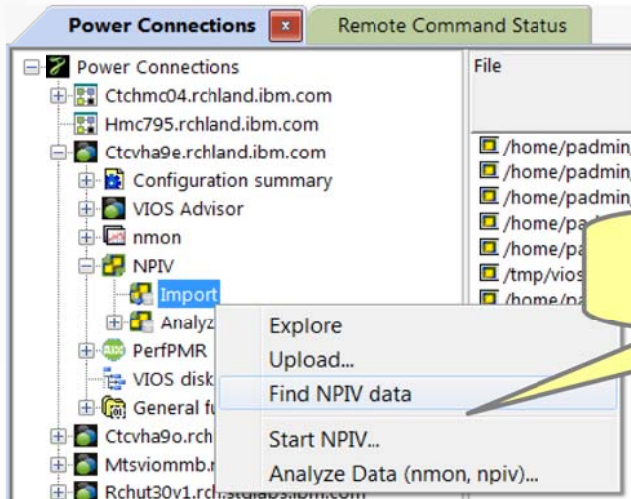
SEA list file:

< Back   Next >   Cancel

# Power Collection Wizard: Finish → NPIV/SEA



# Find NPIV data...

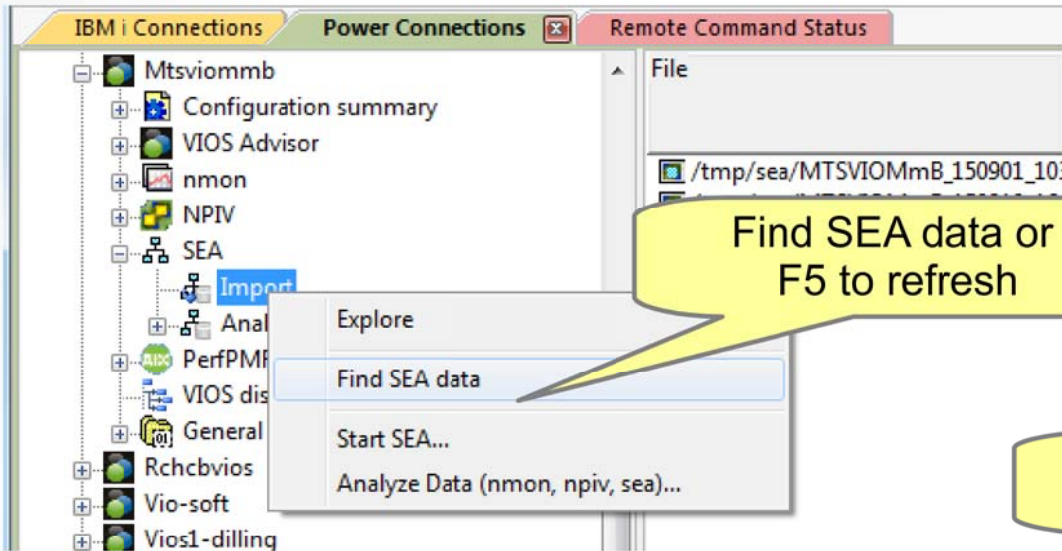


Find NPIV data or F5 to refresh

Percent Complete

File	Percent complete	Location	Partition collected on	Time	Snapsho...	Interval duration (seconds)
/home/padmin/fc_npiv.2015-04-14-14.56.35.000000.npiv	100.00	ctcvha9e	ctcvha9e	2015-04-14-14.56.35.000000	12	5
/home/padmin/fc_npiv.2015-04-14-15.01.51.000000.npiv	100.00	ctcvha9e	ctcvha9e	2015-04-14-15.01.51.000000	300	1
/home/padmin/fc_npiv.2015-04-14-15.04.33.000000.npiv	100.00	ctcvha9e	ctcvha9e	2015-04-14-15.04.33.000000	5	60
/home/padmin/fc_npiv.2015-04-14-15.08.33.000000.npiv	100.00	ctcvha9e	ctcvha9e	2015-04-14-15.08.33.000000	5	60
/home/padmin/fc_npiv.2015-04-14-15.22.13.000000.npiv	100.00	ctcvha9e	ctcvha9e	2015-04-14-15.22.13.000000	5	60
/tmp/vios_investigator/npiv/fc_npiv.2015-04-18-17.00.00.000000.npiv	23.08	ctcvha9e	ctcvha9e	2015-04-18-17.00.00.000000	13	300
/home/padmin/fc_npiv.2015-04-18-17.12.32.000000.npiv	8.33	ctcvha9e	ctcvha9e	2015-04-18-17.12.32.000000	12	300

# Find SEA data...

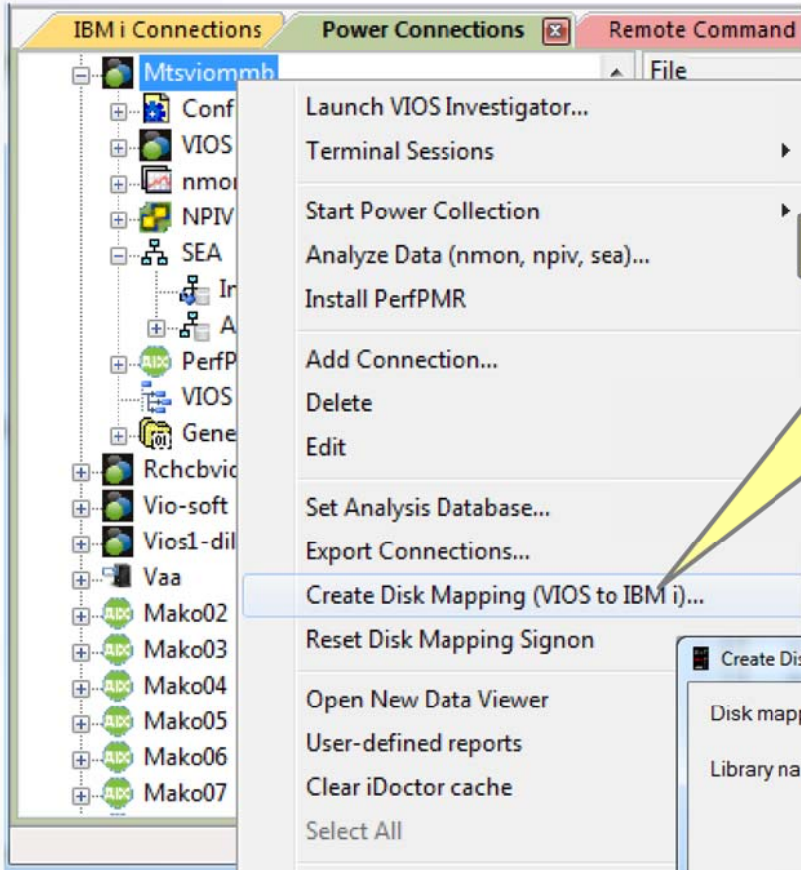


Find SEA data or F5 to refresh

Percent Complete

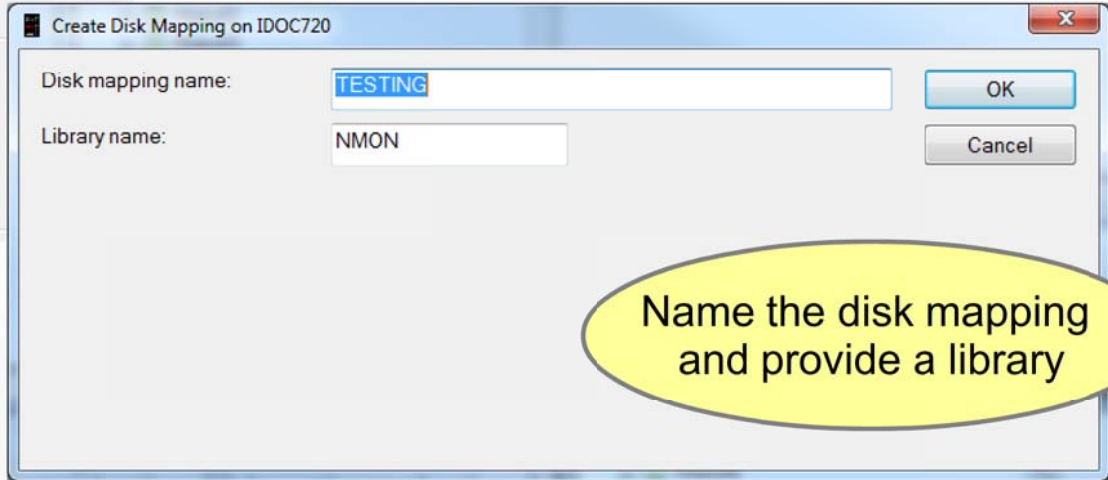
File	Percent complete	Location	Partition collected on	Time	Snapshots	Interval duration (seconds)
/tmp/sea/MTSVIOMmB_150901_103427.sea	100.00	MTSVIOMmB	MTSVIOMmB	2015-09-01-15.34.27.000000	5	1
/tmp/sea/MTSVIOMmB_150910_164549.sea	100.00	MTSVIOMmB	MTSVIOMmB	2015-09-10-21.45.49.000000	720	5
/tmp/sea/MTSVIOMmB_150911_123437.sea	100.00	MTSVIOMmB	MTSVIOMmB	2015-09-11-17.34.37.000000	720	5
/tmp/sea/MTSVIOMmB_150911_160732.sea	0.36	MTSVIOMmB	MTSVIOMmB	2015-09-11-21.07.32.000000	3600	1

# Create Disk Mapping (VIOS to IBMi)...



Select Create Disk mapping

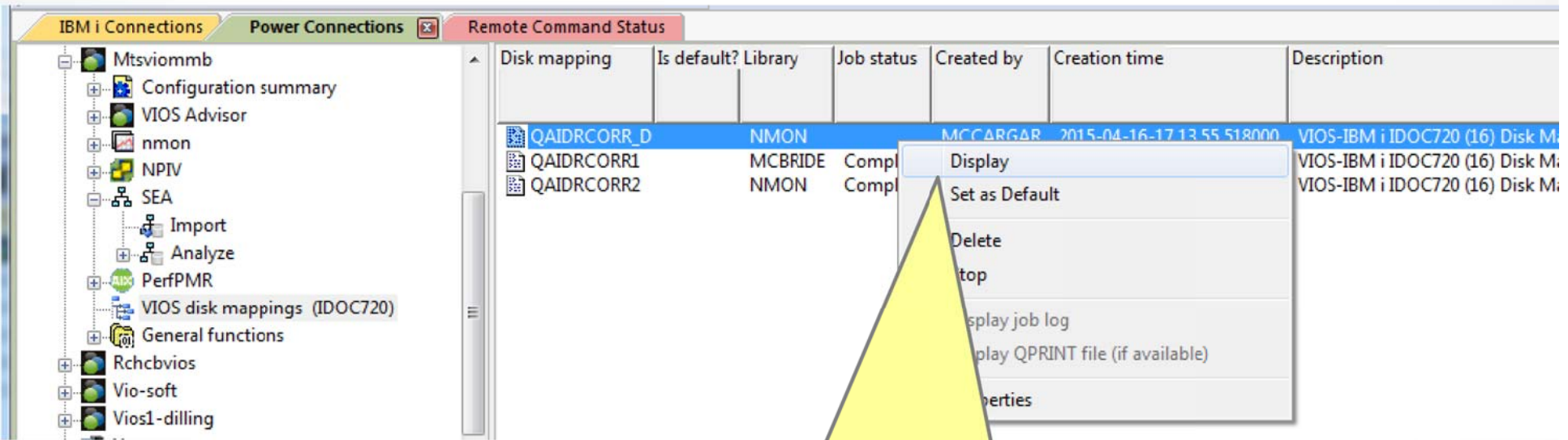
The first time you will be prompted for HMC credentials



Name the disk mapping and provide a library



# Display Disk Mapping



The screenshot shows the IBM i Connections interface. On the left is a tree view with categories like 'IBM i Connections', 'Power Connections', and 'Remote Command Status'. Under 'Remote Command Status', there is a table of disk mappings. The table has columns: 'Disk mapping', 'Is default?', 'Library', 'Job status', 'Created by', 'Creation time', and 'Description'. Three rows are visible: 'QAIDRCORR\_D' (NMON, MCCARGAR, 2015-04-16-17 13:55:518000), 'QAIDRCORR1' (MCBRIDE, Compl), and 'QAIDRCORR2' (NMON, Compl). A context menu is open over the 'QAIDRCORR\_D' row, showing options: 'Display', 'Set as Default', 'Delete', 'Stop', 'Display job log', 'Display QPRINT file (if available)', and 'Properties'. A yellow callout box points to the 'Display' option.

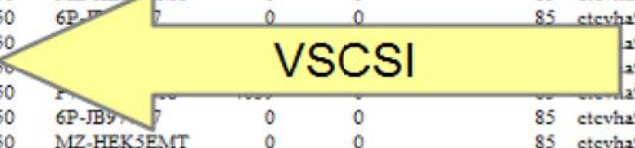
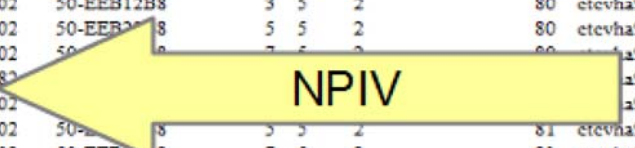
Disk mapping	Is default?	Library	Job status	Created by	Creation time	Description
QAIDRCORR_D		NMON		MCCARGAR	2015-04-16-17 13:55:518000	VIOS-IBM i IDOC720 (16) Disk M:
QAIDRCORR1		MCBRIDE	Compl			VIOS-IBM i IDOC720 (16) Disk M:
QAIDRCORR2		NMON	Compl			VIOS-IBM i IDOC720 (16) Disk M:

Select Disk Mapping to display (or double-click to open)



# VIOS to IBMi Disk Mapping

System Name	System Serial Number	Partition Name	Partition ID	Device resource Name	ASP number	Disk unit type	Disk unit model	Serial number	Disk unit number	RAID type	Disk protection type	Card Position	VIOS Partition Name	VIOS LPar Id	VIOS Slot	Unit Address	Controller	Virtual SCSI Server Adaptor
CTCHA9	10001AP	CTCIHA9V	8	DMP001	1	2107	0A82	50-EEB02B8	1		0	80	ctcvha9e	2	80			0
CTCHA9	10001AP	CTCIHA9V	8	DMP002	1	2107	0A02	50-EEB12B8	3	5	2	80	ctcvha9e	2	80			0
CTCHA9	10001AP	CTCIHA9V	8	DMP003	1	2107	0A02	50-EEB22B8	5	5	2	80	ctcvha9e	2	80			0
CTCHA9	10001AP	CTCIHA9V	8	DMP004	1	2107	0A02	50-EEB32B8	7	5	2	80	ctcvha9e	2	80			0
CTCHA9	10001AP	CTCIHA9V	8	DMP005	1	2107	0A82	50-EEB02B8	1		0	80	ctcvha9e	1	81			0
CTCHA9	10001AP	CTCIHA9V	8	DMP006	1	2107	0A02	50-EEB12B8	3	5	2	80	ctcvha9e	1	81			0
CTCHA9	10001AP	CTCIHA9V	8	DMP007	1	2107	0A02	50-EEB22B8	5	5	2	81	ctcvha9e	1	81			0
CTCHA9	10001AP	CTCIHA9V	8	DMP008	1	2107	0A02	50-EEB32B8	7	5	2	81	ctcvha9e	1	81			0
CTCHA9	10001AP	CTCIHA9V	8	DMP040	201	6B22	0050	98-KDD4UWW	4013		0	85	ctcvha9e	1	85			1 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DMP041	201	6B22	0050	YP-DGGV76X	4015		0	85	ctcvha9e	1	85			2 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DMP042	201	6B22	0050	Z9-ZGNLEUX	4014		0	85	ctcvha9e	1	85			3 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD007	0	6B22	0050	MZ-HEK5EMT	0		0	85	ctcvha9e	1	85			4 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD008	0	6B22	0050	6P-JB97	0		0	85	ctcvha9e	1	85			5 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD009	0	6B22	0050	RD-9QKP2TG	0		0	85	ctcvha9e	1	85			6 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD010	205	6B22	0050	6P-JB97	0		0	85	ctcvha9e	1	85			7 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD003	205	6B22	0050	RD-9QKP2TG	0		0	85	ctcvha9e	1	85			-1 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD004	0	6B22	0050	6P-JB97	0		0	85	ctcvha9e	1	85			-1 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD005	0	6B22	0050	MZ-HEK5EMT	0		0	85	ctcvha9e	1	85			-1 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DD006	0	6B22	0050	RD-9QKP2TG	0		0	85	ctcvha9e	1	85			-1 vhost3
CTCHA9	10001AP	CTCIHA9V	8	DMP015	181	2107	0A01	50-8A002B8	4012	5	2	88	ctcvha9e	2	88			0
CTCHA9	10001AP	CTCIHA9V	8	DMP017	181	2107	0A01	50-8A012B8	4009	5	2	88	ctcvha9e	2	88			0
CTCHA9	10001AP	CTCIHA9V	8	DMP019	181	2107	0A01	50-8B002B8	4010	5	2	88	ctcvha9e	2	88			0
CTCHA9	10001AP	CTCIHA9V	8	DMP021	181	2107	0A01	50-8B012B8	4011	5	2	88	ctcvha9e	2	88			0
CTCHA9	10001AP	CTCIHA9V	8	DMP016	181	2107	0A01	50-8A002B8	4012	5	2	89	ctcvha9e	1	89			0
CTCHA9	10001AP	CTCIHA9V	8	DMP018	181	2107	0A01	50-8A012B8	4009	5	2	89	ctcvha9e	1	89			0
CTCHA9	10001AP	CTCIHA9V	8	DMP020	181	2107	0A01	50-8B002B8	4010	5	2	89	ctcvha9e	1	89			0
CTCHA9	10001AP	CTCIHA9V	8	DMP022	181	2107	0A01	50-8B012B8	4011	5	2	89	ctcvha9e	1	89			0
CTCHA9	10001AP	CTCIHA9V	8	DMP037	201	6B22	0050	98-KDD4UWW	4013		0	84	ctcvha9e	2	84			1 vhost6
CTCHA9	10001AP	CTCIHA9V	8	DMP038	201	6B22	0050	YP-DGGV76X	4015		0	84	ctcvha9e	2	84			2 vhost6
CTCHA9	10001AP	CTCIHA9V	8	DMP039	201	6B22	0050	Z9-ZGNLEUX	4014		0	84	ctcvha9e	2	84			3 vhost6
CTCHA9	10001AP	CTCIHA9V	8	DD001	203	6B22	0050	SP-XRF7WY5	4037		0	84	ctcvha9e	2	84			4 vhost6
CTCHA9	10001AP	CTCIHA9V	8	DD002	204	6B22	0050	DU-7TRG2S	4038		0	84	ctcvha9e	2	84			5 vhost6





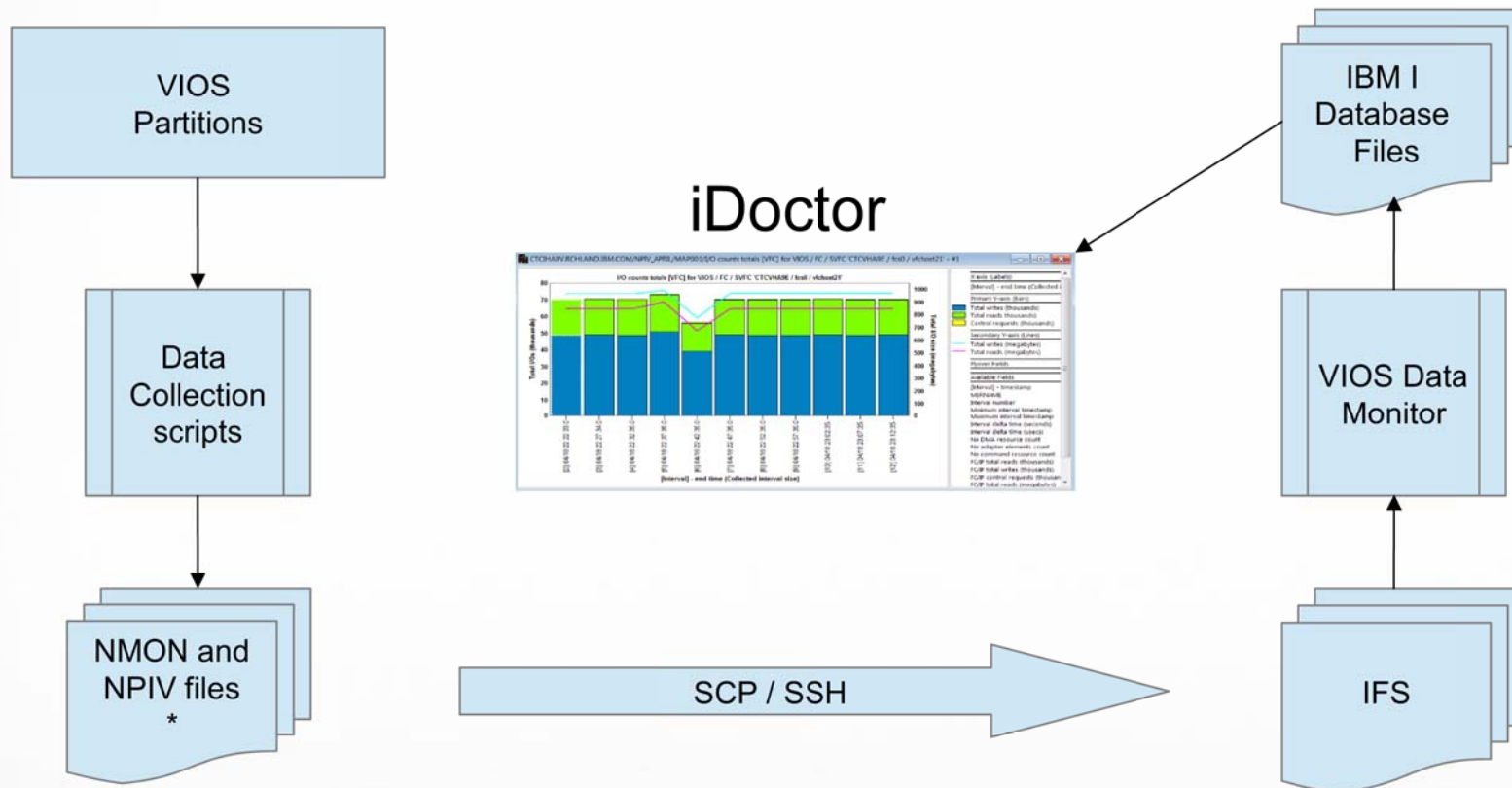
# VIOS to IBMi Disk Mapping

Device resource Name	Virtual Target Backing Device	Virtual Target	Harddisk Node Name	Harddisk Logical Unit Identifier	Unique Id	Client VFC Name	Server VFC Name	VFC WWPN	VFC Status	FC Name
DMP001						DC01	vfchost9	c0507600e4e60024	Active	fc0
DMP002						DC01	vfchost9	c0507600e4e60024	Active	fc0
DMP003						DC01	vfchost9	c0507600e4e60024	Active	fc0
DMP004						DC01	vfchost9	c0507600e4e60024	Active	fc0
DMP005						DC02	vfchost5	c0507600e4e60026	Active	fc0
DMP006						DC02	vfchost5	c0507600e4e60026	Active	fc0
DMP007						DC02	vfchost5	c0507600e4e60026	Active	fc0
DMP008						DC02	vfchost5	c0507600e4e60026	Active	fc0
DMP040	ha9v_ha7k1	hdisk6	5005>	0008000000>	33213>					
DMP041	ha9v_ha7k2	hdisk11	5005>	0009000000>	33213>					
DMP042	ha9v_ha7k3	hdisk12	5005>	000B000000>	33213>					
DD007	vtscsi18	hdisk34	5005>	0019000000>	33213>					
DD008	vtscsi19	hdisk35	5005>	001A000000>	33213>					
DD009	vtscsi20	hdisk36	5005>	001B000000>	33213>					
DD010	vtscsi21	hdisk37	5005>	001C000000>	33213>					
DD003		HSCL2970 >								
DD004		HSCL2970 >								
DD005		HSCL2970 >								
DD006		HSCL2970 >								
DMP015						DC13	vfchost10	c0507600e4e60052	Active	fc2
DMP017						DC13	vfchost10	c0507600e4e60052	Active	fc2
DMP019						DC13	vfchost10	c0507600e4e60052	Active	fc2
DMP021						DC13	vfchost10	c0507600e4e60052	Active	fc2
DMP016						DC14	vfchost17	c0507600e4e60054	Active	fc2
DMP018						DC14	vfchost17	c0507600e4e60054	Active	fc2
DMP020						DC14	vfchost17	c0507600e4e60054	Active	fc2
DMP022						DC14	vfchost17	c0507600e4e60054	Active	fc2
DMP037	ha9v_ha7k	hdisk12	5005>	0008000000>	33213>					
DMP038	ha9v_ha7k2	hdisk13	5005>	0009000000>	33213>					
DMP039	ha9v_ha7k3	hdisk14	5005>	000B000000>	33213>					
DD001	vtscsi25	hdisk35	5005>	0018000000>	33213>					
DD002	vtscsi26	hdisk41	5005>	001E000000>	33213>					



# VIOS Monitor

# VIOS Monitor



\* SEA files not currently supported



## ■ VIOS Partition Setup

- Install iDoctor data collection and scp scripts
- Create entrees in the cron scheduler for NMON and NPIV Data Collection
- Create entrees in the cron scheduler for SCP of NMON and NPIV files
- See iDoctor VIOS Monitor setup document for details
  - <http://public.dhe.ibm.com/services/us/igsc/idoctor/idoctormonitor.pdf>

## ■ IBMi Setup

- Configure monitor with source IFS directories and target IBMi libraries
  - Run the QIDRGUI/ADDMONDIR command once per VIOS / data type
  - Source directory
  - Target library
  - IFS retention period
  - Database file retention period
  - Run the QIDRGUI/STRDIRMON command to start the monitor
  - Additional setup instructions to be provided when the monitor is complete
  - ENDDIRMON and CHGMONDIR or RMVMONDIR
  - Additional GUI automation planned for future release.



- Example adding entry to monitor directory for NMON and NPIV files from VIOS1

## Add NMON/NPIV Monitored Dir (ADDMONDIR)

Type choices, press Enter.

Directory to monitor . . . . .  '/home/myuser/vios1'

File types to monitor . . . . .	<u> *all </u>	*NMON, *NPIV, *ALL
Prefix of IFS files . . . . .	<u> vios1 </u>	Character value
Target library . . . . .	<u> vios1perf </u>	Character value
Target prefix . . . . .	<u> vios1 </u>	Character value
Days to retain IFS files . . . . .	<u> 2 </u>	0-9999
Days to retain DB files . . . . .	<u> 30 </u>	0-9999
Map files . . . . .	<u> = </u>	



- Example adding entry to monitor directory for NMON files only from VIOS1

### Add NMON/NPIV Monitored Dir (ADDMONDIR)

Type choices, press Enter.

Directory to monitor . . . . . '/home/myuser/vios1'

File types to monitor . . . . .	<u>*nmon</u>	*NMON, *NPIV, *ALL
Prefix of IFS files . . . . .	<u>vios1</u>	Character value
Target library . . . . .	<u>vios1nmon</u>	Character value
Target prefix . . . . .	<u>vios1</u>	Character value
Days to retain IFS files . . . . .	<u>2</u>	0-9999
Days to retain DB files . . . . .	<u>30</u>	0-9999
Map files . . . . .	<u></u>	





- Example adding entry to monitor directory for NPIV files only from VIOS1

```
      Add NMON/NPIV Monitored Dir (ADDMONDIR)

Type choices, press Enter.

Directory to monitor . . . . .  '/home/myuser/vios1' 
_____
_____
_____
_____
_____

File types to monitor . . . . .  *npiv           *NMON, *NPIV, *ALL
Prefix of IFS files . . . . .  vios1            Character value
Target library . . . . .  vios1npiv          Character value
Target prefix . . . . .  vios1              Character value
Days to retain IFS files . . . . .  2          0-9999
Days to retain DB files . . . . .  30         0-9999
Map files . . . . . _____
_____
_____
```



- Starting the directory monitor job.

```
Start the NMON/NPIV monitor (STRDIRMON)

Type choices, press Enter.

User for submitted job . . . . . *CURRENT *CURRENT, USER
```



- QIDRDIRMON – Directory Monitor Job.
- Monitor list created from ADDMONDIR command.

```
Work with Submitted Jobs                                LPDAC710
                                                         06/23/15 19:55:16
Submitted from . . . . . : *JOB

Type options, press Enter.
 2=Change  3=Hold  4=End  5=Work with  6=Release  7=Display message
 8=Work with spooled files

Opt  Job          User          Type      -----Status-----  Function
_   QIDRDIRMON    BSMENGES    BATCH     ACTIVE                 DLY-60
```



- Ending the directory monitor job.

```
End the NMON/NPIV monitor (ENDDIRMON)

Type choices, press Enter.

Ending option . . . . . *DELAY *DELAY, *IMMED
```

# Set Analysis Database ( nmon, NPIV, SEA or HMC data)

IBM i Connections

Power Connections

Remote Command Status

	Is default?	Library
RR_D		NMON
RR1		MCBRID
RR2		NMON

Launch VIOS Investigator...

Terminal Sessions

Start Power Collection

Analyze Data (nmon, npiv, sea)...

Install PerfPMR

Add Connection...

Delete

Edit

Set Analysis Database...

Export Connections...

Set analysis DB

Analysis System

SQLite can be used if no IBM i available

Power Connections: Set analysis database

This screen lets you determine which type of database you want to use to analyze the data captured by iDoctor. Some functions may still work without doing this but for best results it's highly recommended to use one of the options below.

Database type:

DB2 on IBM i

Analysis system: IDOC720

SQLite on the PC

ODBC data source: LOCAL\_SQLITE

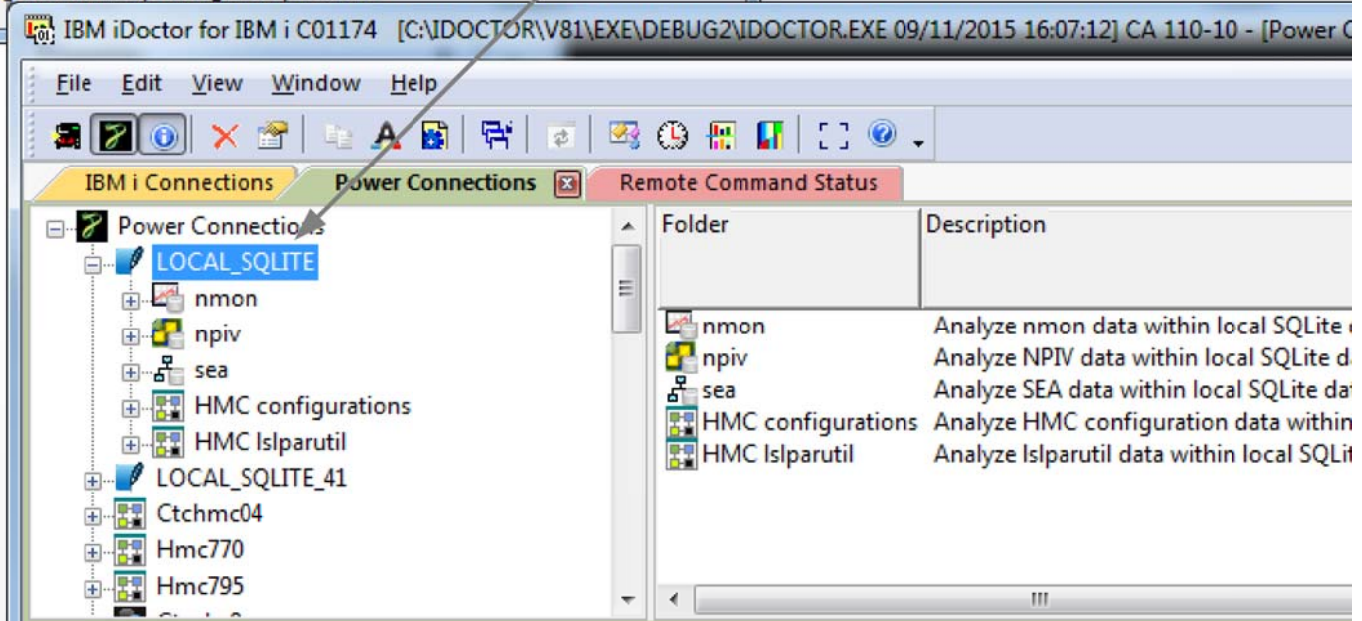
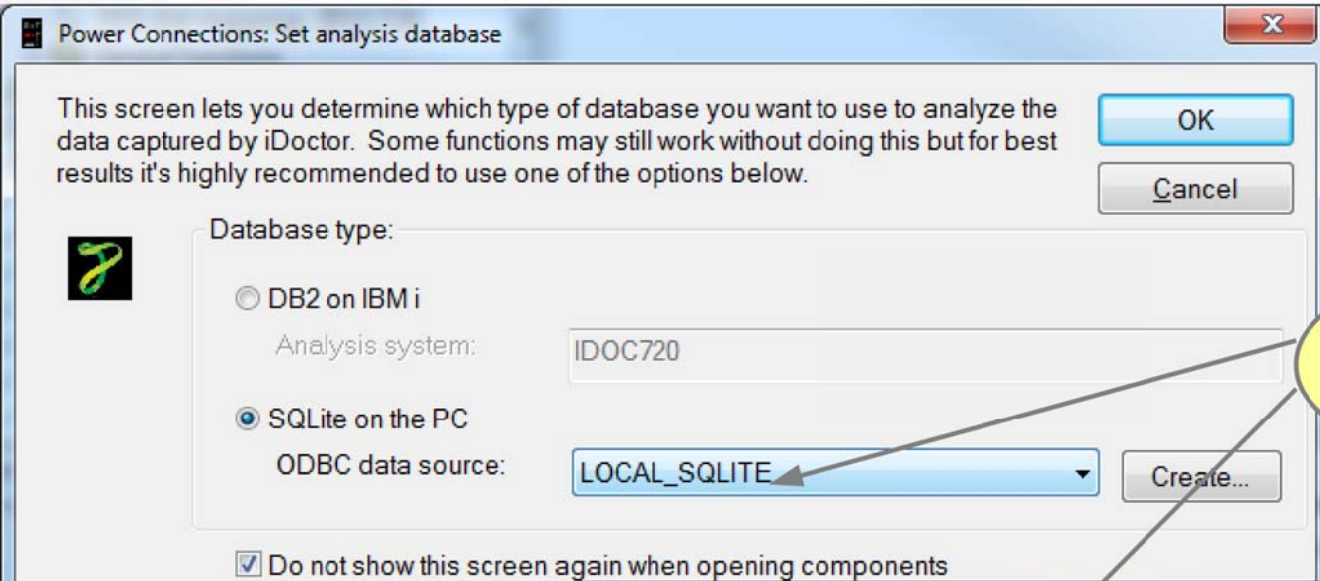
Create...

Do not show this screen again when opening components

OK

Cancel

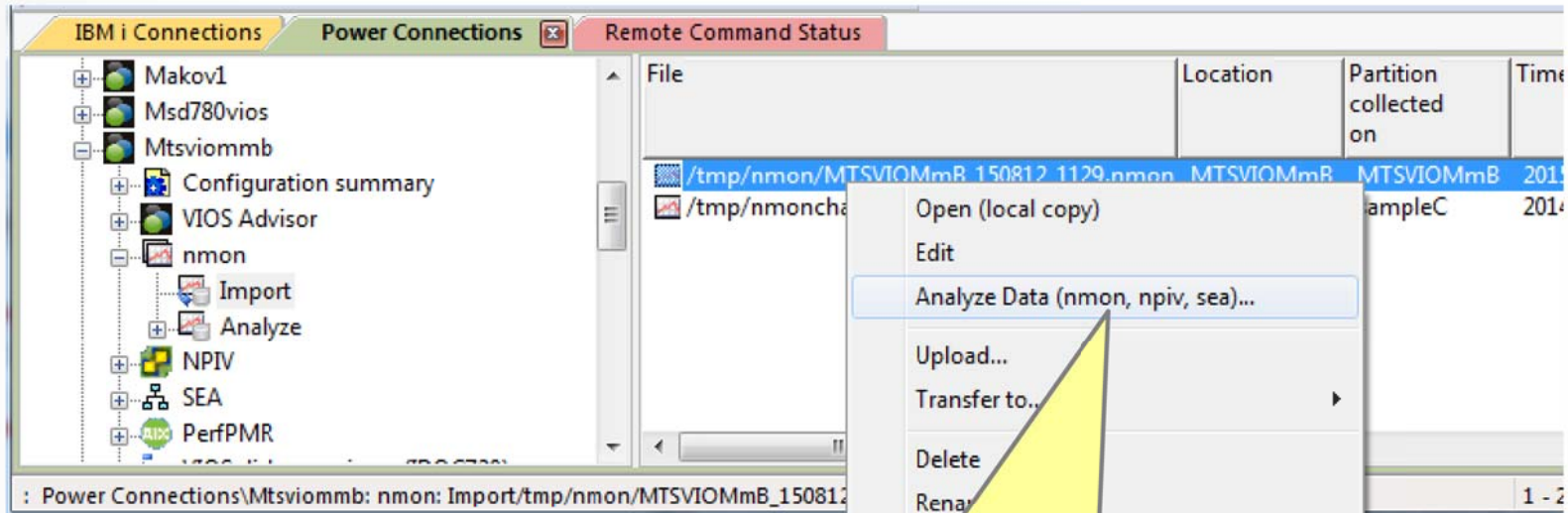
# Working with SQLite iDoctor data



# Edit the ODBC connection to see where the file is located

The screenshot shows the 'Edit Power Connection' dialog box. The 'Name' field contains 'LOCAL\_SQLITE'. The 'Connection type' dropdown is set to 'SQLite'. The 'Database' field contains 'C:\sqlite\iDoctor.sqlite' and is highlighted with a red box. A 'Browse...' button is next to the database field. The dialog also includes 'OK' and 'Cancel' buttons. In the background, a context menu is open over the 'LOCAL\_SQLITE' connection in the 'Power Connections' tree, with the 'Edit' option selected.

# Importing nmon data for analysis



Right click and select Analyze Data



# Analyze Data screen

Analyze Data (nmon, npiv, sea) on IDOC720

Use this option to import \*.nmon, \*.npiv or \*.sea files into your database for analysis purposes.

Data to analyze:

File

C:\nmon\nmon12.nmon

Add Files...  
Remove

Mode:

Normal  
 Append new  
 Merge

Collection name prefix: test Library: nmon\_sept Starting index: 1  Overwrite

Description:

Disk Mappings (VIOS to IBM i)

Select the disk mapping(s) that indicates the IBM i device resource names and disk unit numbers associated with each disk or fiber channel device on the VIOS.

Disk mapping	Library	Status	Created by	Created on	Description	File
QAIDRCORR_D	NMON	Complete	MCCARGAR	2015-04-16	VIOS-IBM i IDOC720 (16) Disk Mapping <V00.01.00>	Q...
QAIDRCORR1	MCBRIDE	Complete	MCCARGAR	2013-05-24	VIOS-IBM i IDOC720 (16) Disk Mapping <V00.01.00>	Q...
QAIDRCORR2	NMON	Complete	MCCARGAR	2013-05-24	VIOS-IBM i IDOC720 (16) Disk Mapping <V00.01.00>	Q...

Import Cancel

Create library  
If it does not exist

Create library on IDOC720

The library 'NMON\_SEPT' does not exist. Create it now?

Yes No

Specify Disk  
Mapping File  
(optional)



# Analyze Data modes

Mode:

- Normal
- Append new
- Merge

- Normal
  - Creates 1 collection per file
  
- Append new
  - Use this mode to update an existing collection with the newest data from the same original file.
  - (i.e. If active collection is running and you want to add the latest data.)
  
- Merge
  - Allows you to combine many files of the same type into a single collection. Can be used to analyze larger time periods, multiple LPARs at once, etc.
  - **Note:** Multiple LPAR graphs are not yet implemented.

# Available nmon graphs and reports

Time	System	Status	Command
✓ 09/11/15 16:55:37	Idoc720	File sent successfully (.81 seconds)	put C:\nmon\nmon12.nmon /tmp/nmon12.nmon
✓ 09/11/15 16:55:37	Idoc720	Analysis completed successfully (4.04 seconds)	QSYS/RUNSQL SQL('Call qidrgui/QIDRNMADB2 ("NMON_SEPT", "TEST001", 0, "/tmp/nmon12.nmon", "", "

Check remote command Status window for progress

Expand library and Collection

The screenshot shows the IBM iDoctor interface with the following components:

- Tree View (Left):** Shows a hierarchy of folders including 'Analyze', 'Mccargar1', 'Nmon\_sept', 'SQL tables', and 'TEST001' (highlighted).
- Report Folder List (Right):**

Report folder	Description
SQL tables	
nmon Analyzer graphs	These reports are designed to be clones of the graphs found in nmon Analyzer
nmon Analyzer sheets	These reports are designed to be clones of the data sheets found in nmon Analyzer
System graphs	Reports displaying system overviews
System configuration	Reports displaying system configuration information
CPU graphs	Reports displaying CPU statistics
Disk graphs	Reports displaying disk statistics (utilizes the VIOS -> IBM i disk)
Server-side output files	Power Connections output files
User-defined queries	Reports defined previously over Power Connections data
User-defined graphs	Graphs defined previously over Power Connections data
- Callouts:**
  - A yellow callout points to the 'TEST001' folder in the tree view.
  - A yellow callout points to the 'nmon Analyzer graphs' and 'nmon Analyzer sheets' entries in the list.

Graph and report folders

# nmon → nmon Analyzer graphs

The screenshot displays the IBM iDoctor interface. The left pane shows a tree view of connections, with 'Nmon\_sept' expanded to show 'nmon Analyzer graphs' selected. The right pane shows a list of report folders, including 'SYS\_SUMM - System summary - physical CPUs vs disk I/Os', 'DISK\_SUMM - Disk total KB/sec overview', and 'CPU\_SUMM - CPU overview'. A yellow callout bubble points to the 'nmon Analyzer graphs' folder, stating: 'Provides the same 80+ graphs provided in the Excel nmon Analyzer Ron McCargar nmon Analyzer also.'

IBM iDoctor for IBM i C01174 [C:\DOCTOR\W81\EXE\DEBUG2\DOCTOR.EXE 09/11/2015 16:07:12] CA 110...

File Edit View Window Help

IBM i Connections Power Connections Remote Command Status

Nmon\_sept

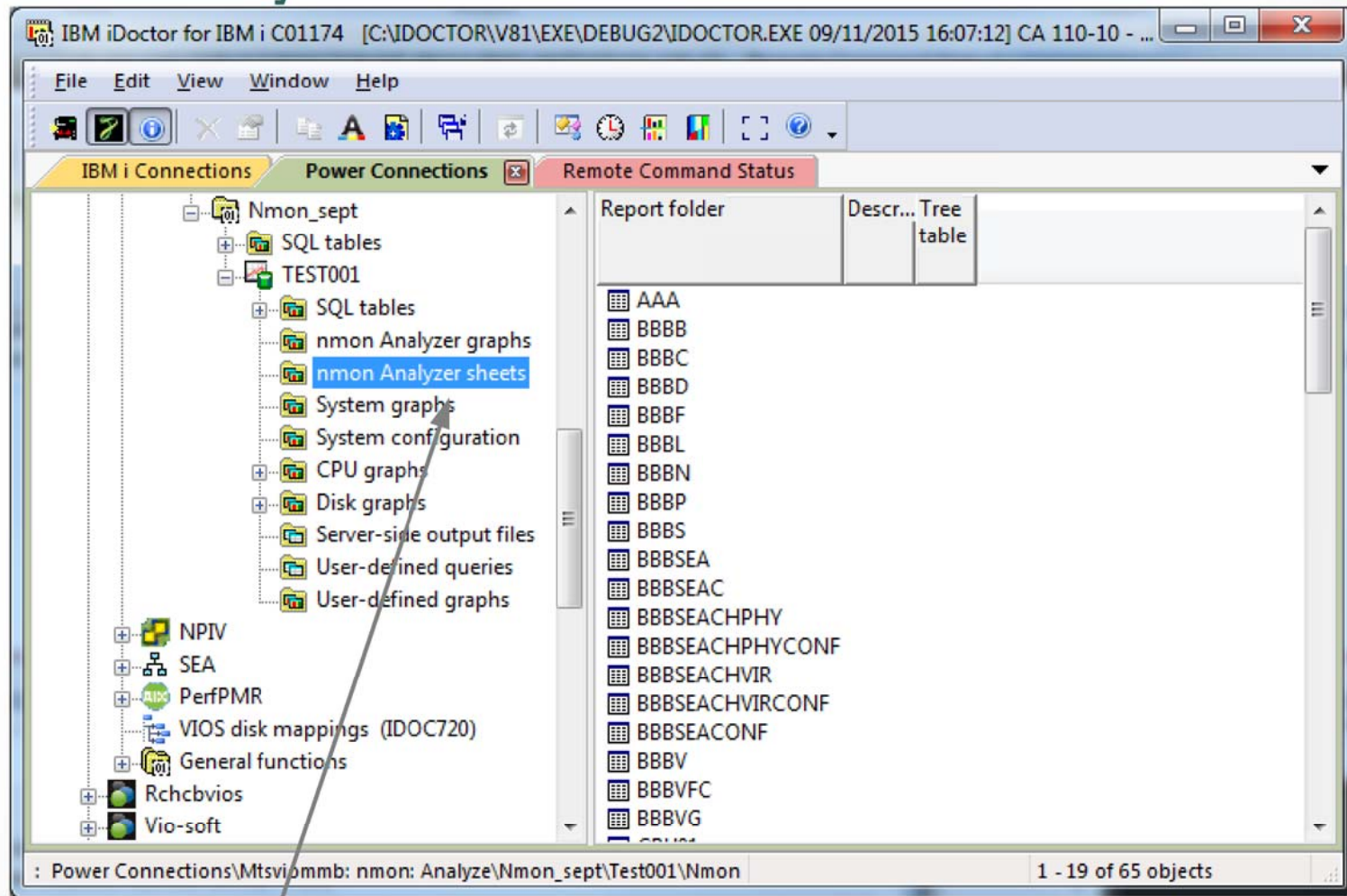
- SQL tables
- TEST001
  - SQL tables
  - nmon Analyzer graphs
  - nmon Analyzer sheets
  - System graphs
  - System configuration
  - CPU graphs
  - Disk graphs
  - Server-side output files
  - User-defined queries
  - User-defined graphs
- NPIV
- SEA
- PerfPMR
- VIOS disk mappings (IDOC720)
- General functions
- Rchcbvios
- Vio-soft
- Vios1-dilling
- Vaa
- Mako02
- Mako03
- Mako04
- Mako05
- Mako06
- Mako07
- Mako09
- Mako10
- Mako21
- Mako22

Report folder

- SYS\_SUMM - System summary - physical CPUs vs disk I/Os
- SYS\_SUMM - System summary - CPU % vs disk I/Os
- DISK\_SUMM - Disk total KB/sec overview
- DISK\_SUMM - Disk total KB/sec by operation
- LPAR - Physical CPU vs Entitlement
- LPAR - CPU % vs VPs
- LPAR - Shared CPU Utilization
- CPU\_SUMM - CPU Overview
- CPU\_SUMM - Logical CPUs
- CPU\_SUMM - CPU by Thread
- CPU - 1 overview
- CPU - 2 overview
- CPU - 3 overview
- CPU - 4 overview
- DISKAVGRI0 - Disk IO average reads per second by disk
- DISKAVGRI0 - Disk IO average reads per second overview
- DISKAVGWIO - Disk IO average writes per second by disk
- DISKAVGWIO - Disk IO average writes per second overview
- DISKBSIZE - Disk block size by disk
- DISKBSIZE - Disk block size overview
- DISKBUSY - Disk % busy by disk
- DISKBUSY - Disk % busy overview
- DISKREAD - Disk read KB/sec by disk
- DISKREAD - Disk read KB/sec overview
- DISKRIO - Disk IO reads per second by disk
- DISKRIO - Disk IO reads per second overview
- DISKRXFER - Transfers from disk (reads) per second by disk
- DISKRXFER - Transfers from disk (reads) per second overview
- DISKWIO - Disk IO writes per second by disk
- DISKWIO - Disk IO writes per second overview
- DISKWRITE - Disk write KB/sec by disk

© 2 : Power Connections\Mtsviommb: nmon: Analyze\Nmon\_sept\Test001\N 1 - 31 of 83 objects

# nmon → nmon Analyzer sheets



Similar look and feel as NMON  
Analyzer spreadsheets

# nmon → System Graphs

The screenshot displays the IBM iDoctor application interface. The left pane shows a tree view of connections and data sources, including 'Nmon\_sept' with sub-items like 'SQL tables', 'TEST001', 'nmon Analyzer graphs', 'System graphs', 'System configuration', 'CPU graphs', 'Disk graphs', 'Server-side output files', 'User-defined queries', and 'User-defined graphs'. The right pane, titled 'Remote Command Status', shows a list of 16 objects under the 'Report folder'. A yellow callout bubble points to the 'System graphs' category in the tree and the list of objects, containing the text 'System level graphs from nmon data'.

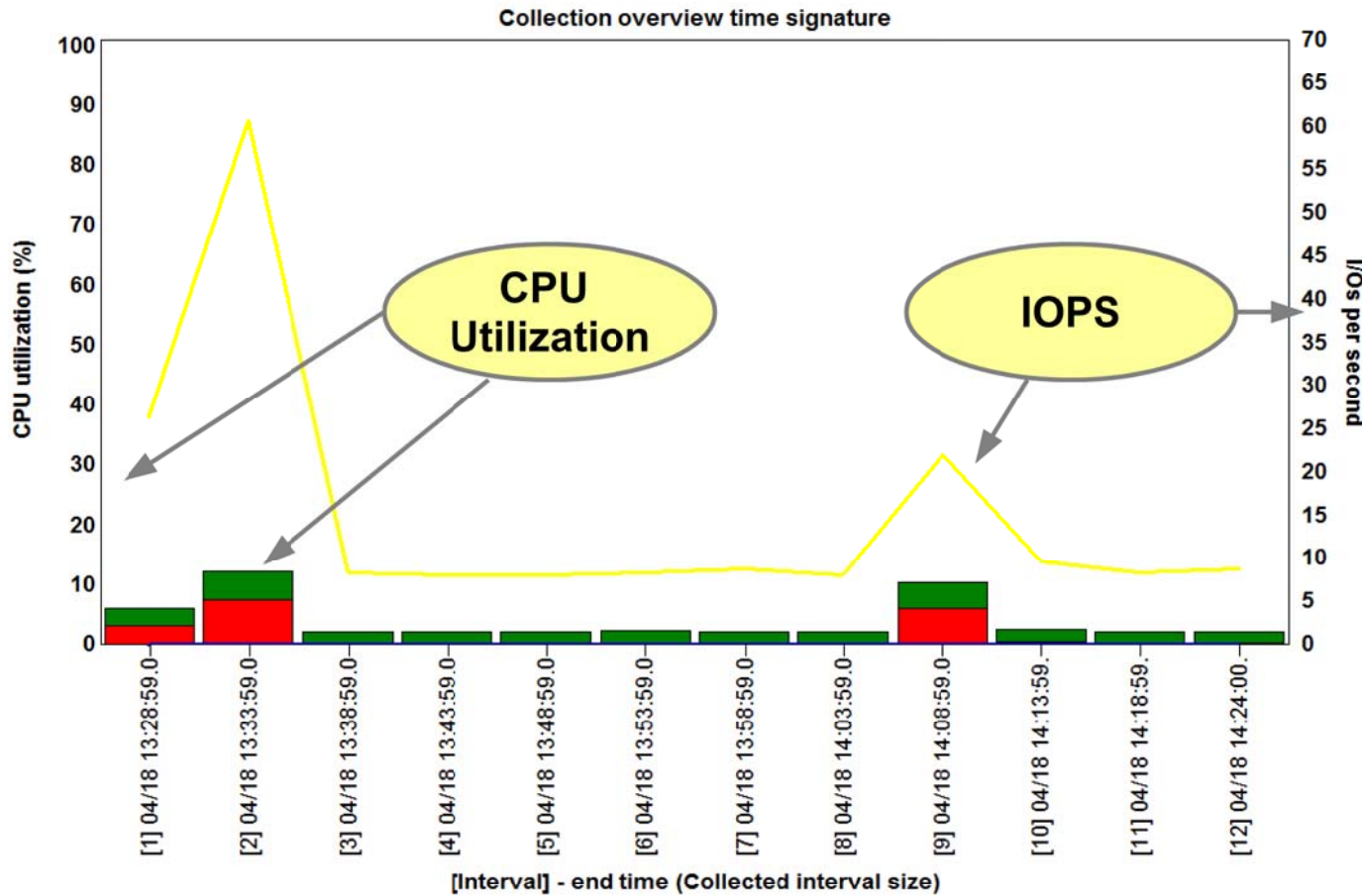
Report folder	Descr...	Tree table
Collection overview time signature		
CPUs varied on overview		
Kernel read/write characters transferred system calls		
Kernel file system functions		
Memory free		
Memory totals		
Memory allocations by category		
VMTUNE parameters		
Paging rates to/from paging space		
Paging rates to/from file system space		
Page scan:free ratio		
Processes: run queue length and swap-ins		
Processes: pswitch and syscall		
Processes: fork and exec		
Processes: read and write		
Processes: sem and msg		

1 - 16 of 16 objects



# nmon → System Graphs → Collection overview time signature

CTCIHA9V.RCHLAND.IBM.COM/NMON\_APRIL/TEST01001/Collection overview time signature - #1



X-axis (Labels)
[Interval] - end time (Collected interval size)
Primary Y-axis (Bars)
User CPU utilization (%)
System CPU utilization (%)
Secondary Y-axis (Lines)
HDISK I/Os per second
EMC/PowerPath Disk I/Os per second
Flyover Fields
Total active CPUs (varied on)
Available Fields
[Interval] - timestamp
MBRNAME
Interval number
Minimum interval timestamp
Maximum interval timestamp
Interval delta time (seconds)
Interval delta time (usecs)
CPU utilization (%)
CPU wait (%)
CPU idle (%)
iget function calls per second
namei function calls per second
dirblk function calls per second
Read characters transferred per second (millions)
Write characters transferred per second (millions)
Real memory free (%)
Virtual memory free (%)
Real memory free (MBs)
Virtual memory free (MBs)
Real memory total (MBs)
Virtual memory total (MBs)
File pages (%)
MINPERMPCT
MAXPERMPCT
MINPGSFREE
MAXPGSFREE
User processes (%)
File system cache (%)
System segments (%)

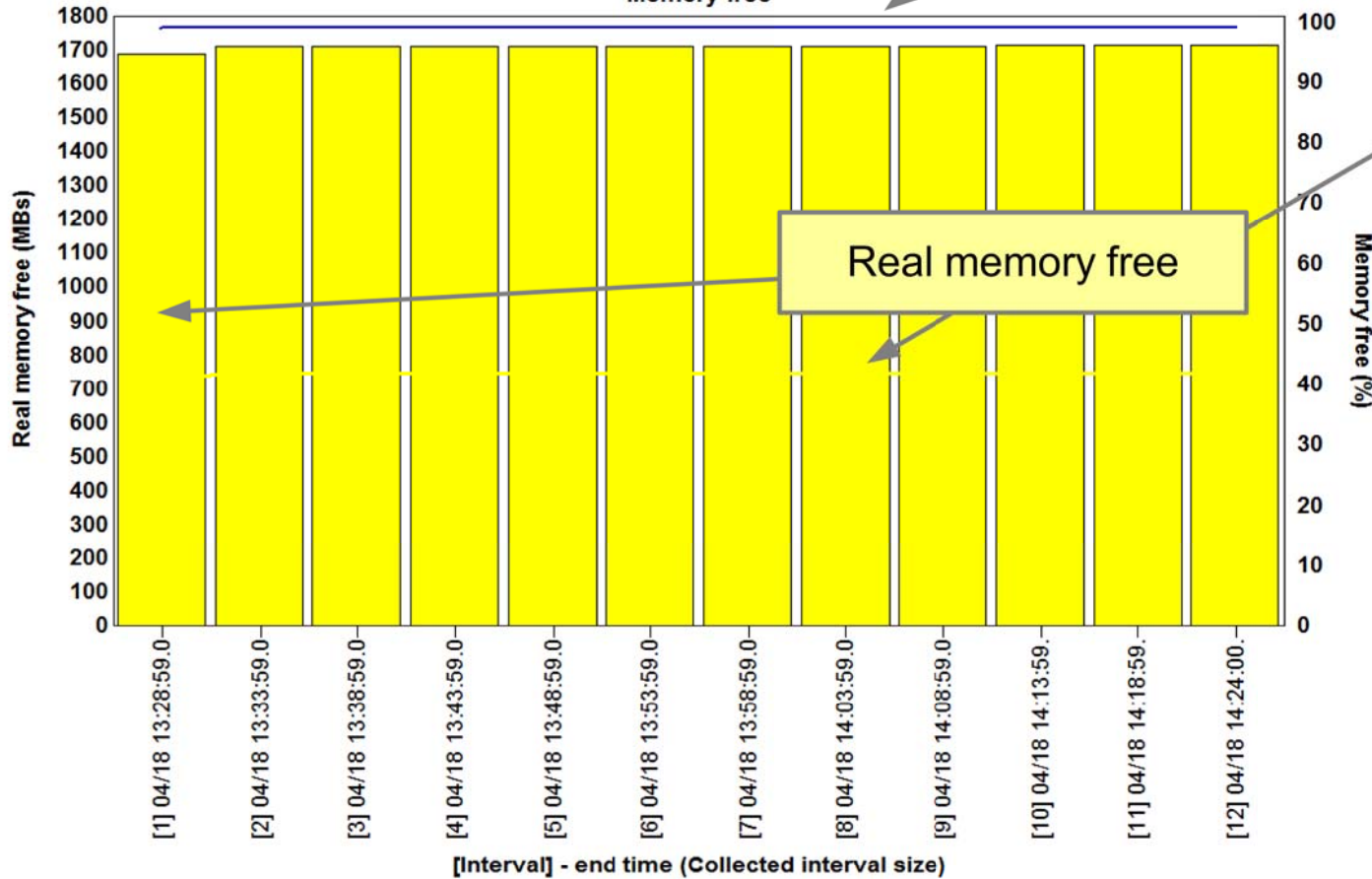


# nmon → System Graphs → Memory free

CTCIHA9V.RCHLAND.IBM.COM/NMON\_APRIL/TEST01001/Memory free - #1

Virtual memory free

Memory free



Real memory free

Memory free (%)

- X axis (Labels)
- [Interval] - end time (Collected interval size)
- Primary Y-axis (Bars)
- Real memory free (MBs)
- Secondary Y-axis (Lines)
- Real memory free (%)
- Virtual memory free (%)
- Flyover Fields
- Available Fields
- [Interval] - timestamp
- MBRNAME
- Interval number
- Minimum interval timestamp
- Maximum interval timestamp
- Interval delta time (seconds)
- Interval delta time (usecs)
- User CPU utilization (%)
- System CPU utilization (%)
- CPU utilization (%)
- CPU wait (%)
- CPU idle (%)
- Total active CPUs (varied on)
- HDISK I/Os per second
- EMC/PowerPath Disk I/Os per second
- iget function calls per second
- namei function calls per second
- dirblk function calls per second
- Read characters transferred per second (millions)
- Write characters transferred per second (millions)
- Virtual memory free (MBs)
- Real memory total (MBs)
- Virtual memory total (MBs)
- File pages (%)
- MINPERMPCT
- MAXPERMPCT
- MINPGSFREE
- MAXPGSFREE
- User processes (%)
- File system cache (%)
- System segments (%)

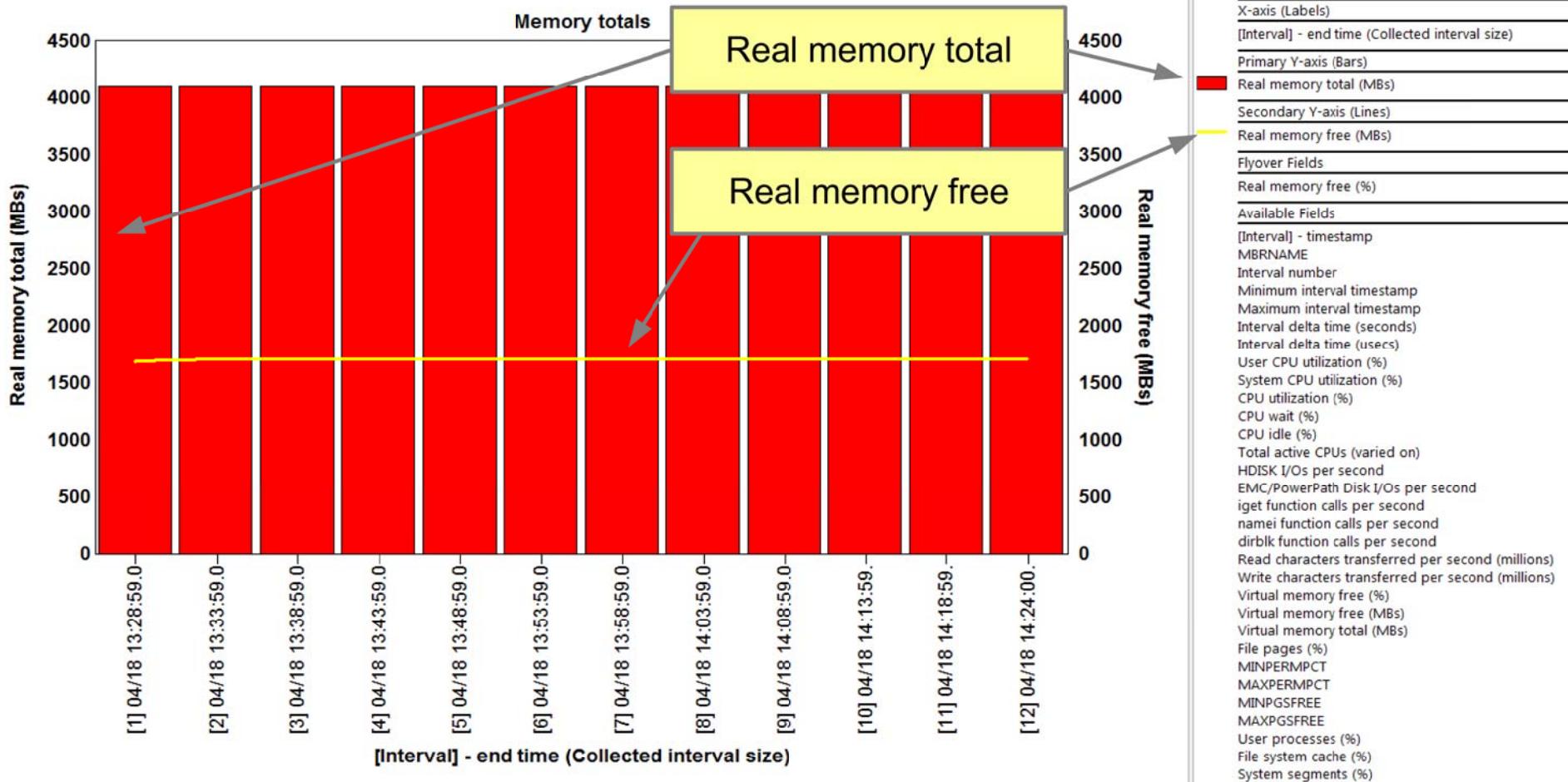




# nmon → System Graphs → Memory totals

CTCIHA9V.RCHLAND.IBM.COM/NMON\_APRIL/TEST01001/Memory free - #1

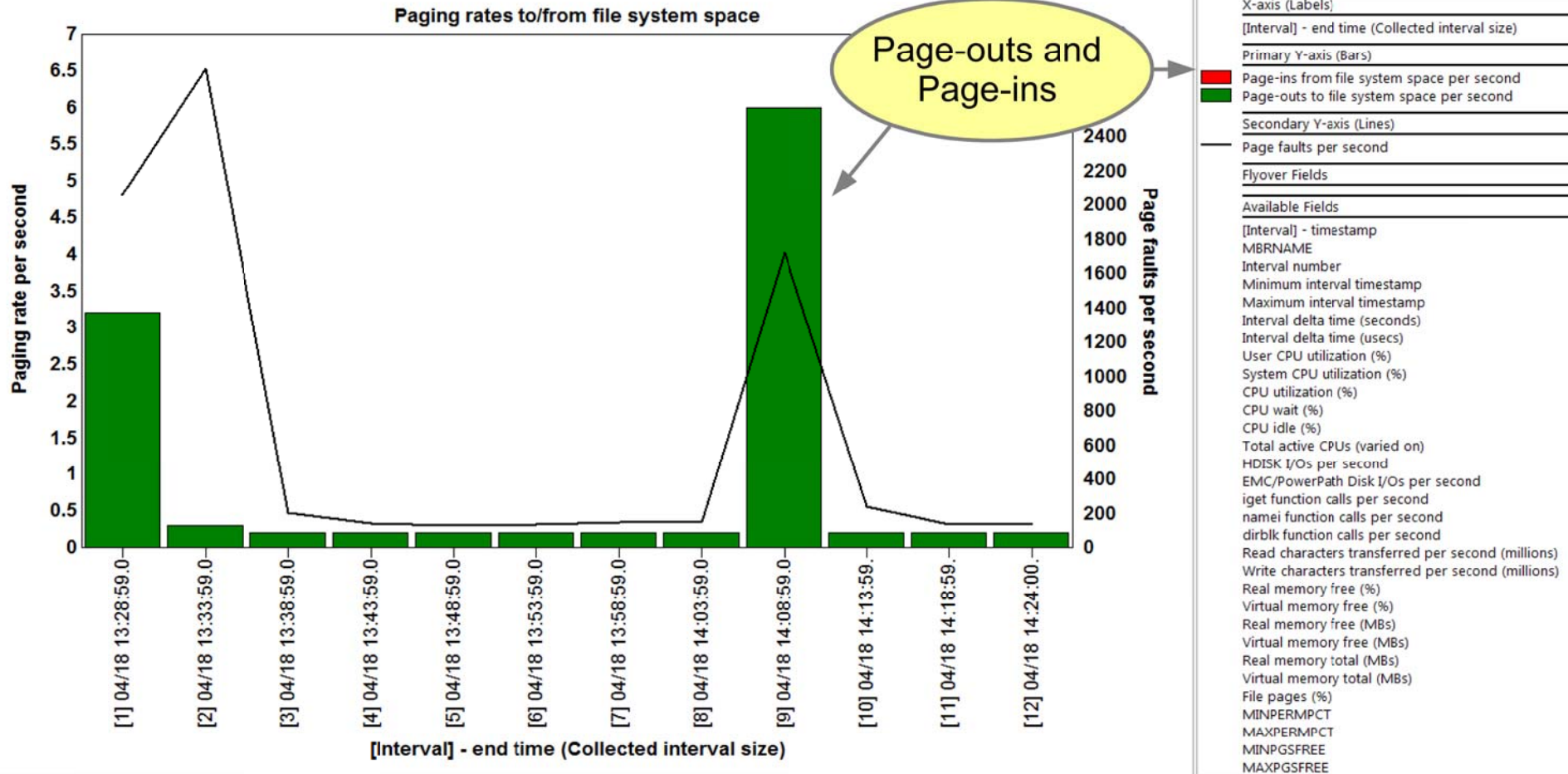
CTCIHA9V.RCHLAND.IBM.COM/NMON\_APRIL/TEST01001/Memory totals - #1





# nmon → System Graphs → Paging rates to/from file system space

CTCIHA9V.RCHLAND.IBM.COM/NMON\_APRIL/TEST01001/Paging rates to/from file system space - #1



# nmon → System Configuration Folder

The screenshot shows the IBM iDoctor application window. The left pane displays a tree view of connections and folders. The right pane shows a list of configuration reports.

**Left Pane (Tree View):**

- IBM i Connections
- Power Connections
- Remote Command Status
- Nmon\_sept
  - SQL tables
  - TEST001
    - SQL tables
    - nmon Analyzer graphs
    - nmon Analyzer sheets
    - System graphs
    - System configuration
    - CPU graphs
    - Disk graphs
    - Server-side output files
    - User-defined queries
    - User-defined graphs
- NPIV
- SEA
- PerfPMR
- VIOS disk mappings (IDOC720)
- General functions
- Rchcbvios
- Vio-soft

**Right Pane (Report folder):**

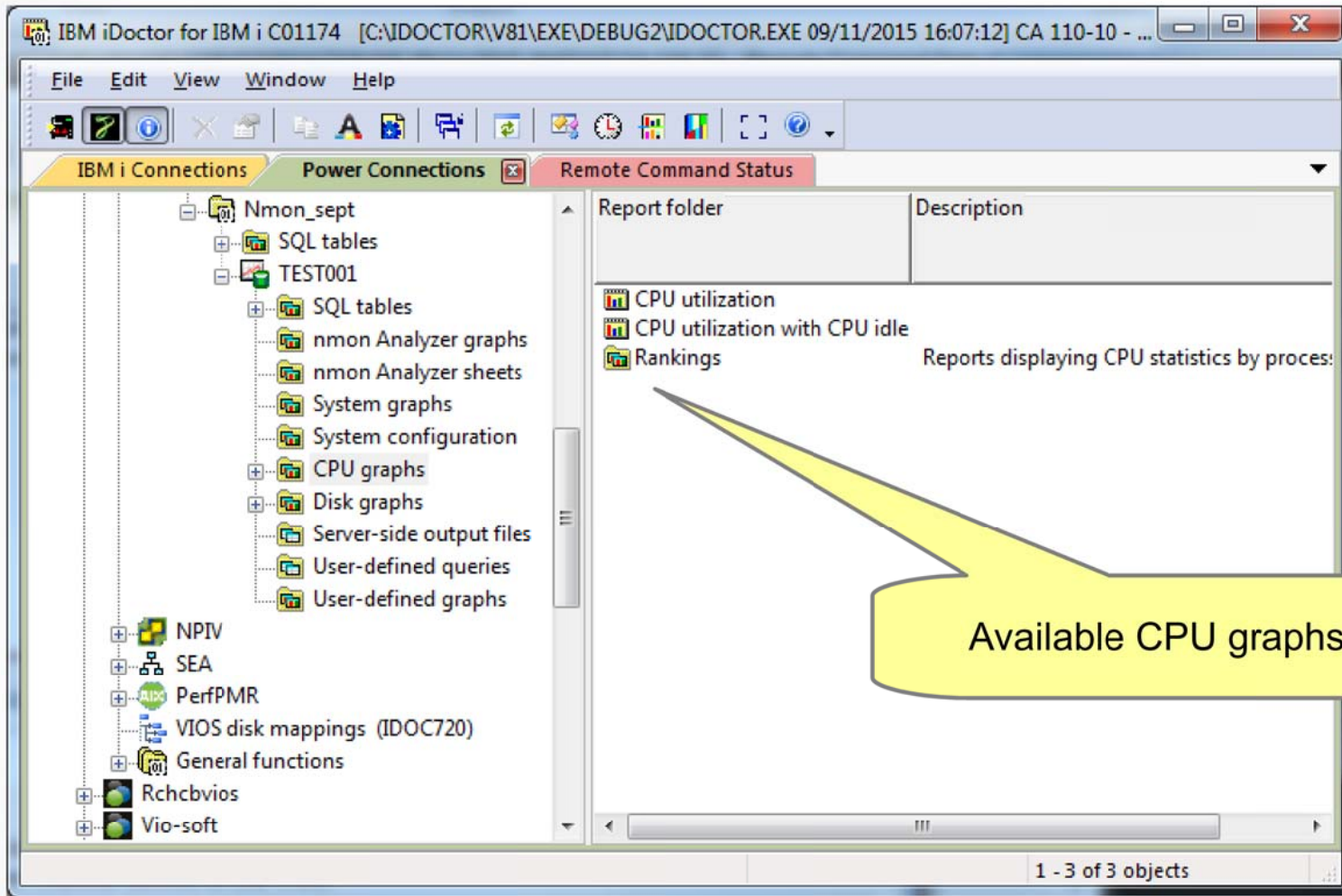
Report folder	Descr...	Tree table
Logical volumes (BBBC)		
I/O adapters (BBBD)		
Network adapters (BBBN)		
Command output (BBBP)		
Volume groups (BBBV)		

A yellow callout bubble points to the 'System configuration' folder in the left pane and the list of reports in the right pane.

**Callout Bubble:** Configuration reports

1 - 5 of 5 objects

# nmon → CPU Graphs



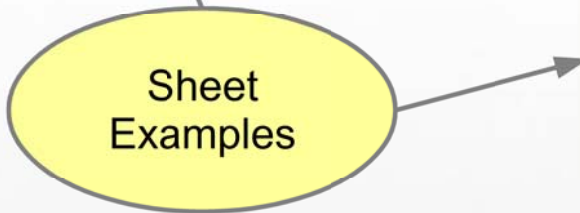
# nmon → nmon Analyzer Sheets

Ctciha9v.rchland.ibm.com/NMON\_APRIL/TEST01001/AAA - #1

DESC	VALUE1	VALUE2	VALUE3
AIX	6.1.9.15		
build	AIX		
command	/usr/bin/topas_nmon -f -s 300 -c 12 -t -10.1 -d -youtput_dir=/home/padmin/ctcvha9e -ystart_time=13:18:52	Apr18	2015
cpus	8	8	
date	18-APR-2015		
disks_per_line	150		
hardware	Architecture PowerPC Implementation POWER7_COMPAT_mode 64 bit		
host	ctcvha9e		
interval	300		
kernel	HW-type=CHRP=Common H/W Reference Platform Bus=PCI LPAR=Dynamic Multi-Processor 64 bit		
LPARNumberName	2	ctcvha9e	
MachineType	IBM	8233-E8B	
NodeName	ctcvha9e		
progname	topas_nmon		
runname	ctcvha9e		
SerialNumber	10001AP		
snapshots	12		
SubprocessorMode	Unknown		
time	13:18:53		
timestampsize	0		
TL	08		
user	padmin		
version	TOPAS-NMON		
VIOS	2.2.3.3		

Ctciha9v.rchland.ibm.com/NMON\_APRIL/TEST01001/CPU\_ALL - #1

INTSTRTIME	User CPU utilization (%)	System CPU utilization (%)	CPU wait (%)	CPU idle (%)	CPU utilization (%)	Logical CPUs
13:23:59	3.1000	2.9000	0	94	6	
13:28:59	7.5000	4.8000	0	87.7000	12.3000	
13:33:59	.3000	1.7000	0	97.9000	2	
13:38:59	.2000	1.8000	0	98	2	
13:43:59	.2000	1.8000	0	98	2	
13:48:59	.2000	2	0	97.8000	2.2000	
13:53:59	.2000	1.8000	0	97.9000	2	
13:58:59	.2000	1.8000	0	98	2	
14:03:59	6.1000	4.2000	0	89.7000	10.3000	
14:08:59	.4000	2	0	97.6000	2.4000	
14:13:59	.2000	1.8000	0	98	2	
14:19:00	.2000	1.8000	0	98	2	



# nmon → Disk Graphs

The screenshot shows the 'Power Connections' interface with the 'Remote Command Status' tab selected. The left pane shows a tree view of configurations, with 'nmon' expanded to 'Analyze' and then 'Disk graphs'. The right pane shows a list of report folders and their descriptions.

Report folder	Description
Disk percent busy<<DISKNAMELABEL>> for ASP <<DSASP>>	
I/O counts totals<<DISKNAMELABEL>> for ASP <<DSASP>>	
I/O size totals<<DISKNAMELABEL>> for ASP <<DSASP>>	
I/O size rates<<DISKNAMELABEL>> for ASP <<DSASP>>	
I/O rates totals<<DISKNAMELABEL>> for ASP <<DSASP>>	
Block sizes<<DISKNAMELABEL>> for ASP <<DSASP>>	
Service times<<DISKNAMELABEL>> for ASP <<DSASP>>	
Disk total KB/s	
By disk name	Reports displaying Hdisk rankings
By disk unit	Reports displaying Hdisk rankings
By disk path	Reports displaying Hdisk rankings
By ASP	Reports displaying Hdisk rankings
By disk type	Reports displaying Hdisk rankings

**Available Disk Overview and Rankings graphs**

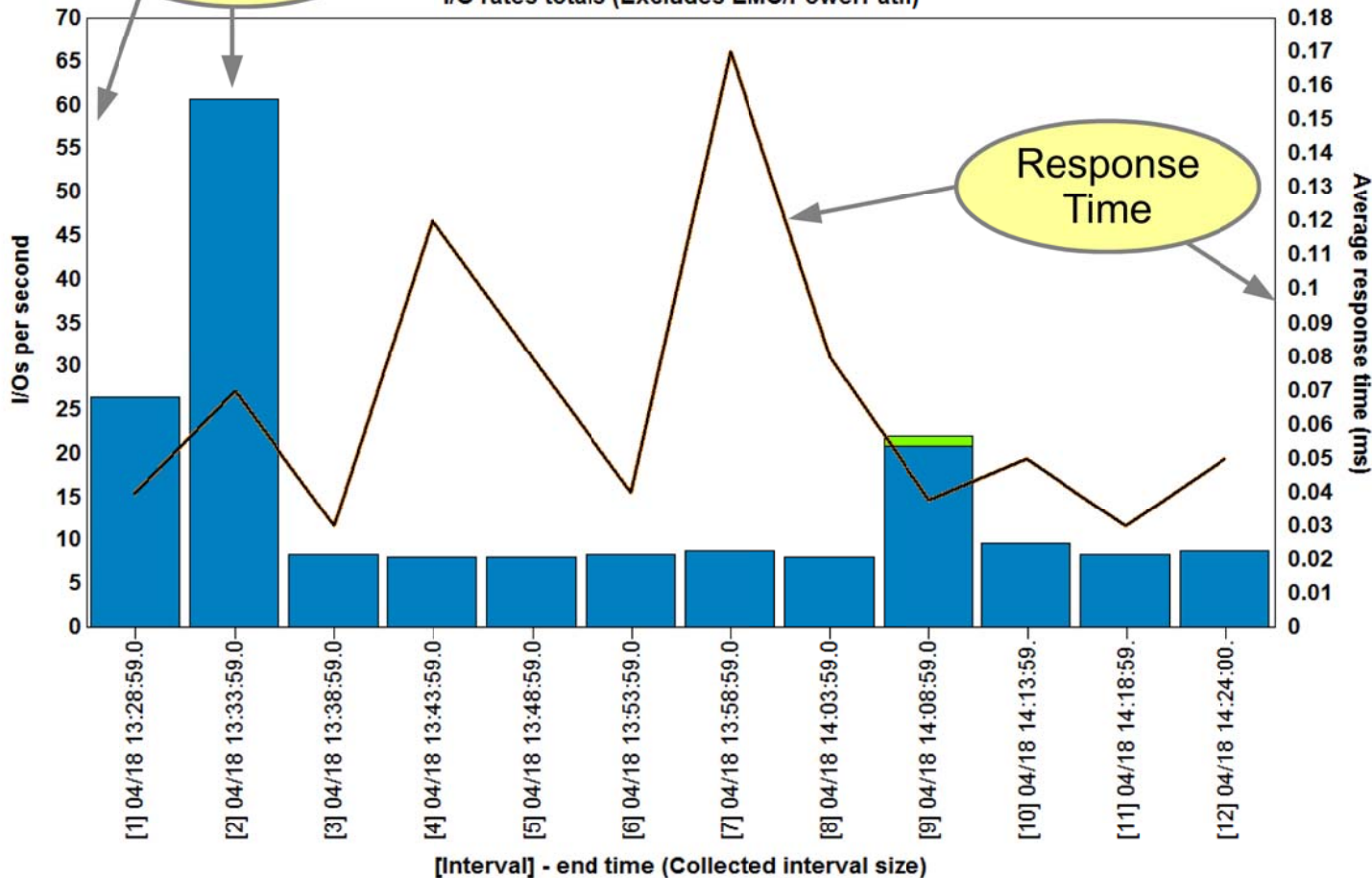


# nmon → I/O Rates Totals

CTCIHA9... RIL/TEST01003/I/O rates totals - #1

IOPS

### I/O rates totals (Excludes EMC/PowerPath)



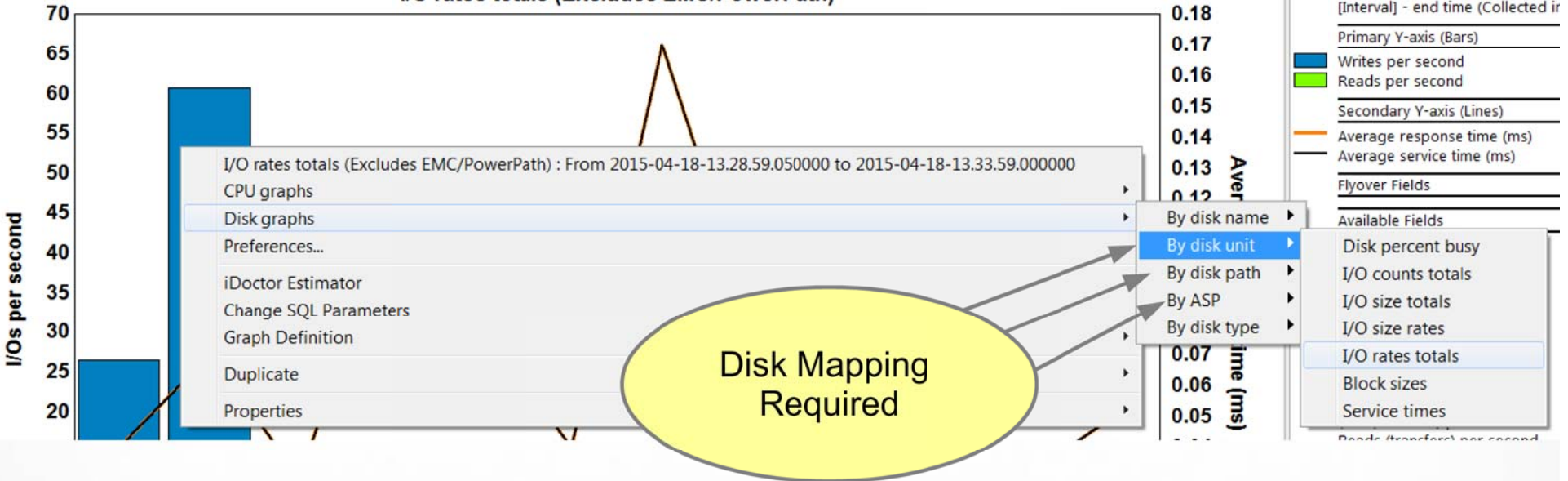
X-axis (Labels)	
[Interval] - end time	(Collected interval size)
Primary Y-axis (Bars)	
Writes per second	
Reads per second	
Secondary Y-axis (Lines)	
Average response time (ms)	
Average service time (ms)	
Flyover Fields	
Available Fields	
MBRNAME	
[Interval] - timestamp	
Interval number	
Minimum interval timestamp	
Maximum interval timestamp	
Interval delta time (seconds)	
Interval delta time (usecs)	
Disk read KBs per second	
Disk write KBs per second	
I/Os (transfers) per second	
Reads (transfers) per second	
Average block size (KBs)	
Average service time (ms)	
Average read service time (ms)	
Average write service time (ms)	
Average wait time (ms)	
Average disk busy (%)	
Weighted avg disk percent busy	
HDISK I/Os per second	
EMC/PowerPath Disk I/Os per second	
Total reads (megabytes)	
Total writes (megabytes)	
Total writes (thousands)	
Total reads (thousands)	
Average read service time	
Average write service time (ms)	
Reads per second (megabytes)	
Writes per second (megabytes)	



# nmon → Drill Downs Available

CTCIHA9V.RCHLAND.IBM.COM/NMON\_APRIL/TEST01003/I/O rates totals - #1

### I/O rates totals (Excludes EMC/PowerPath)



Disk Mapping Required

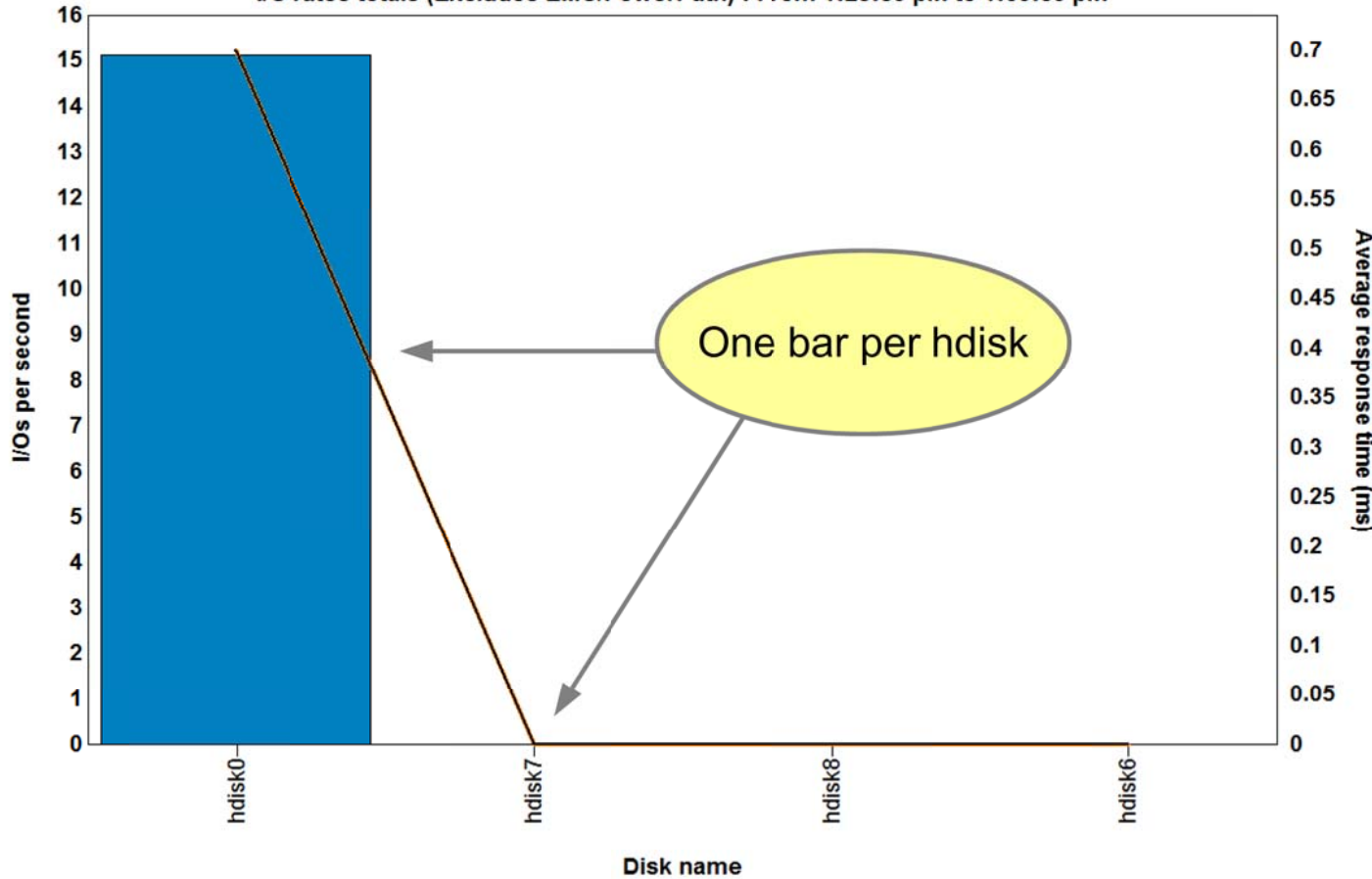




# nmon → I/O Rates totals by disk name

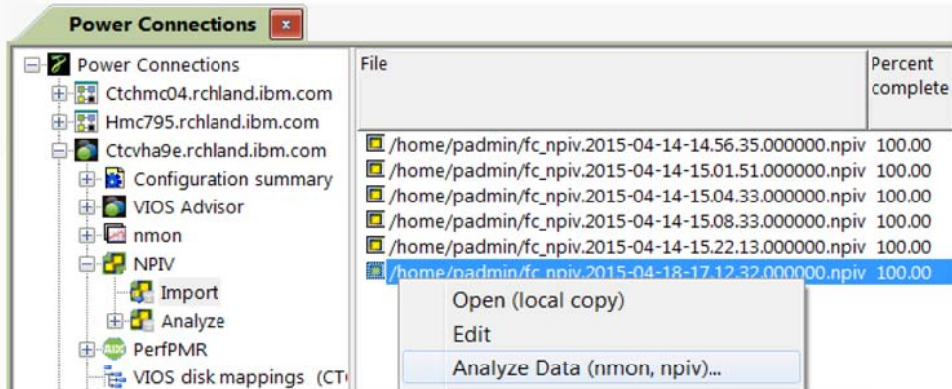
CTCIHA9V.RCHLAND.IBM.COM/NMON\_APRIL/TEST01003/I/O rates totals (Excludes EMC/PowerPath) : From 1:28:59 pm to 1:33:59 pm - #1

I/O rates totals (Excludes EMC/PowerPath) : From 1:28:59 pm to 1:33:59 pm



X-axis (Labels)
Disk name
Primary Y-axis (Bars)
Writes per second
Secondary Y-axis (Lines)
Average response time (ms)
Average service time (ms)
Flyover Fields
Available Fields
OBJVALUE
OBJNAME
DSKGRPTYPE
Average disk read KBs per second
Maximum disk read KBs per second
Weighted average disk read KBs per second
Average disk write KBs per second
Maximum disk write KBs per second
Weighted average disk write KBs per second
Average disk transfers per second
Maximum disk transfers per second
Weighted average disk transfers per second
Average disk block size KBs per second
Maximum disk block size (KBs)
Weighted average disk block size per second
Average disk busy (%)
Maximum disk busy (%)
Weighted avg disk percent busy
DISKRW
TOTMB
Total writes (megabytes)
Total reads (megabytes)
TOTRATE
Reads per second
Total writes (thousands)
Total reads (thousands)
Average read service time
Average write service time (ms)
TOTMBPERSEC
Reads per second (megabytes)
Writes per second (megabytes)

# Importing NPIV data for analysis



The screenshot shows the 'Power Connections' application window. On the left is a tree view with 'NPIV' expanded to show 'Import', 'Analyze', and 'PerfPMR'. The main pane displays a table of NPIV data collections with a context menu open over the last row.

File	Percent complete
/home/padmin/fc_npiv.2015-04-14-14.56.35.000000.npiv	100.00
/home/padmin/fc_npiv.2015-04-14-15.01.51.000000.npiv	100.00
/home/padmin/fc_npiv.2015-04-14-15.04.33.000000.npiv	100.00
/home/padmin/fc_npiv.2015-04-14-15.08.33.000000.npiv	100.00
/home/padmin/fc_npiv.2015-04-14-15.22.13.000000.npiv	100.00
/home/padmin/fc_npiv.2015-04-18-17.12.32.000000.npiv	100.00

The context menu options are: Open (local copy), Edit, and Analyze Data (nmon, npiv)...

Select one or more collections  
for analysis



# Analyze NPIV data

Analyze Data (nmon, npiv) on CTCIHA9V.RCHLAND.IBM.COM

Use this option to import \*.nmon or \*.npiv files into your database for analysis purposes. This data must have been previously transferred using ASCII mode.

Data to analyze:

File: /home/padmin/fc\_npiv.2015-04-18-17.12.32.000000.npiv

Buttons: Add Files..., Remove

Target library: NMON\_APRIL      Collection name prefix: TEST01

Description:

Disk Mappings (VIOS to IBM i)

Select the disk mapping(s) that indicates the IBM i device resource names and disk unit numbers associated with each disk or fiber channel device on the VIOS.

Disk	Library	Status	Created by	Created on	Description	File
QAIDRCORR_MAP01	BSMENGES	Complete	BSMENGES	2015-04-18	VIOS-IBM i CTCIHA9V(8) Disk Mapping <v00.01.00>	QAIDR001
QAIDRCORR_MYMAP	BSMENGES	Complete	BSMENGES	2015-04-17	VIOS-IBM i CTCIHA9V(8) Disk Mapping <v00.01.00>	QAIDR002
DAGBO2	BSMENGES	Complete	BSMENGES	2014-05-13	VIOS-IBM i CTCIHA9V(8) Disk Mapping <v00.01.00>	DAGBO2
MAP0516	QGPL	Complete	BSMENGES	2013-05-16	VIOS-IBM i LPDAC710(3) Disk Mapping <v00.00.09>	MAP0516
VIOSMAP0501A	QGPL	Complete	BSMENGES	2013-05-01	VIOS-IBM i CTCIHA9V(8) Disk Mapping <v00.00.09>	VIOSM00
VIOSMAP319B	QGPL	Complete	BSMENGES	2013-03-25	VIOS-IBM i CTCIHA9V(8) Disk Mapping <v00.00.09>	VIOSM00

Buttons: Import, Cancel

Create library  
If it does not exist

Create library on CTCIHA9V.RCHLAND.IBM.COM

The library 'NPIV\_APRILB' does not exist. Create it now?

Buttons: Yes, No

Specify Disk Mapping File (optional)

# NPIV → Overview Graphs

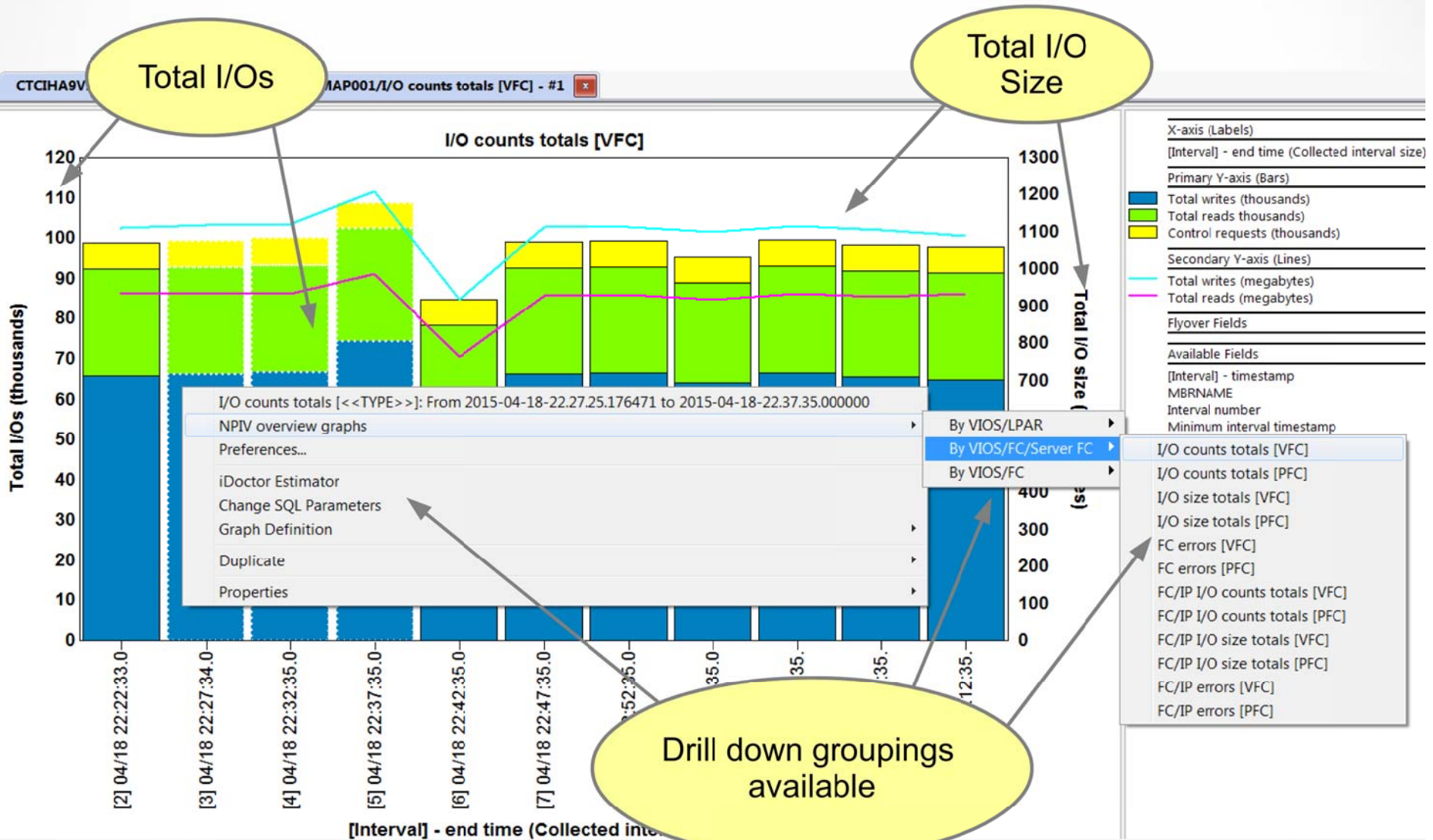
The screenshot shows the IBM iDoctor application window. The left pane displays a tree view of connections under 'NPIV'. The right pane shows a table of reports with columns 'Report folder' and 'Description'. A yellow callout box points to the 'Virtual fiber channel' and 'Physical fiber channel' entries in the table.

Report folder	Description
SQL tables	
Virtual fiber channel	Reports displaying virtual fiber channel statistics from FCSTAT
Physical fiber channel	Reports displaying physical fiber channel statistics from FCSTAT
NPIV configuration	Reports displaying NPIV configuration
Server-side output files	Power Connections server-side output files
User-defined queries	Reports defined by user
User-defined graphs	Graphs defined by user

Virtual Fiber Channel (VFC)  
Physical Fiber Channel (PFC)

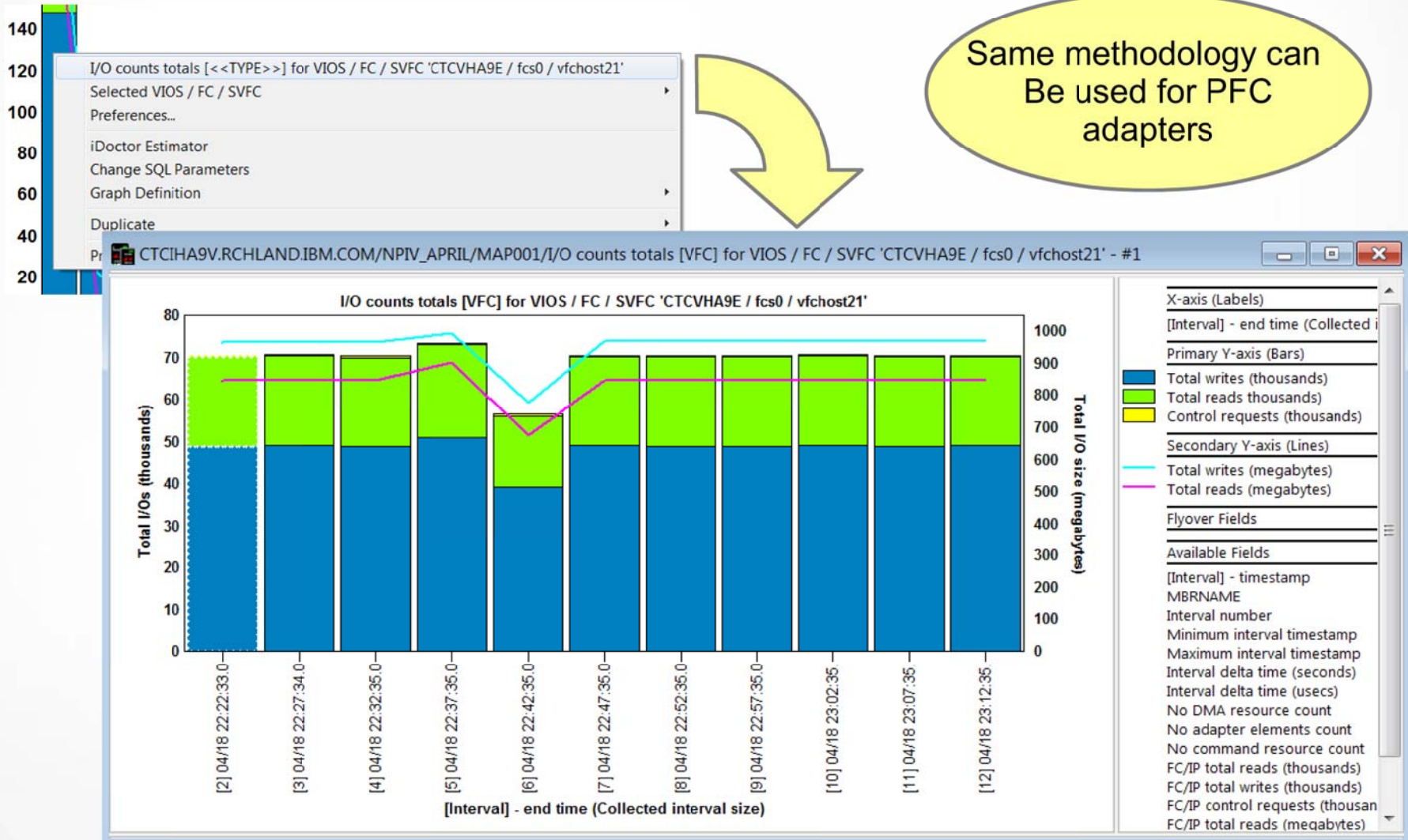


# NPIV → VFC I/O Counts





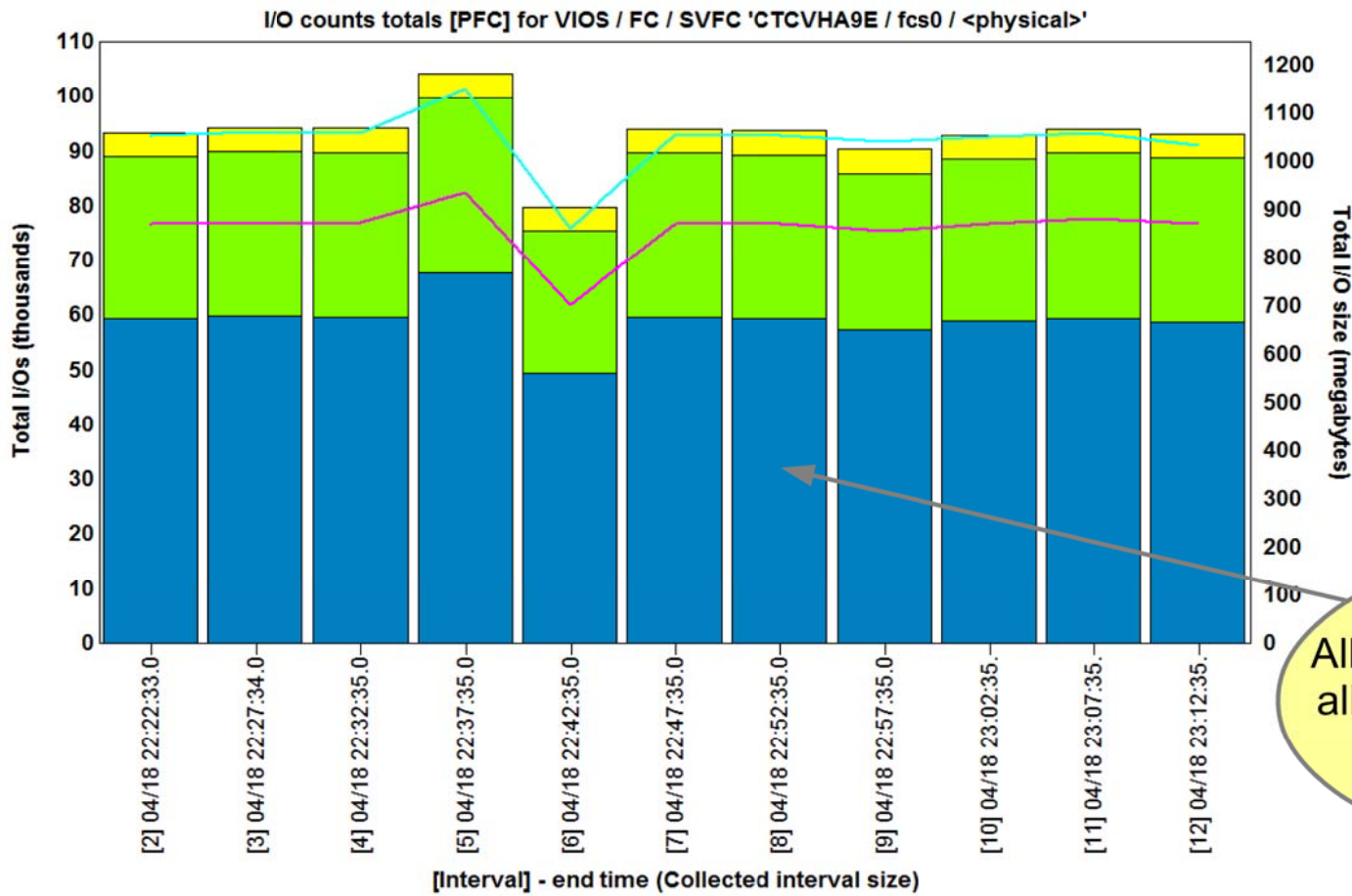
# NPIV → I/O Rates totals by VFC adapter





# NPIV → I/O counts totals for fcs0

CTCIHA9V.RCHLAND.IBM.COM/NPIV\_APRIL/MAP001/I/O counts totals [PFC] for VIOS / FC / SVFC 'CTCVHA9E / fc...



X-axis (Labels)
[Interval] - end time (Collected interval size)
Primary Y-axis (Bars)
Total writes (thousands)
Total reads (thousands)
Control requests (thousands)
Secondary Y-axis (Lines)
Total writes (megabytes)
Total reads (megabytes)
Flyover Fields
Available Fields
[Interval] - timestamp
MBRNAME
Interval number
Minimum interval timestamp
Maximum interval timestamp
Interval delta time (seconds)
Interval delta time (usecs)
No DMA resource count
No adapter elements count
No command resource count
FC/IP total reads (thousands)
FC/IP total writes (thousands)

All of the I/O for fcs0 from all mapped VFC adapters



# NPIV → Advanced Graphs

The screenshot shows the IBM iDoctor interface for IBM i C01174. The left pane displays a tree view of NPIV connections, with the path: NPIV > Analyze > Mccargar1 > C001 > Virtual fiber channel > Advanced selected. The right pane shows a list of 14 performance metrics for the selected path.

Report folder	Descr...	Tree table
📊	Total reads [VFC]	
📊	Total writes [VFC]	
📊	Control requests [VFC]	
📊	Total read sizes [VFC]	
📊	Total write sizes [VFC]	
📊	Average read size [VFC]	
📊	Average write size [VFC]	
📊	Read size per second [VFC]	
📊	Write size per second [VFC]	
📊	Reads per second [VFC]	
📊	Writes per second [VFC]	
📊	No DMA resource errors [VFC]	
📊	No adapter element errors [VFC]	
📊	No command resource errors [VFC]	

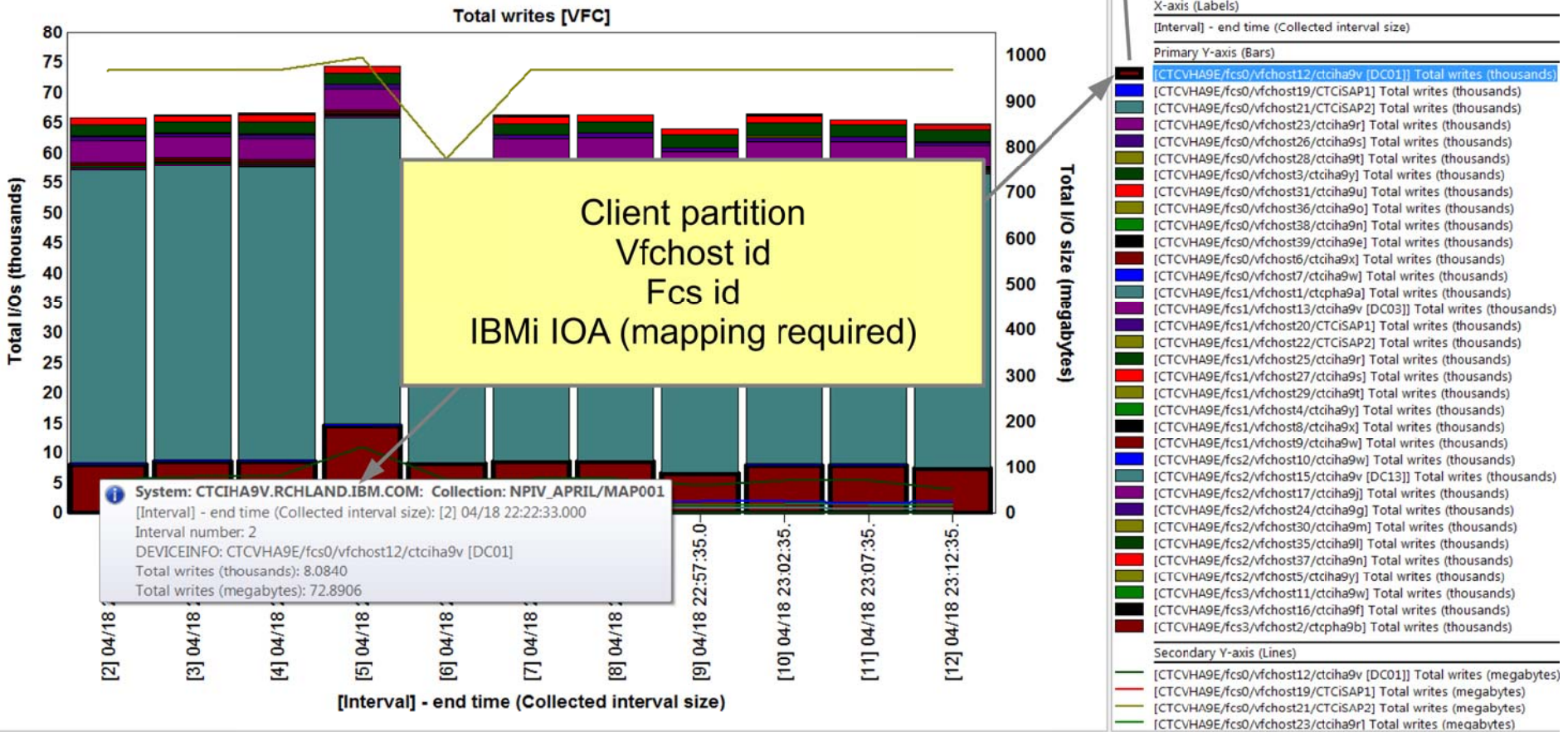
Power Connections\Mtsviommb: NPIV: Analyze\Mccargar1\C001\Virtual fiber channel\Advanced 1 - 14 of 14 objects



# NPIV → Total VFC writes

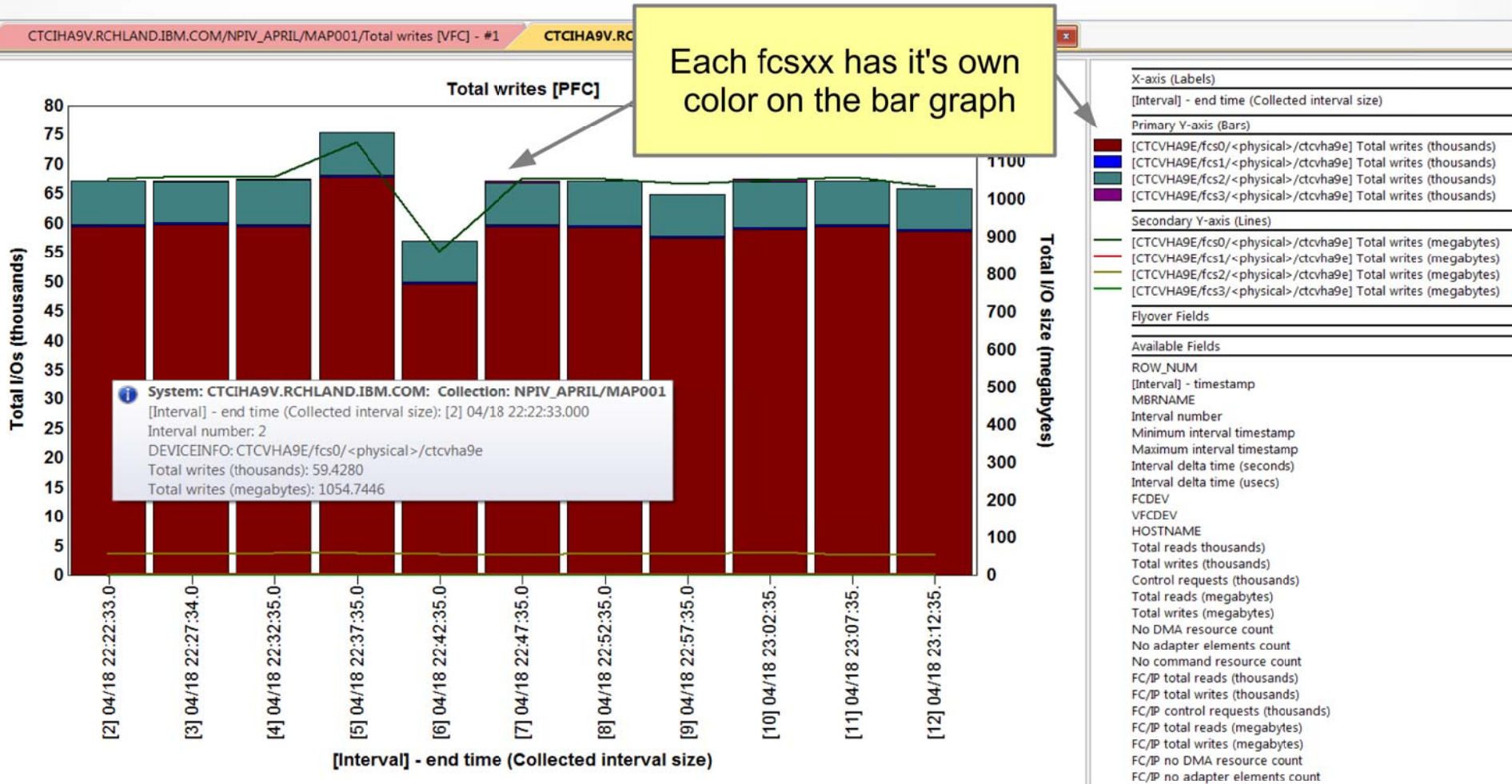
- [CTCVHA9E/fcs0/vfchost12/ctciha9v [DC01]] Total writes (thousands)
- [CTCVHA9E/fcs0/vfchost19/CTCiSAP1] Total writes (thousands)
- [CTCVHA9E/fcs0/vfchost21/CTCiSAP2] Total writes (thousands)

CTCIHA9V.RCHLAND.IBM.COM/NPIV\_APRIL/MAP001/Total writes [VFC] - #1

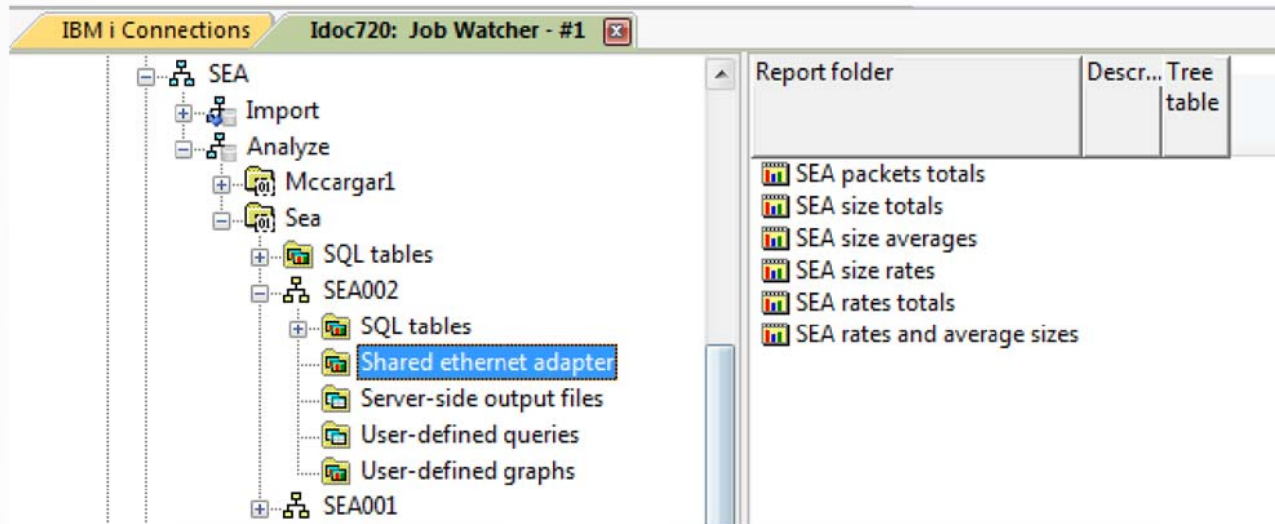










# NPIV → Total PFC writes



# SEA → Shared Ethernet Adapter graphs

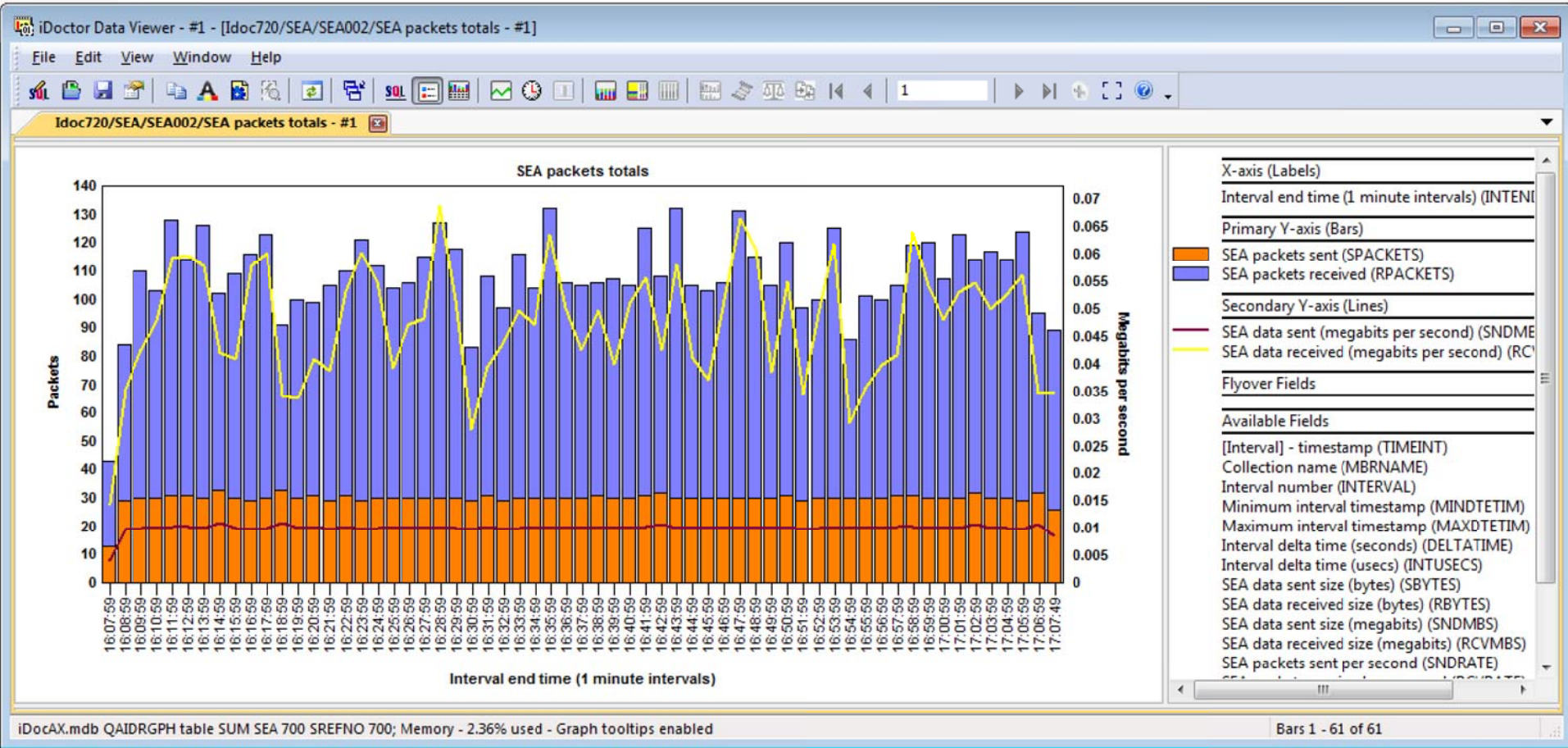


The screenshot shows the IBM i Connections Job Watcher interface. The left pane displays a tree view of the SEA folder structure. The right pane displays a list of report folders.

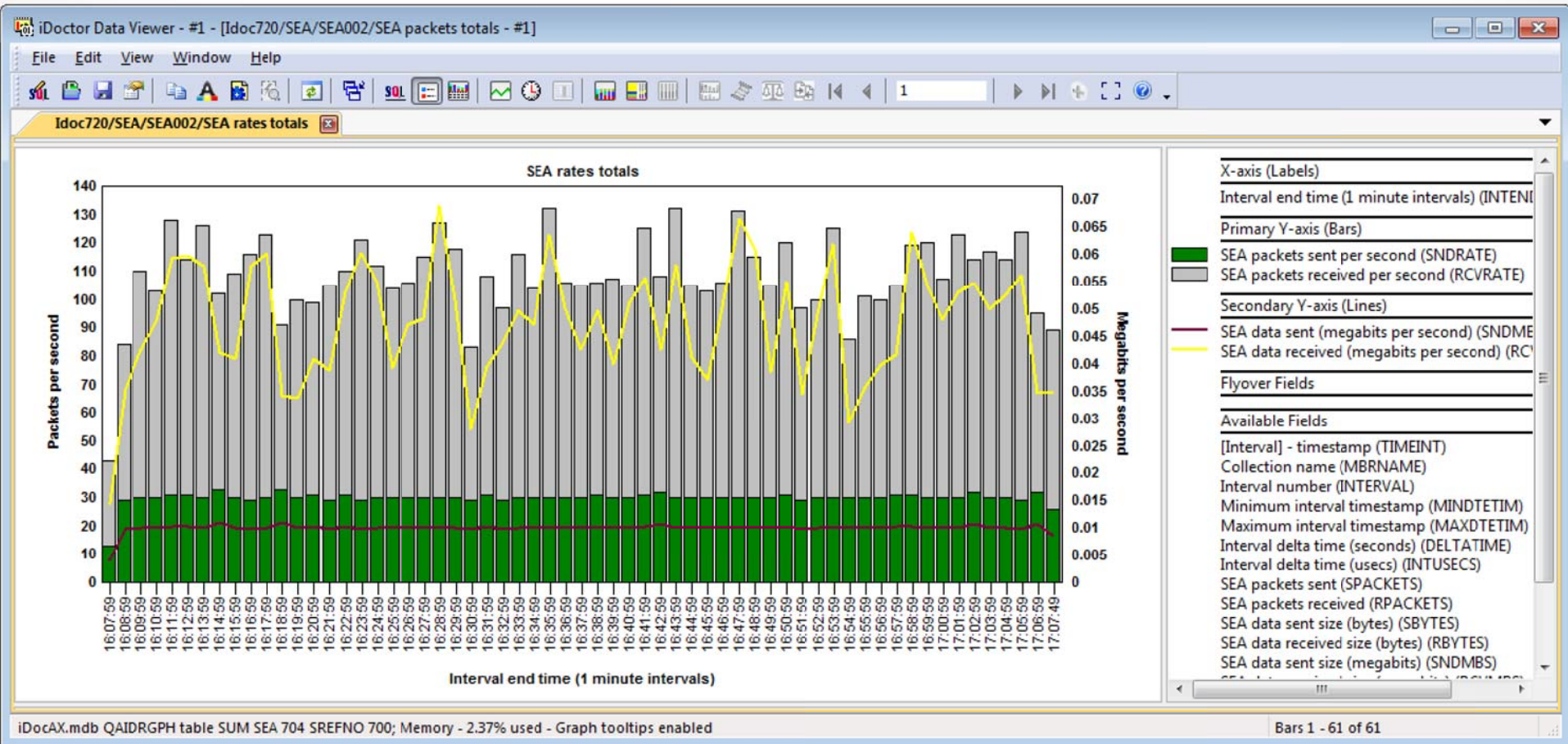
Report folder	Descr...	Tree table
 SEA packets totals		
 SEA size totals		
 SEA size averages		
 SEA size rates		
 SEA rates totals		
 SEA rates and average sizes		

Additional graphs to rank the adapters and show individual adapters over time will be added soon.

# SEA → SEA packets totals

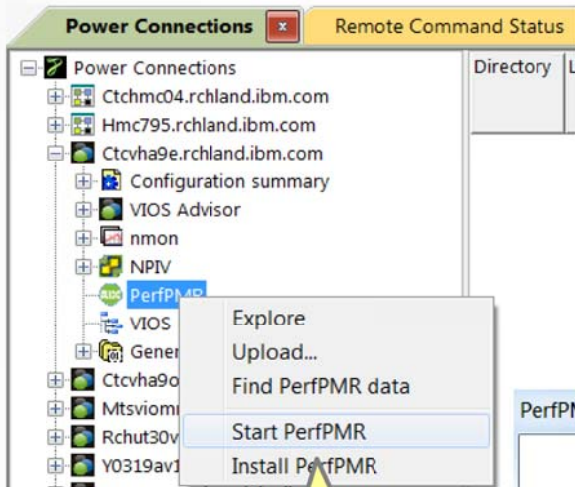


# SEA → SEA rates totals

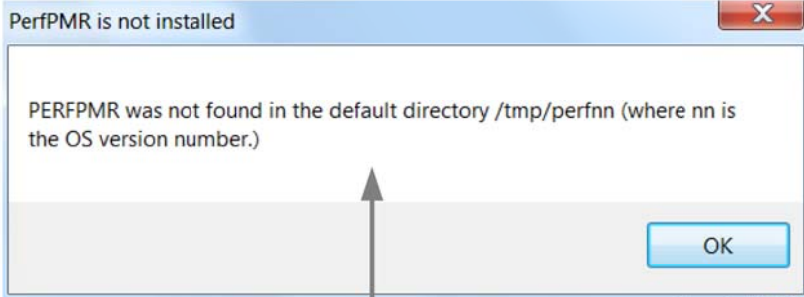


# Collecting PerfPMR – When requested by service

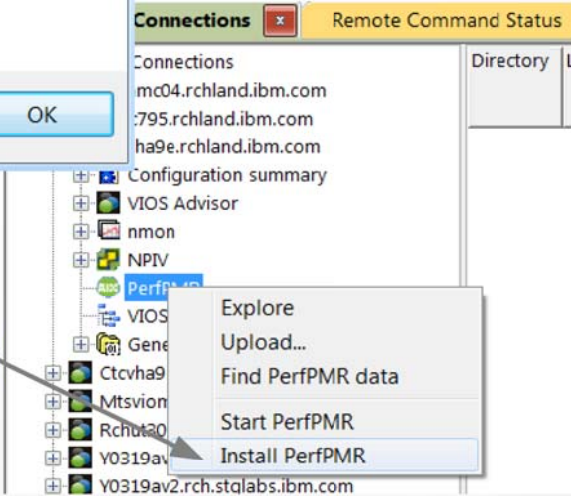
PerfPMR is a set of scripts provided by AIX / VIOS Support. Automated installation and collection of the data is available using iDoctor.



Start PerfPMR



If PerfPMR is not found then use the install option.





# Install PerfPMR

Install PerfPMR

This option will download and install PerfPMR from <ftp://ftp.software.ibm.com/aix/tools/perfpmr>  
PerfPMR should only be used if directed by IBM support.

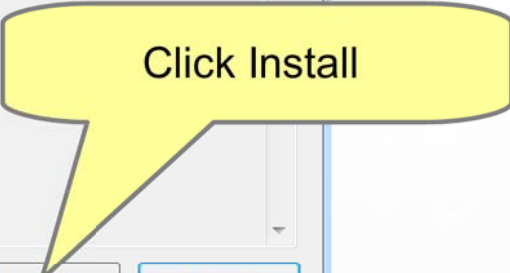
Press 'Install' to proceed with installation of PerfPMR for the systems in the list below.

Systems to install PerfPMR on: Remove

System	Directory	Installed build date	Available build date	AIX level
Ctcvha9e.rchland.ibm.com	Not installed		2015/04/02	61

Installation results

Install Cancel







# Install PerfPMR

**Install PerfPMR**

This option will download and install PerfPMR from ftp://ftp.software.ibm.com/aix/tools/perftools/perfpmr  
PerfPMR should only be used if directed by IBM support.

Press 'Install' to proceed with installation of PerfPMR for the systems in the list below.

Systems to install PerfPMR on: Remove

System	Directory	Installed build date	Available build date	AIX level
Ctcvha9e.rchland.ibm.com	Not installed		2015/04/02	61

Installation results

Performing install on Ctcvha9e.rchland.ibm.com...Ctcvha9e.rchland.ibm.com installed successfully!

PerfPMR installed successfully

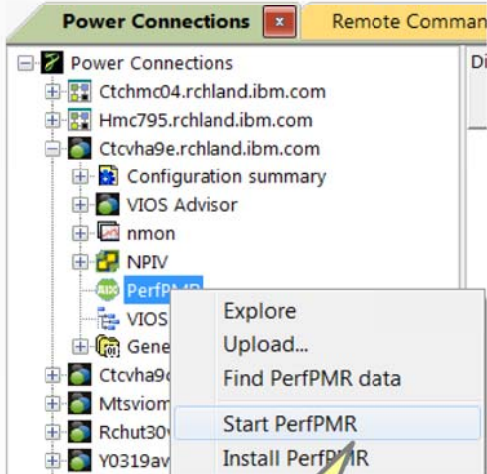
PerfPMR was installed successfully on all system(s).

OK

Install Cancel

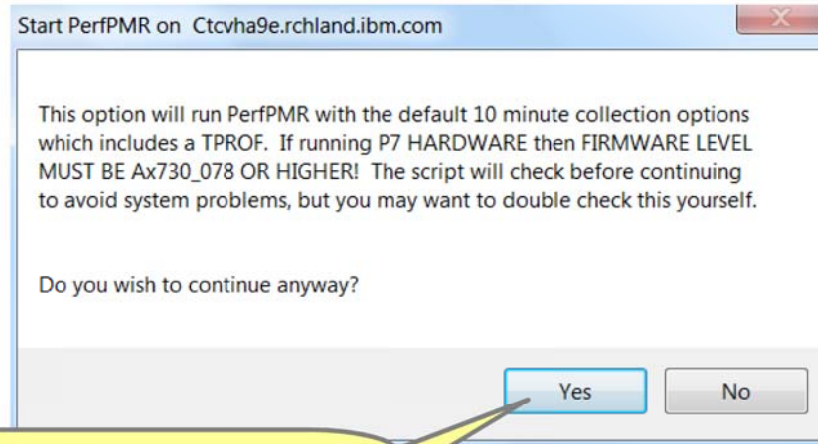
Successfully Installed

# Starting PerfPMR

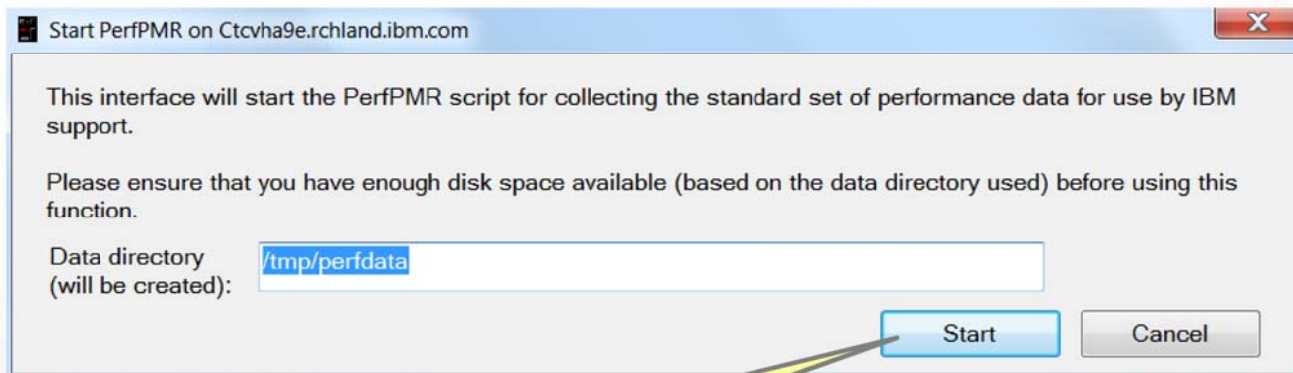


Click start

Will collect data for approximately 10 minutes



Firmware level warning message



Click start

# Sending data to IBM

Reporting a performance problem  
Sending data to IBM (section IV)

Launch a terminal session and follow the instructions for reporting the problem and sending data.

Power Connections Remote Command Status

Name	Size (bytes)	Modified date	File type	Attributes	Owner
aiostat.int	53	Apr 02 10:31	INT	-rw-r--r--	root staff
alog.boot	131,052	Apr 02 10:46	BOOT	-rw-r--r--	root staff
alog.console	12,671	Apr 02 10:46	CONSOLE	-rw-r--r--	root staff
config.sum	675,004	Apr 02 10:48	SUM	-rw-r--r--	root staff
crontab_1	2,497	Apr 02 10:46	File	-rw-r--r--	root staff
crontabs	256	Apr 02 10:46	Folder	drwxr-xr-x	root staff
devsw.out	25,604	Apr 02 10:46	OUT	-rw-r--r--	root staff
devtree.out	561,941	Apr 02 10:46	OUT	-rw-r--r--	root staff
disk_qd_list	504	Apr 02 10:46	File	-rw-r--r--	root staff
disk_qdepth.out	773	Apr 02 10:46	OUT	-rw-r--r--	root staff
dlpi.conf	2,487	Apr 02 10:46	CONF	-rw-r--r--	root staff
emc_powermt.txt	57	Apr 02 10:46	TXT	-rw-r--r--	root staff
errlog	1,048,576	Apr 02 10:46	File	-rw-r--r--	root staff

Use Find PerfPMR option if no data is available in the directory

Power Connections Remote Command Status

Name	Size (bytes)	Modif date
aiostat.int	53	INT
alog.boot	131,052	BOO
alog.console	12,671	CON
nfig.sum	675,004	SUM

- Launch VIOS Investigator...
- Terminal Sessions
  - Launch Putty (SSH)
  - Launch Putty (telnet)
  - End all Putty sessions
- Add Connection...
- Delete



# Videos

<https://www.youtube.com/user/IBMiDoctorForIBMi>



## Additional Information

IBM iDoctor for i: [https://www-912.ibm.com/i\\_dir/idoctor.nsf](https://www-912.ibm.com/i_dir/idoctor.nsf)

QMGTOOLS: <http://www-01.ibm.com/support/docview.wss?uid=nas8N1011297>



## Possible Future Enhancements...

- Monitors for continuous NMON, NPIV and SEA data collection
- PerfPMR transfer to IBM option
- Scaled down iDoctor web interface compatible with mobile devices, Linux, Mac, etc.
- Java based data analysis engine for cross platform statistics (IBMi, Linux, AIX)
- Other ideas ? Email to [idoctor@us.ibm.com](mailto:idoctor@us.ibm.com)



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Revised September 26, 2006



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