

From Krypton with love. The superhuman powers of VantagePoint Reporter

(OV Service Reporter Tips & Tricks)

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Presentation #: 400





Objectives

- Quick introduction to OVSR
- What is the value in reporting?
- How to get started.
- Harnessing the power of OVSR
- Examples of product usage
- Future directions of OVSR





OpenView Service Reporting

***** Benefits

- Painless reporting
- Out-of-the-box reports

From the

Report

Architect

- Scalability

- Flexibility

- Customization

DEPLOY

***** Types of users

- Line of business managers
- IT managers
- IT administrators

To the

Report







NT 4.0 Workstation/Server



What Service Reporter is AND what it is NOT:

• <u>ls</u>:

 A high level reporting tool that uses data from MeasureWare Agent and ITO database systems to summarize weekly performance

• <u>Not</u>:

- A replacement for PerfView Analyzer
- Not a real-time tool
- Not an alarm generator/display engine
- Not intended for drill-down activities



Discovery Engine



- Automatically find machines with MWA agents on local NT domain.
- To discover HP-UX, Solaris, AIX, SINIX, Reliant OS, NCR agent systems automatically you need an NFS service (like Hummingbird Maestro NFS)
- "Bulk discovery" allows machines to be discovered from text file input
- Will find new MWA agents when added to environment (scheduled based on user need)
- Time-out if discovery can't find all systems in allotted time
- Discovered systems report provides system name, OS info, machine type, disks, CPU, memory and networks
- Discovery is ARM'd
- Logs discovery progress tracking to Reporter status file
- Discover_ITO similar to Discover but discovers ITO agent systems.



Gatherer Engine

- Gathers data into central DB based on assigned metric lists
- Validates metric list on remote node
- Gathering available at different summarization levels (5 min, hourly, 3 hrs, etc)
- Will time-out based on threshold and catches up on missed-data from previous days
- Gatherer report generated including last status, and scheduling info
- Gatherer is ARM'd
- Estimated gathering time is 15 seconds/system for standard metric set (one week of data).
- Logs to Reporter status file for easy tracking of gathering progress
- Process level gathering is possible, but be aware that this consumes a lot of disk space
- Gather ITO is used to collect ITO metrics for long term ITO trending and is saved in the MS Access 97 database

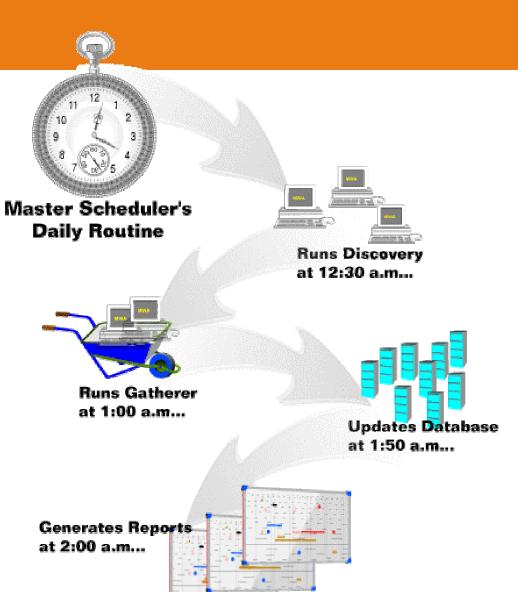


Scheduler



- Runs as a service and controls the execution of all scheduled Reporter functions
- Provides "time-out" capability to kill programs that run longer that practical (default settings or user controlled).
- Allows individual system gathering scheduled manually by need
- Logs to Reporter status file for tracking scheduled activities
- Allows execution of any user-defined program including the passing of user parameters
- Ensures all Reporter processes complete before the next process starts-up







Why Report?

• Line of business managers:

- Are my customers requirements being met?
- Will my customers requirements continue to be met?
- Am I receiving the levels of service that I am paying for?

• IT Managers:

- Am I delivering the contracted levels of service?
- Is my current configuration able to handle the current and future business requirements?
- Has the workload changed? Was this change anticipated/planned?

IT Administrators:

- Where do I need to focus my staff to improve customer service?
- How can I reduce the number of incidents that need direct operations involvement?



HP OpenView If we didn't have reports.....

- How can you manage an environment if you don't know what that environment is experiencing?
- How can IT be a valued business partner if IT doesn't understand their value to the business?
- How can you expect customer satisfaction if you don't know what you are delivering to them?

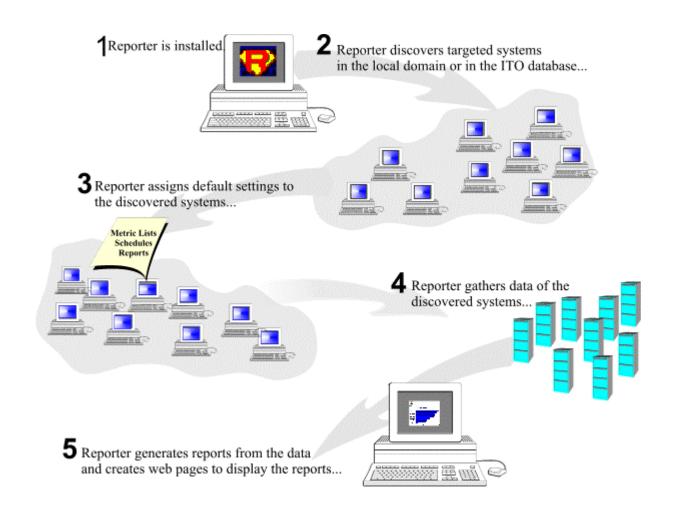


What reports are valuable?

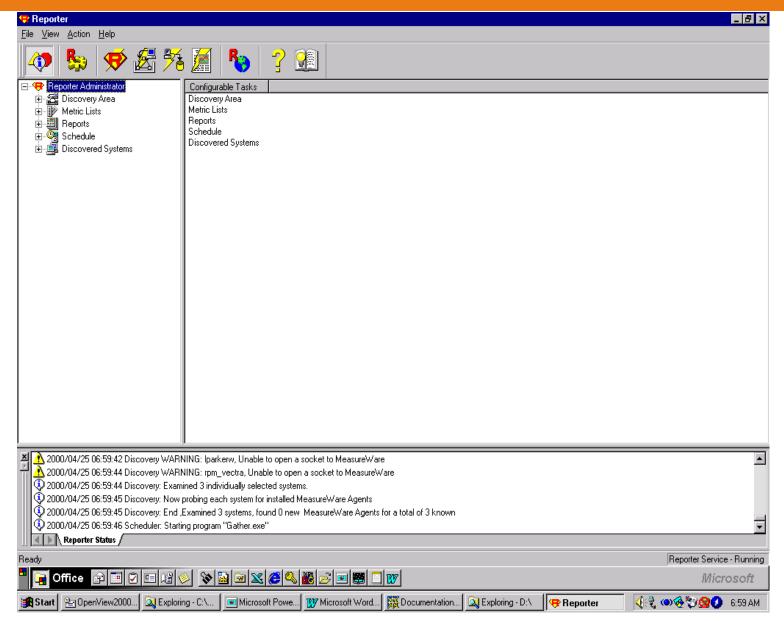
- **Resource utilization**
- Resource availability
- Business transaction throughput/completions/aborts/service times
- Number, Severity & Type of incidents
- Resolution time of incidents •
- **Operator statistics (number, time/operator/incident)**
- **Node assignment**



What Happens After Installation

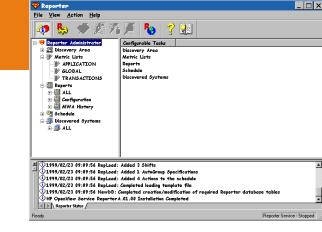








Reporter UI

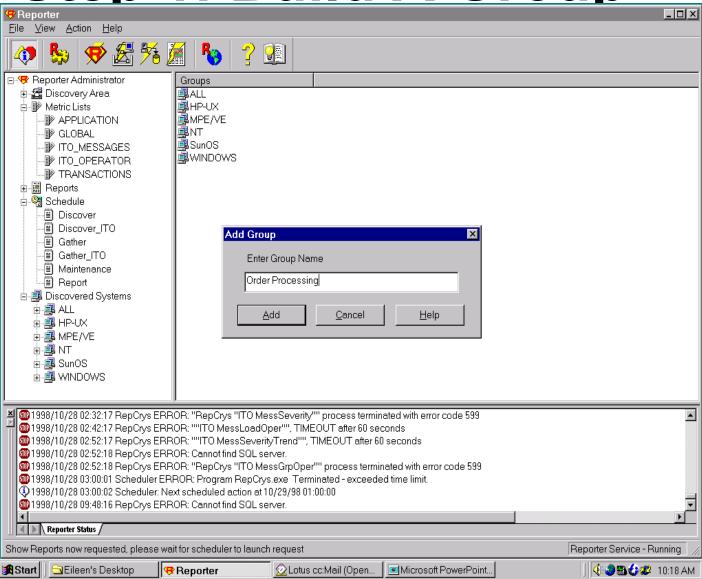


- Windows I/F to user-controlled reporting features:
 - Scheduling
 - Discovery of systems
 - Discovered systems and grouping
 - Reports and custom report definitions
 - Metric lists
 - Configuration of Databases/Holidays/Shifts/Auto Groups/Options
- Shift configuration to further customize your reports (Prime, Graveyard, Swing, User)
- View into Reporter status file
- Configuration of Reporter parameters (tracing, time-outs, concurrent programs, maintenance)
- Comprehensive online help and Concepts Guide
- Drag-n-drop capability and Multiple select in UI



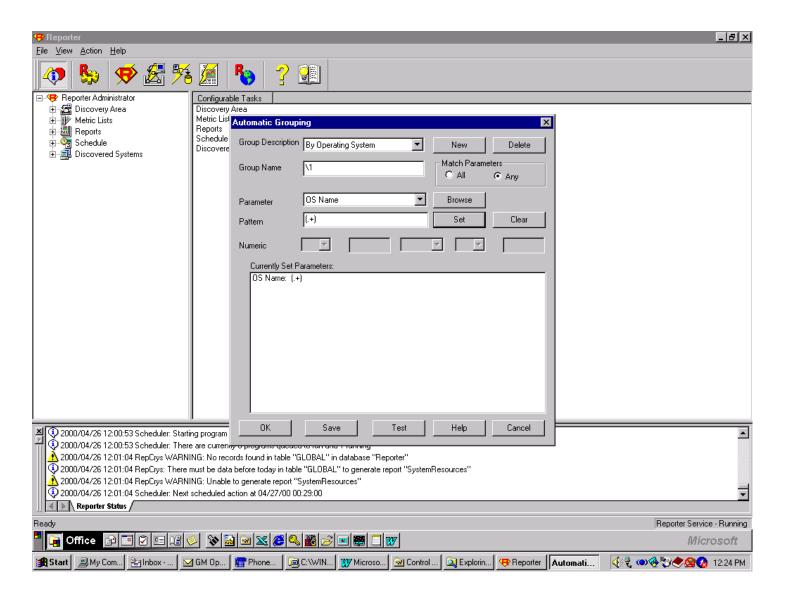
Harnessing the power:

Step 1: Build A Group



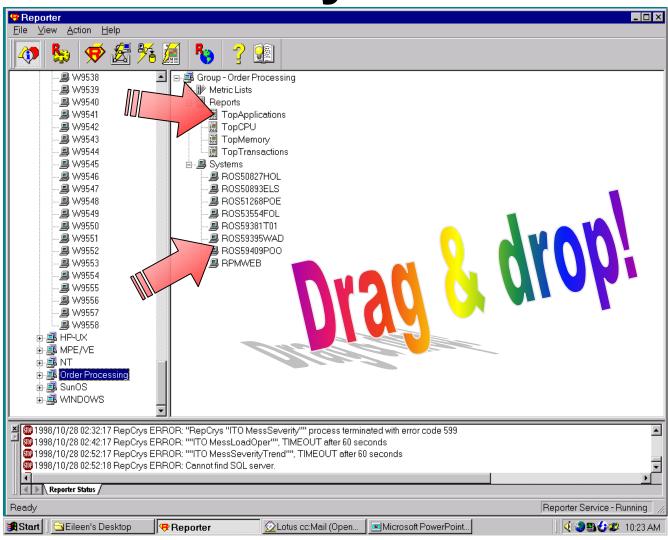


Grouping Systems



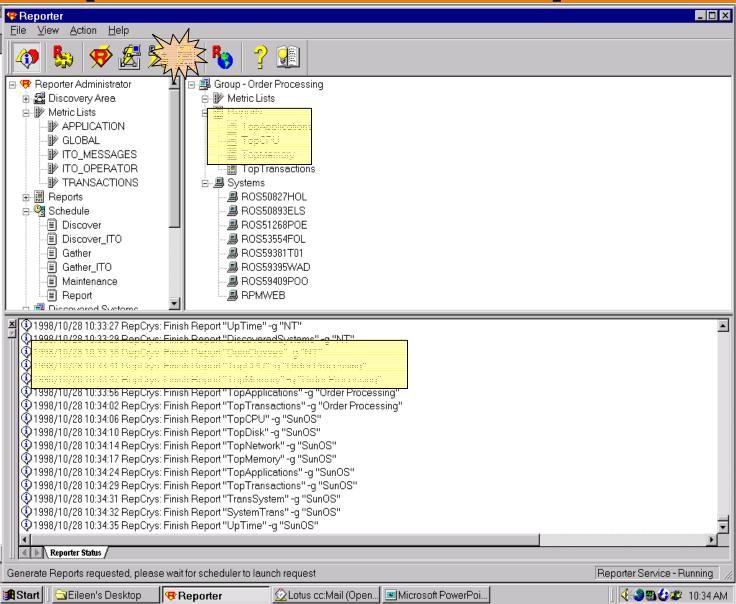


Step 2: What Reports? Which Systems?



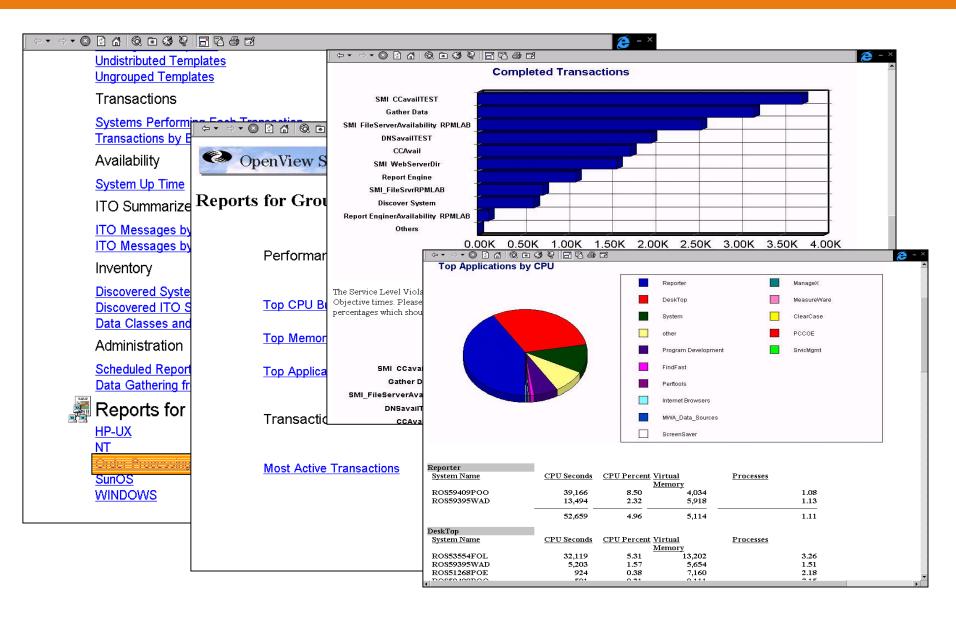


Step 3: Generate Reports





Step 4 - View Reports!





Problems?

- Trace Level 1-9, defines detail of information traced in modes of operation. File -> Configuration -> Options
- Status Windows can be turned on/off for the various modes of operation. File -> Configure -> Status Window
- General status information is kept in Status.reporter file renames to oldstatus.reporter when it reaches 100KB
- Trace files (ie. Trace.Discover, Trace.Gather) for the different phases log same information as the status pane. These files named get renamed "traceold...." when they reach 500KB.

What DataBases are supported & how to laccess them?

- Microsoft Access 97 & Oracle are the only databases that is currently supported by Service Reporter.
- Note: The Microsoft Access 97 database can reach a maximum size of 1 Gigabyte of data.
- A standard database size (7 days of data w/standard metric collection) is ~ 45 kbytes per system
- Maintenance is scheduled once per day to clean the data base of unwanted data
- Data retention period is user-configurable (in days) through the Reporter UI (metric list 'retain # days')
- Need to identify the database in the report template:
- If you are creating your own report templates with Crystal Reports tm you must specify the database you are connecting to in the 'Create Report Expert', which is the first step in creation of a custom report template. From the 'Data' tab select SQL/ODBC and from the 'Log On Server' window that pops up, go down the list to 'ODBC-Reporter', select and click 'OK'.



System Discovery

- MeasureWare discovery is a two step process.
- Discovering systems through network browsing relies on the NT operating system, which lists all systems known to the NT network. It is possible for NT to know many thousands of systems so you will probably want to restrict the systems to be searched.
- Generate a list of system names
- Probe each system for the existence of a MeasureWare Agent. ITO discovery involves copying system nodes and nodegroups from the ITO database.



What about Unix system discovery?

- Creating a bulk discovery file from a Un*x /etc/hosts file
- HP supplies a file to extract the unix system names from the /etc/hosts file. The file 'c:\rpmtools\newconfig\hosts2discover' will convert an /etc/hosts file (found on a Un*x system) into a bulk discovery file. Copy this file to your Un*x system and set it's permissions to allow execution (if not already set) and run '\$ hosts2discover'. The 'discoversys.txt' file will be created in the directory that you are currently in. Copy this file to the Service Reporter console (into the c:\rpmtools\data\ directory), then follow the instructions for performing bulk load.



How many systems can I manage from one VantagePoint Reporter station?

Scalability Example:

Hardware	Systems supported / Database space required
200 MHz Pentium pro, single processor	1600 MeasureWare Agents
64 MB memory	84 MB for database (approximate)
200 MHz Pentium pro, dual processors	2492 MeasureWare Agents
96 MB memory	131 MB for database (approximate)
400 MHz Pentium-II, dual processors	4577 MeasureWare Agents
192MB memory	240 MB for database (approximate)



Changing Report Style

• You can easily make minor modifications to the default report templates such as replacing the "OpenView Service Reporter" graphic with a company logo. To edit the report templates you must purchase a copy of the Crystal Reports product.

Creating New Report Templates

- Why?
- When you want to report on data from new or modified metric lists.
- i.e. new data from a MeasureWare DSI data source.
- Change the information on an existing report (perhaps add more detail), different look?
- Note: If you change any default template, it is recommend to retain the original template and save changes under a new report template file name.

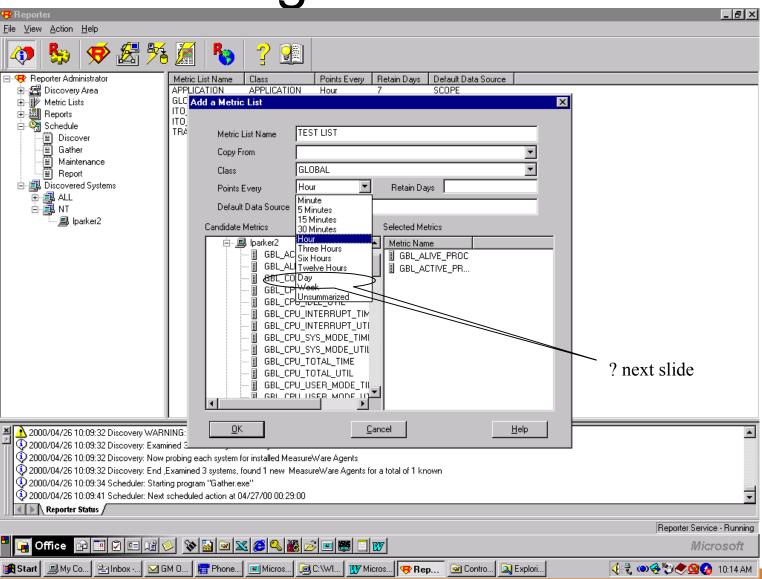
HP OpenView

Creating New Report Templates

- How?
 - Step 1: Specify the database
 - Step 2: Choose a database table
 - Step 3: Choose fields (metrics) to use in the report
 - Step 4: Design the template using Crystal Reports
 - Pay attention to aligning columns in web pages
 - Step 5: Save the template
 - Step 6: Add the report template to Reporter (right click reports). Note the template type:
 - all, group, single system



reating new metric lists & adding to existing MWA metric lists





Unsummarized Data

- What is it and why?
- One of the current design limitations of the Data Source Integration feature of MeasureWare is its inability to accept more than one data point at the same date and time value. Most of the time this is not a problem, but it can be annoying when you want to record multiple instances. Suppose we had similar data from several data sources, same name, just different source, i.e disk metrics. Summarization would total the data for the same metric, for the same time instance.



Proxy Data

• When a data source from one system is mounted on another system's MeasureWare Agent, it is being proxied by the MeasureWare Agent. Normally data sources are identified with the system where the MeasureWare agent resides. It is often desirable to identify proxied data sources with the system that originally collected the data. This process is called deproxification.

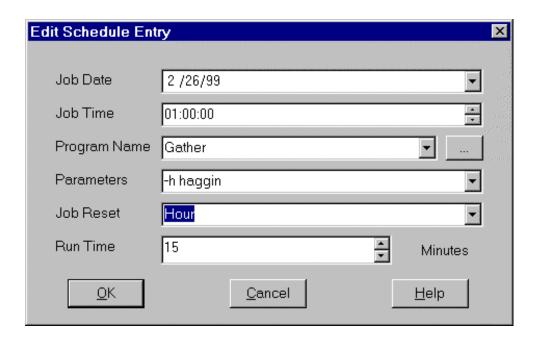


• If the actual system name is required for reporting then it should be stored in the collected data.



More Frequent DataCollections:

• By default, when the *gather* program pulls data from MeasureWare Agents, it will not gather data past the previous midnight.





Examples of Usage.....













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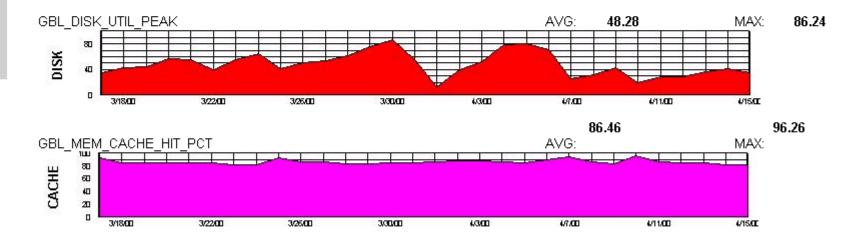
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HP OpenView Possible Disk bottleneck: AMERIMTAL

The DISK graph uses the Measureware metric: GBL DISK UTIL PEAK. This represents the utilization of the busiest disk during the interval. This utilization is the percentage of time during the interval that the busiest disk was performing IO transfers. It is not an average utilization over all the disk devices. A peak disk utilization of more than 50 percent often indicates a disk bottleneck situation. Slower disk devices show a higher utilization with lower IO rates than faster disks. Only local disks are counted in this measurement. NFS devices (and DUX devices on HPUX 9.0) are excluded.

The CACHE graph uses the Measureware metric: GBL MEM CACHE HIT PCT. This represents the percentage of buffered reads satisfied in the buffer cache (rather than going to disk) during the interval. This metric is obtained by measuring the number of buffered read calls that were satisfied by the data that was in the system buffer cache. Reads that are not in the buffer cache result in disk IO. Unbuffered IO and virtual memory IO (including memory mapped files), are not counted in this metric.

This set of graphs is shown, because the system under evaluation has a DISK utilization peak above 50% for 3 consecutive days, or 5 times in the past 30 days, and has an average memory CACHE hit greater than 95%.



AIT-S Boise NT Team



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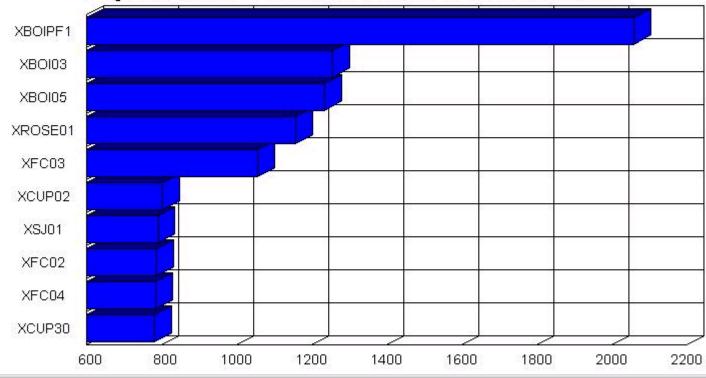


MPT Application Usage

This report was prepared on 4/15/00, 4:27:12AM

This report shows data during the reporting interval of 4/10/00 - 4/15/00. The graphs are prepared using Hourly data.

Top 10 Max Outlook Client Connections





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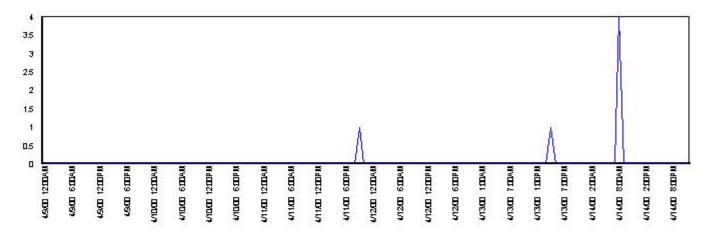
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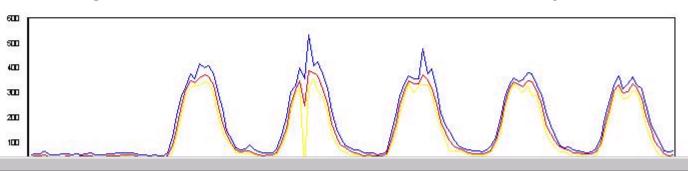
Outlook Web Access Connections

HTTP Service: Current Connections - MSExchangeIS:IS Active User Count - Number of user connections that have shown some activity in the last 10 minutes.



Outlook Client Connections

MSExchangelS:IS Active User Count - Number of user connections that have shown some activity in the last 10 minutes.





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Future Directions

- Support for additional databases.
- Support of new Measurement Engine (VP NT).
- Support for Windows 2000.
- Continued use as 'defacto' reporting engine.
- Service Availability from VP Service Reporter.
- Expanding data repository functionality and drill down (summary to detail).



Questions ?



Service Reporter Architecture

