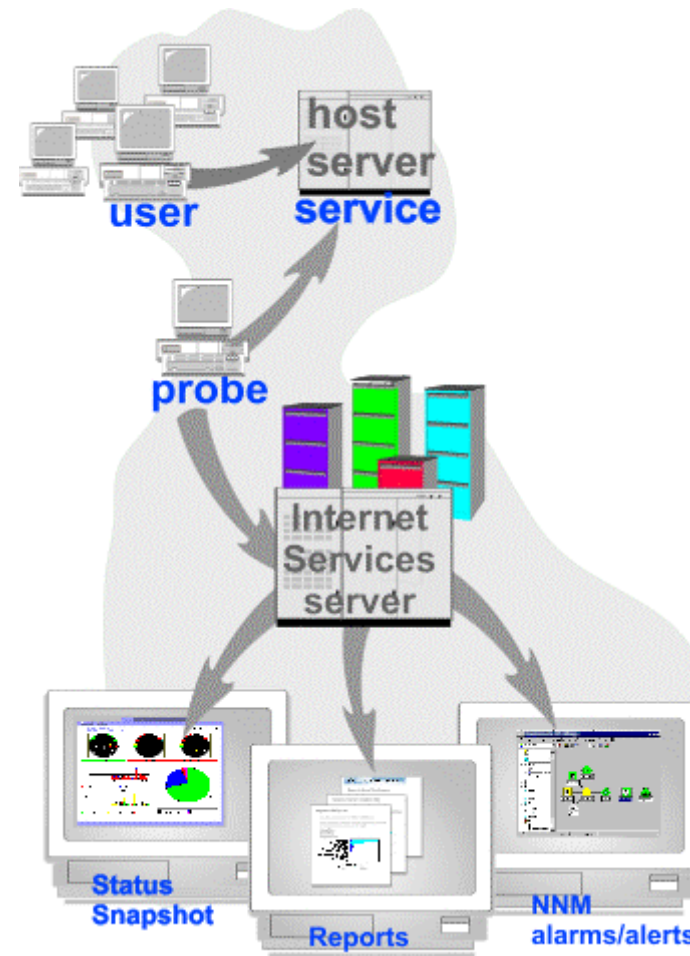




HP OPENVIEW

# Introducing HP OpenView VantagePoint Internet Services (VP-IS)



invent

Visit VP-IS Interactive website

<http://ovweb1.external.hp.com/nnminteract/ovis-main.htm>

# HP OpenView VantagePoint Internet Services



HP OPENVIEW

## What is VP Internet Services 2.0?

---

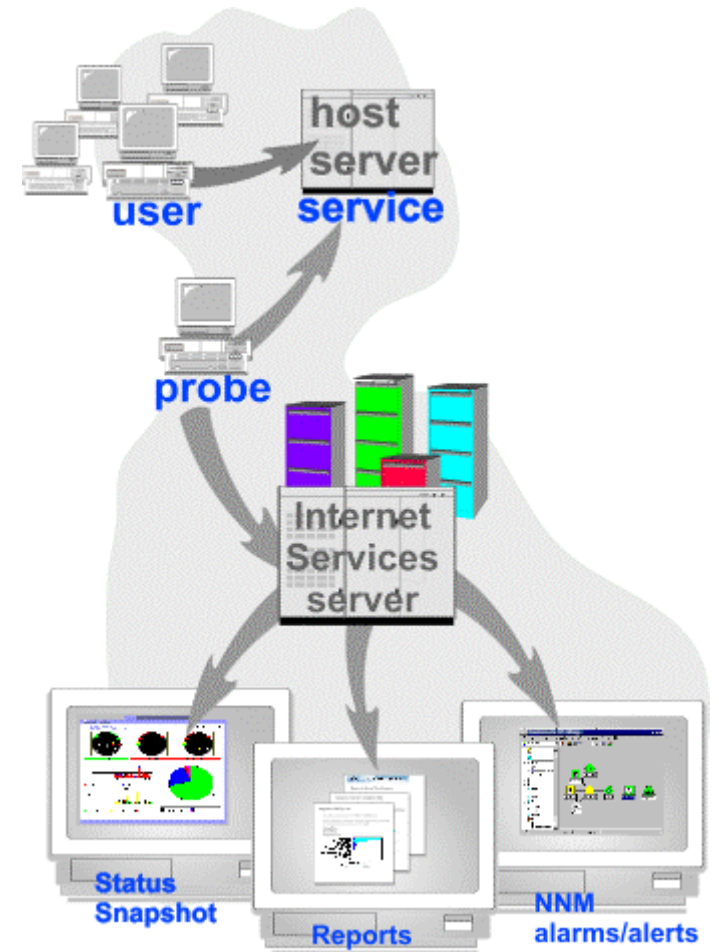
- For companies that provide business-critical internet services
- Measure, monitor and report against service level agreements
- Provides end-to-end service assurance by proactively managing availability and performance
- Reduce Mean-time-to-Repair the service through tight linkage between internet services monitoring and troubleshooting



i n v e n t

# Overview

- Users engage many internet services (HTTP, DNS, etc.) in everyday use, generally without any knowledge of the service
- But poor service performance gives user a poor experience
- High service availability and performance is key to making the user experience satisfying



# HP OpenView VantagePoint Internet Services



HP OPENVIEW

The industry's most complete “Active” monitoring probe technology solution lets you pinpoint the source of the service problem

- **The active software probes detect and automatically alarm whenever end-to-end response time SLOs are violated**
- **Builtin reports help you quickly determine system application related problems**
- **Integration with VP Operation's templates point to problems on mission critical servers**



**Integration with NNM Event Correlation Services allow quick determination of network or application problems and “root cause analysis” for network failures.**



# HP OpenView VantagePoint Internet Services

HP OPENVIEW

## Why HP OpenView VantagePoint Internet Services 2.0 is the right choice

- Tight integration with HP OV troubleshooting tools increases service availability
- Tight integration with HP OV reporting tools for consistent look-and-feel
- At-a-glance health summary information
- Automatic baselining gives your more intelligent alarms
- Support of leading-edge technologies such as WAP
- Support is all from HP (no 3<sup>rd</sup> party support needed)



i n v e n t

# HP OpenView VantagePoint Internet Services



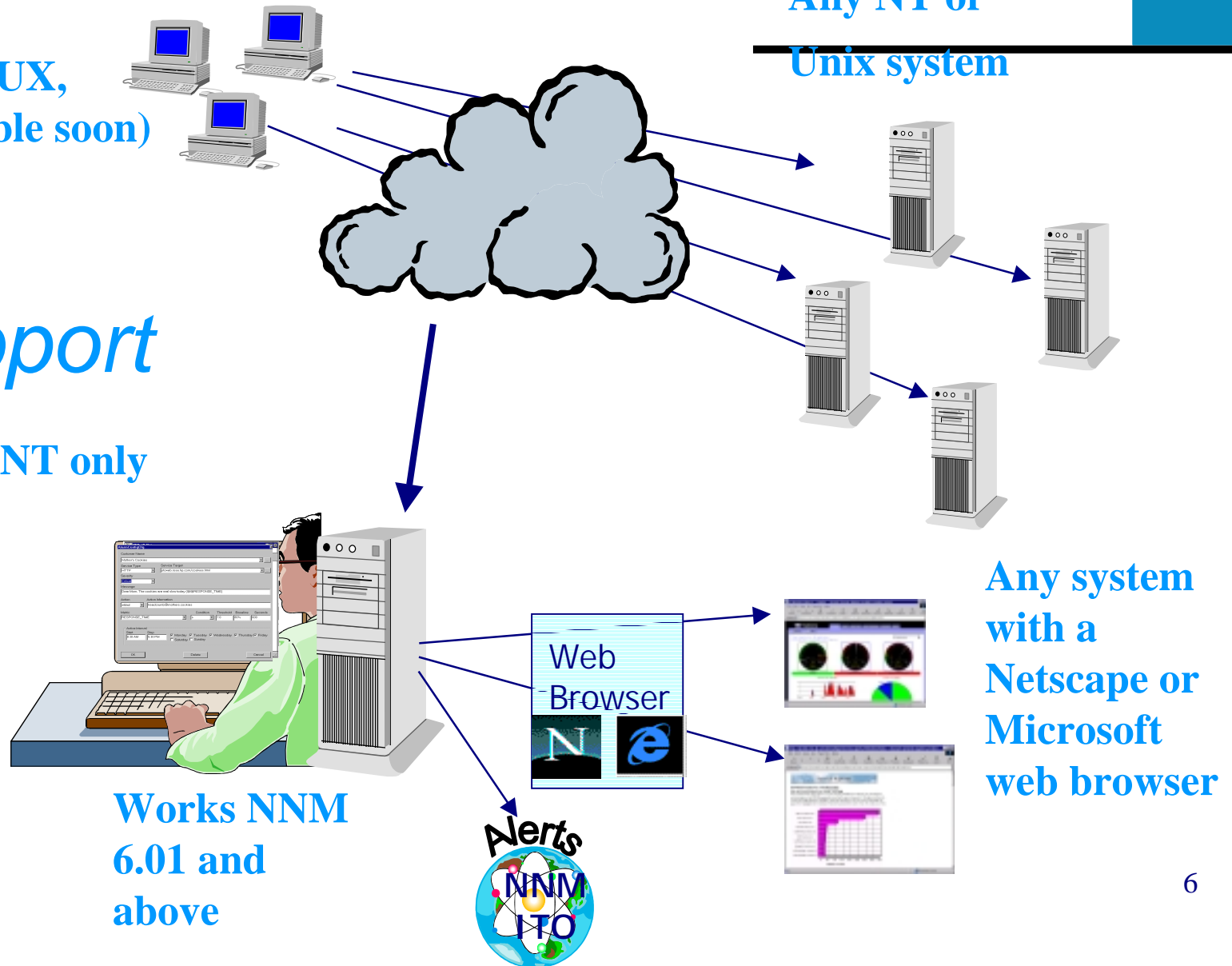
HP OPENVIEW

NT only  
(Solaris, HP-UX,  
Linux available soon)

Any NT or  
Unix system

OS Support

NT only



Works NNM  
6.01 and  
above

Any system  
with a  
Netscape or  
Microsoft  
web browser





HP OPENVIEW

## Easy licensing model

- One license needed per managed server (independent as to how many services run on them)
- Software probes are not licensed
- No separate license for the measurement server

**You only pay for what  
you want to manage!**



invent



# HP OpenView VantagePoint Internet Services

HP OPENVIEW

## Product Structure and Pricing

J5100AA	HP OV VantagePoint Internet Services 2.x Enterprise Server LTU	\$ 11,995.00
J5101AA	HP OV VantagePoint Internet Services 2.x Datacenter Server LTU	\$ 4,995.00
J5102AA	HP OV VantagePoint Internet Services 2.x Advanced Server LTU	\$ 1,995.00
J5103AA	HP OV VantagePoint Internet Services 2.x Server LTU	\$ 995.00
J5104AA	HP OV VantagePoint Internet Services 2.x Media/Manual	\$ 195.00

Tier classification of the server (see ESP, keyword "ovtierm")



invent





## Ordering Example

Customer wants to test from 35 NT-based probe locations

- 12 HTTP servers (2 Sun Enterprise 5500, 10 NT w/ 4 CPUs)
- 4 DNS (Sun Enterprise 450)
- 5 servers running FTP and NNTP (NT w/ 8 CPUs)

The following needs to be ordered:

- 1 J5104AA (media and manuals)
- 2 J5101AA (VPIS Datacenter License) for Sun 5500
- 10 J5103AA (VPIS Server License) for NT w/ 4 CPUs
- 4 J5102AA (VPIS Advanced License) for Sun 450
- 5 J5102AA (VPIS Advanced License) for NT w/ 8 CPUs



**NOTE:** - no charge for software probes  
- no charge for VPIS measurement server  
- charge per managed server (independent of the number of services running)



# HP OpenView VantagePoint Internet Services

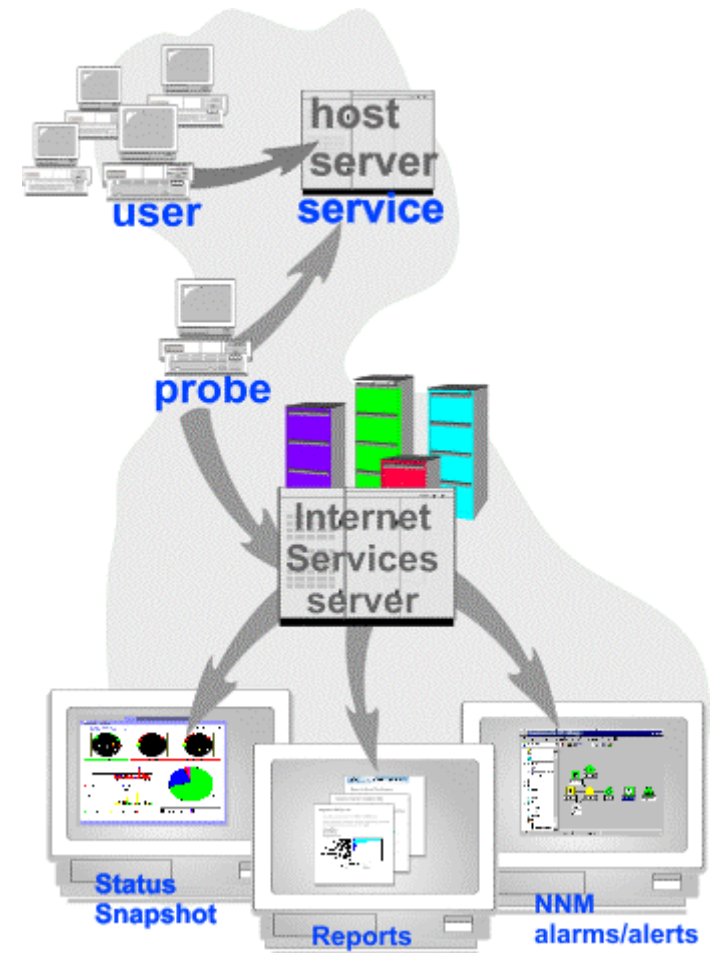
## How you should deploy VP Internet Services 2.0

- Only one measurement server needed (only runs on NT)
- Deploy the software probes to the points in the network from where the response time should be measured
- Measure the response time of several servers (e.g. HTTP, DNS, FTP ...) from one probe system
- VP Internet Services 2.0 can run standalone, but it can also be integrated into NNM and VP Operations



# Overview

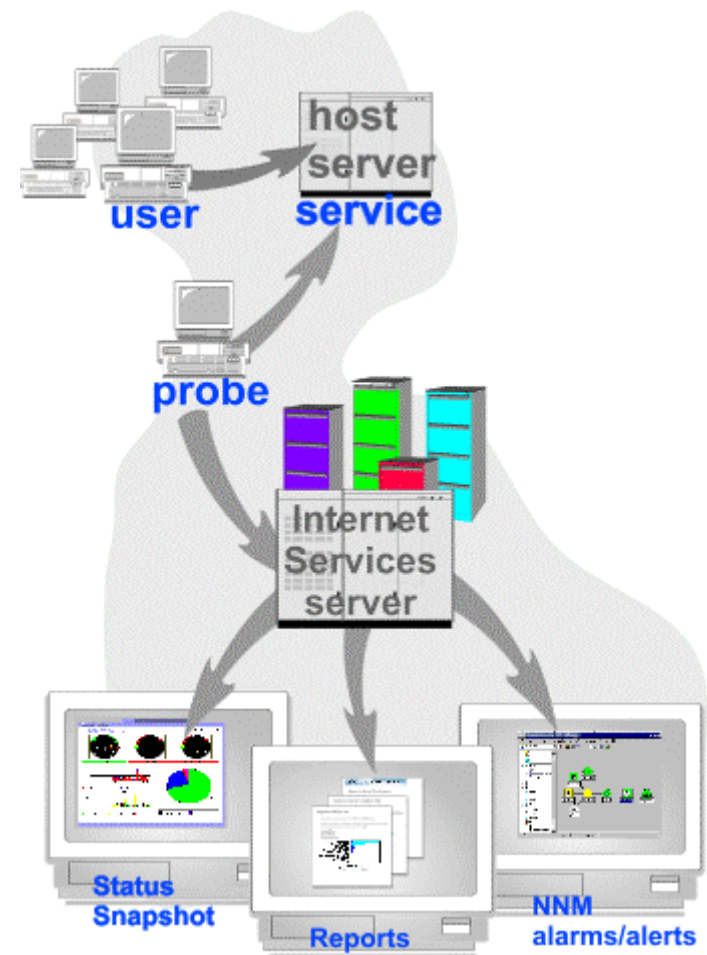
- **VP-IS** actively probes services to measure their performance and availability. Examples:
  - % of time service is available
  - Time to set up a transaction
  - Time to complete a transaction
  - % of successful completion of transaction
- Data from the probe(s) go to the database on the **VP-IS** server



# Overview

(cont'd)

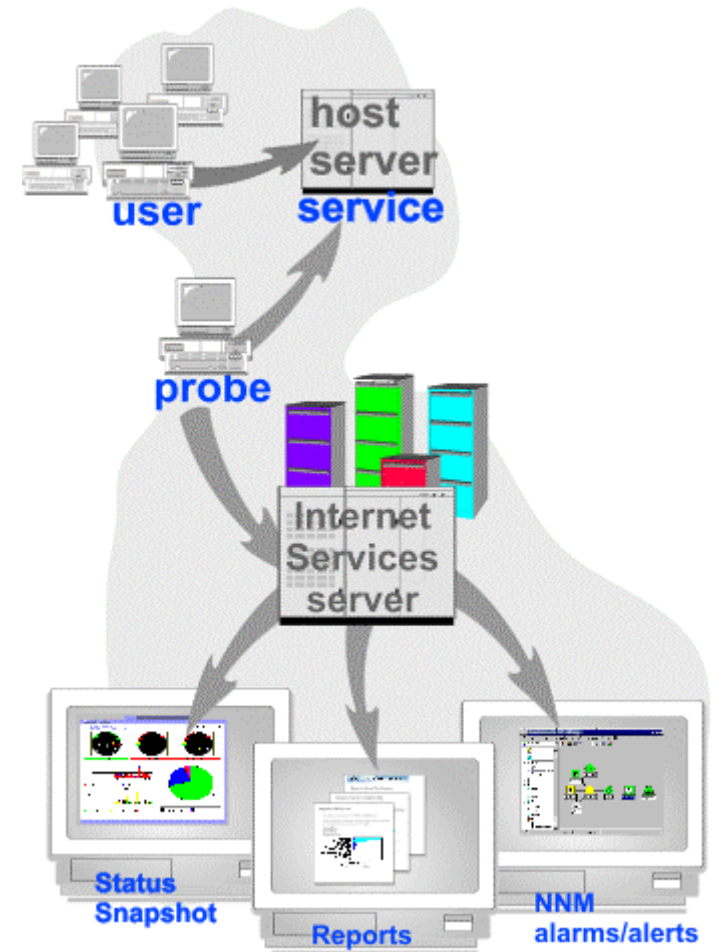
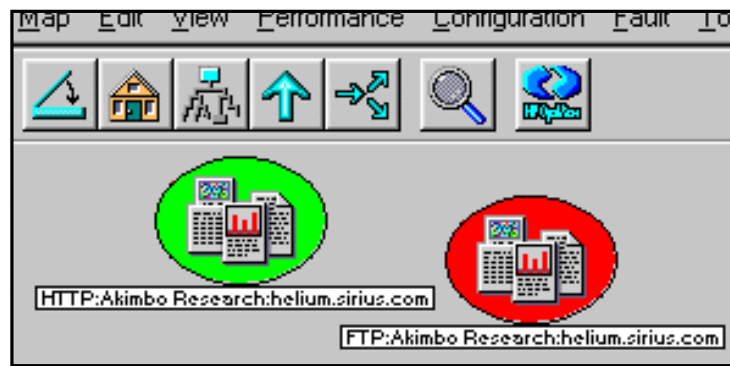
- The **VP-IS** server offers a web interface for viewing the data, with tabs for:
  - Snapshot view
  - Availability view
  - Response Time view
  - Service Level Violations view
  - Reports view
- Details on these views in a moment



# Overview

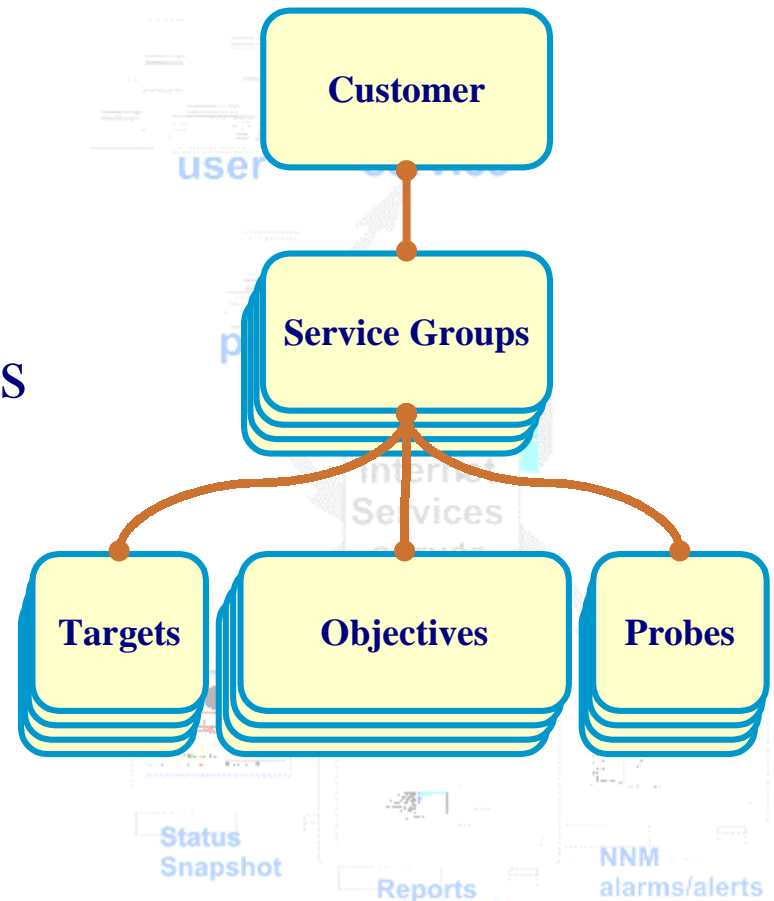
(cont'd)

- Alarms can also be sent to **NNM** or **ITO** for fault diagnosis
- Integration with **NNM** creates new map symbols for customers and the services they receive
  - Symbol status colors reflect alarm status of monitored services



# Overview

- **VP-IS** lets you structure the services by customer and service groups.
  - E.g. ISP has multiple customers
  - Each customer has service groups with specific service targets (e.g. URLs, DNS servers, etc).
  - VP-IS summarizes data by customer and service group

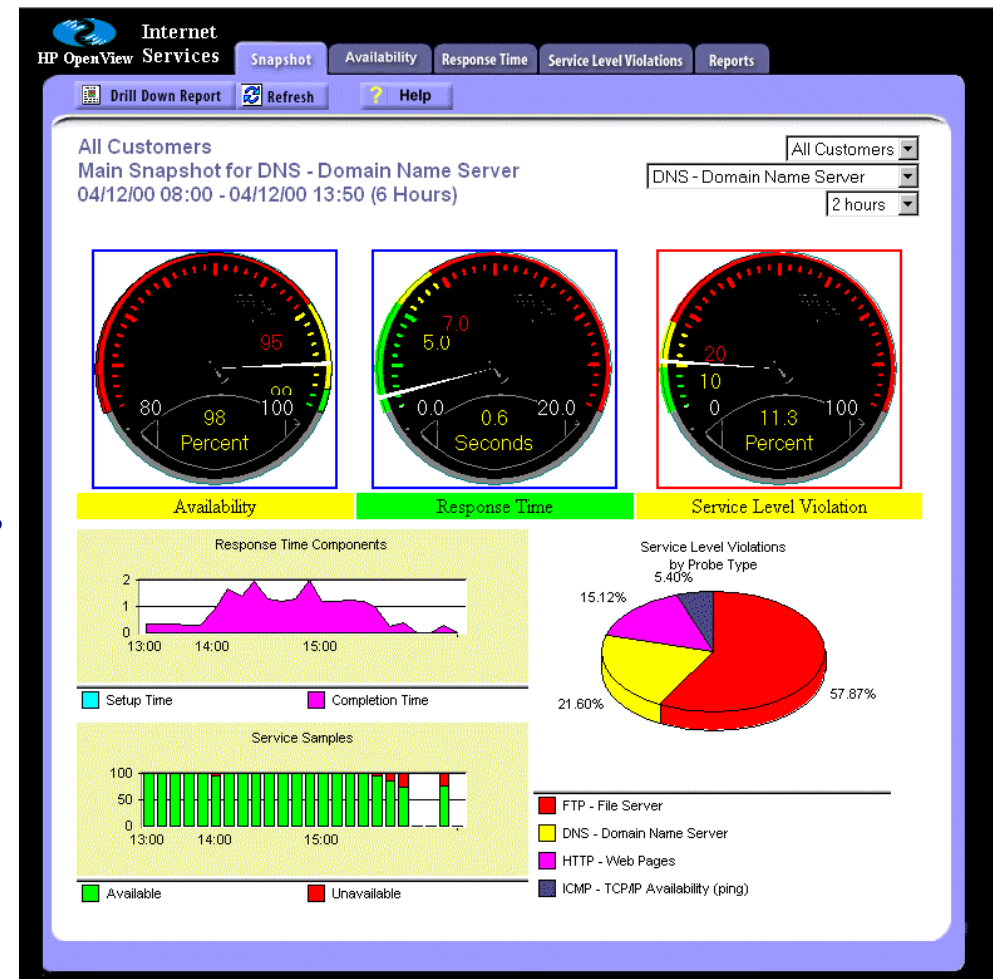




# Snapshot View

## (Overview (cont'd))

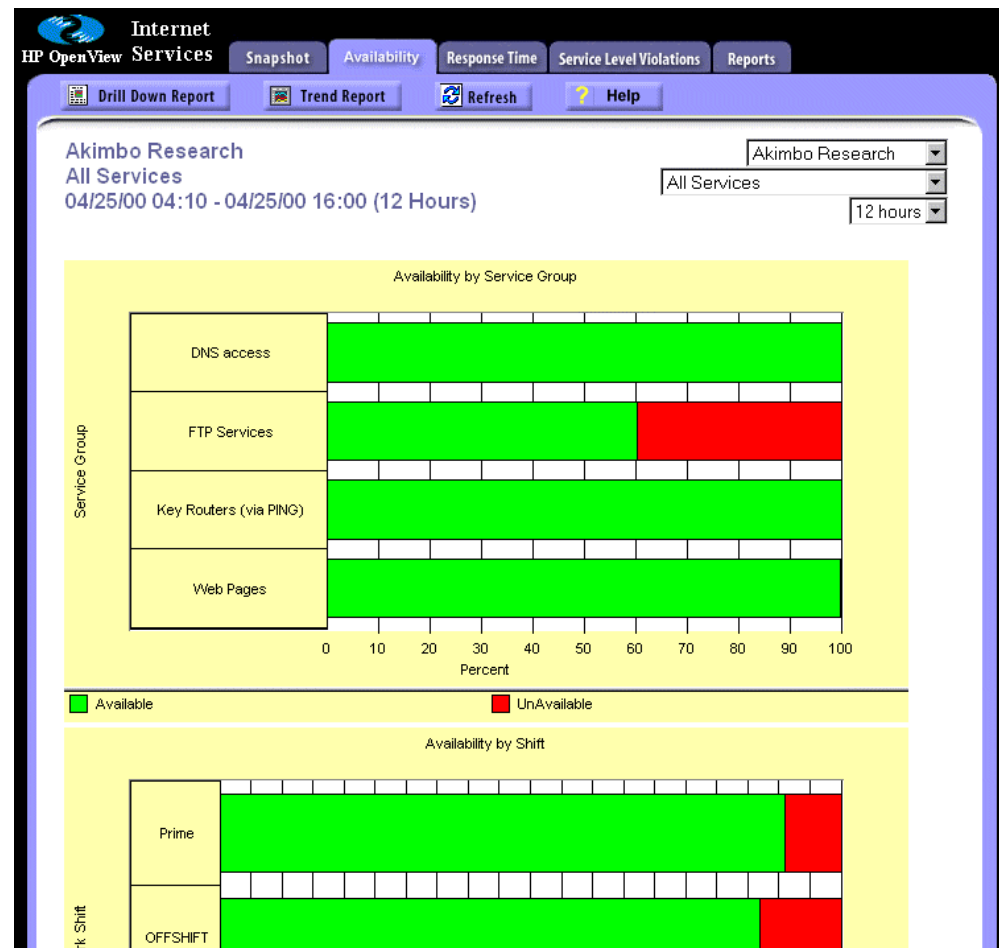
- Top-level Summary info, intuitively presented
- Three meters:
  - Availability (avg. % of time service has been available)
  - Response Time (avg. service completion time)
  - Service Level Violations (% of SLOs tested that were in violation)
- Graphs:
  - Response Time (request setup, and total)
  - Service availability per time-slot
  - Service Level Violations per service



# Availability View

(Overview (cont'd))

- Shows service availability bar charts, grouped by:
  - Customer
  - Service Group
  - Shift (8-hr period)
- Each bar shows % of time the service was responding

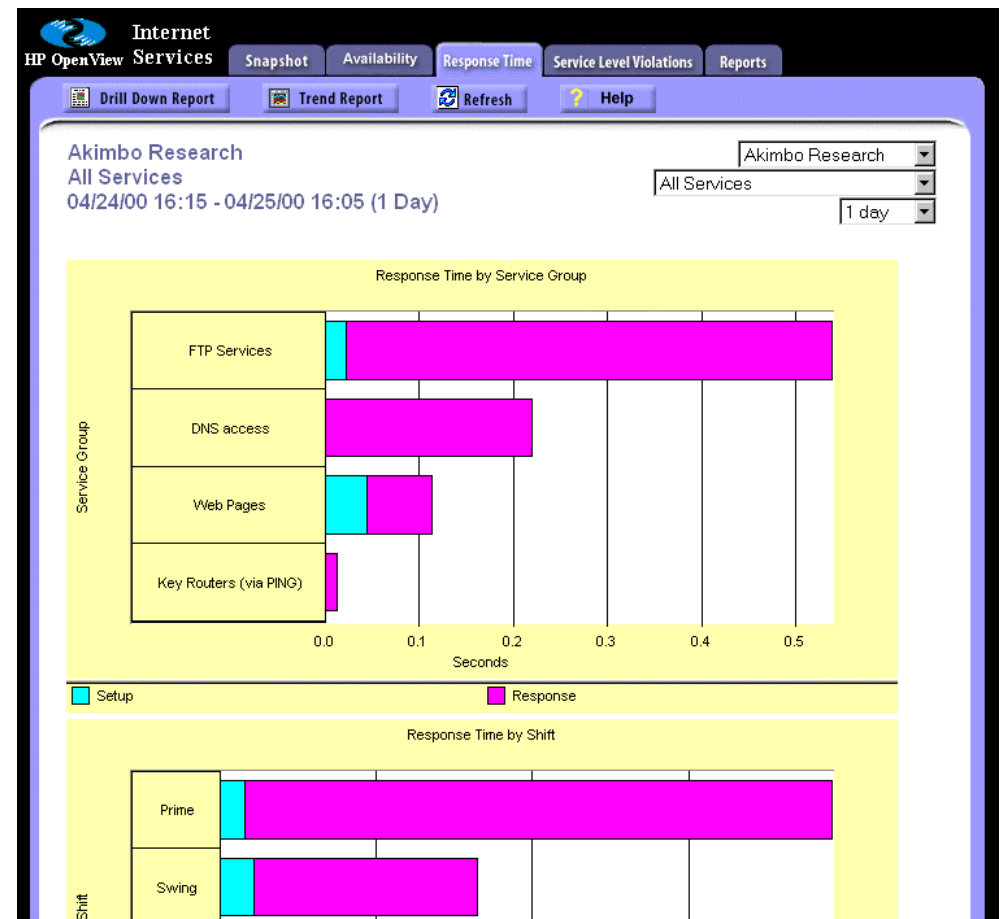




# Response Time View

(Overview (cont'd))

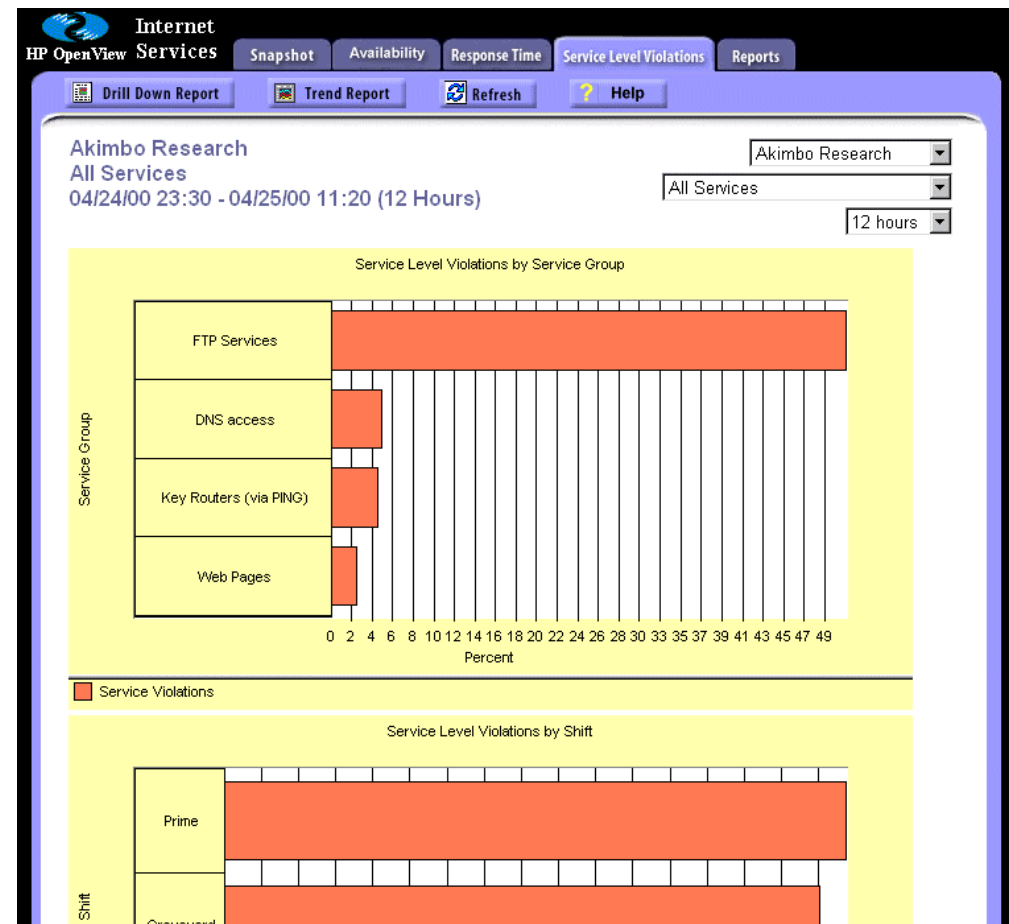
- Shows service response-time bar charts, grouped by:
  - Customer
  - Service Group
  - Shift (8-hr period)
- Each bar shows average time the service took to complete a transaction
- Bar segments show response time components



# Service Level Violation View

(Overview (cont'd))

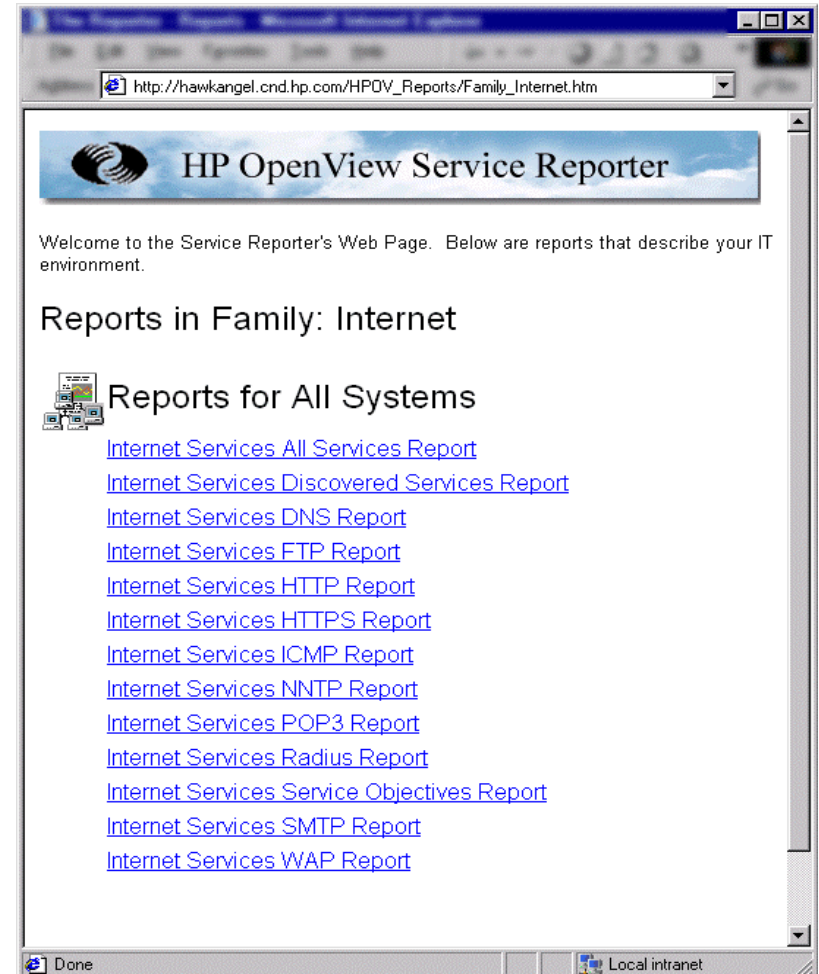
- Shows service violations bar charts, grouped by:
  - Customer
  - Service Group
  - Shift (8-hr period)
- Each bar shows percentage of samples whose value violated an SLO threshold (details on SLOs later)



# Reports View

(Overview (cont'd))

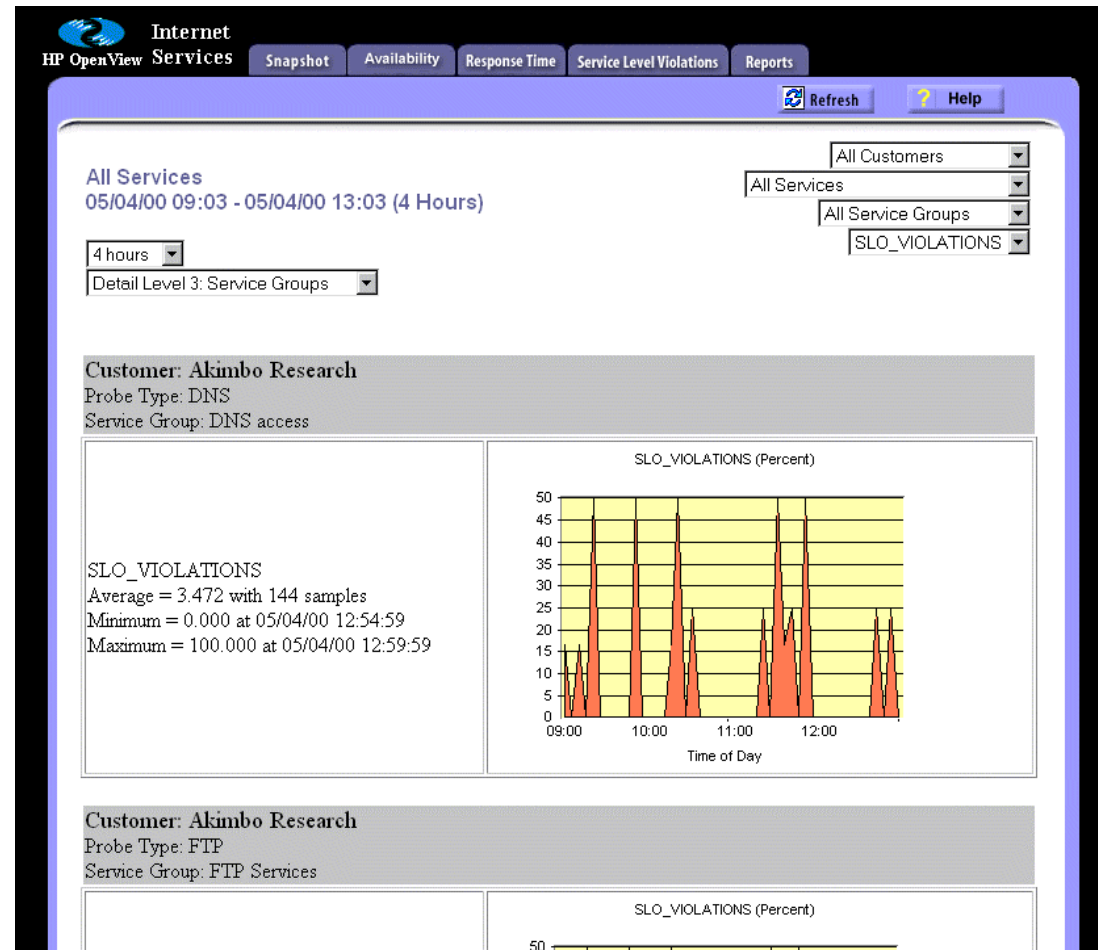
- Based on a light version of Service Reporter
- Top-level provides links to detailed reports on:
  - All service types
  - Service Level Objectives
- Reports generated nightly using data from longer time periods than the other online displays



# Drill Down Reports

(Overview (cont'd))

- Top-level views (Snapshot, Availability, Response Time, Service Level Violation) offer “Drill-down” and “Trend” reports that provide additional levels of detail
  - e.g., a drill-down report on SLO violations viewed by Service Group (DNS, FTP, etc.)





HP OPENVIEW



# Nuts and Bolts

Hardware and Software Requirements



i n v e n t

# System Requirements

- Hardware
  - Intel Pentium class, 300MHz or faster processor with 128MB of memory or more recommended
  - 60MB of disk space is required initially, with possible increases as more data is added
  - Report generation may temporarily require an additional 50MB to 400MB

# System Requirements

- Software

- Microsoft NT 4.0 (Server or Workstation) with Service Pack 3, 4 or 5
- Microsoft IIS 4.0 Web Server (from Option Pack 4)
- 200MB or more virtual memory on the VP-IS station
  - Systems running other applications may require larger virtual memory settings to accommodate VP-IS in addition to the other applications
- NNM 6.0 or above (if integrating with NNM)

# Implementation Summary

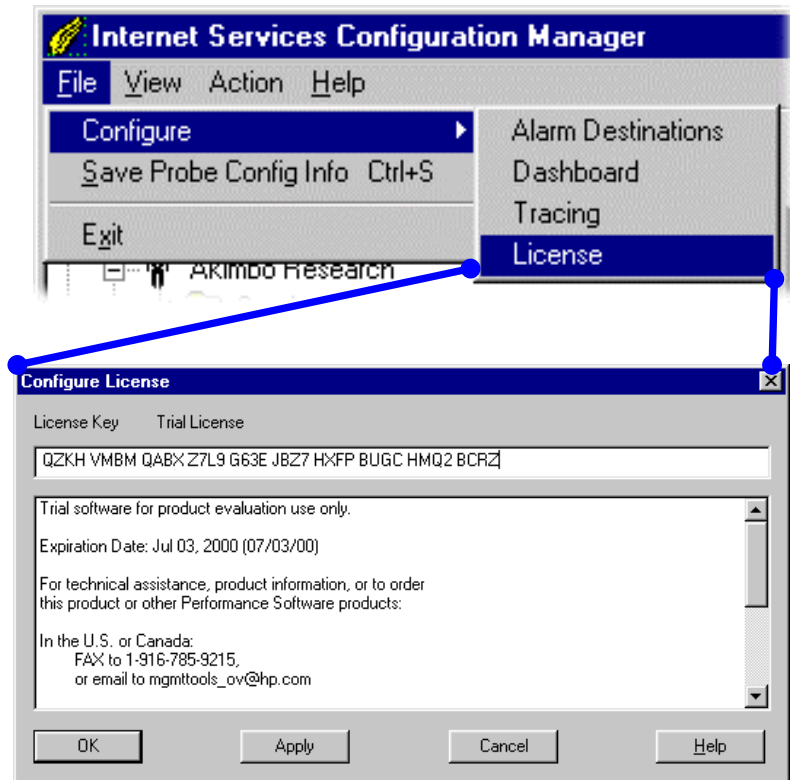
(or, “How to Make VP-IS Work”)

- Install **VP-IS** on a Windows NT system
  - Optionally, integrate with **NNM** and/or **ITO**
- Configure **VP-IS** probe(s) to measure services
  - Probe can be local (on VP-IS station), or remote
- The probe(s) poll for service availability and performance, and send data to **VP-IS** station
- User views **VP-IS** generated reports, responds to **VP-IS** performance/availability alarms in **NNM** or **ITO**



# Licensing VP-IS

- Runs 60-day evaluation if not licensed
  - 15.\*.\*.\* exempt from licensing
- Instructions in package tell where to obtain license key
  - Open the License dialog
  - Enter license string; press OK
- Temporary key available (after evaluation period expires) from HP support



# Monitored Services

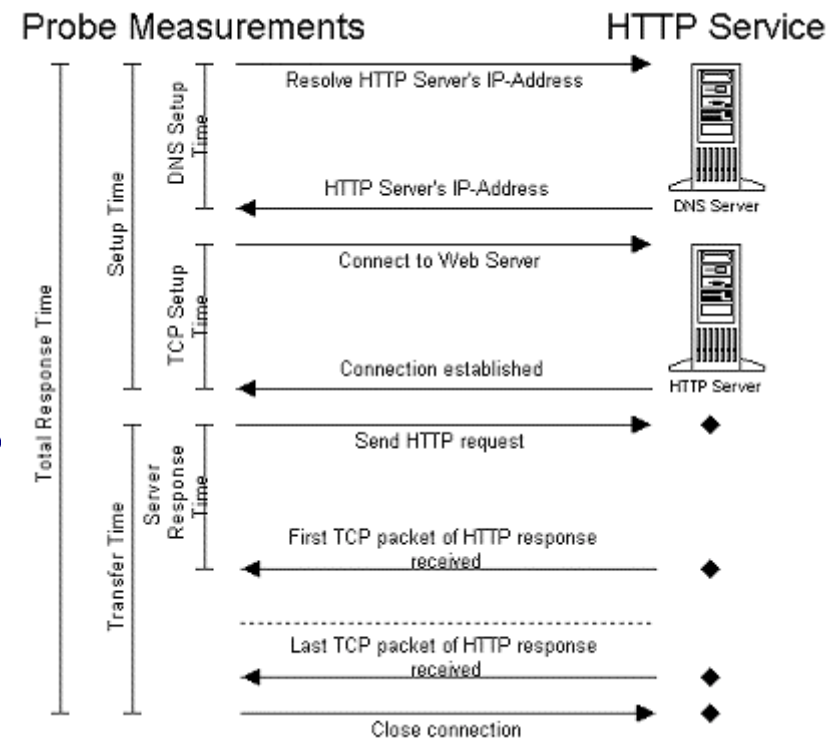
- **VP-IS** has probes to monitor availability and performance of several key Internet services:
  - **HTTP**  
(Web pages)
  - **HTTPS**  
(Secure web pages)
  - **WAP**  
(Wireless access protocol)
  - **FTP**  
(Remote file transfer)
  - **DNS**  
(Domain name service)
  - **ICMP**  
(**ping**-based connectivity test)
  - **RADIUS**  
(Remote authentication)
  - **SMTP**  
(Sending mail to a server)
  - **POP3**  
(Getting mail from a server)
  - **NNTP**  
(Pulling news headers, articles)

# How the Probes Work

- A probe emulates a user request for a service
- The probe finds out if the service is available, and takes service-specific performance measurements
  - E.G., the HTTP probe requests a web page, and measures request setup time, transfer time, and total response time (plus several finer-grained protocol steps)
- Default polling interval is 5 minutes

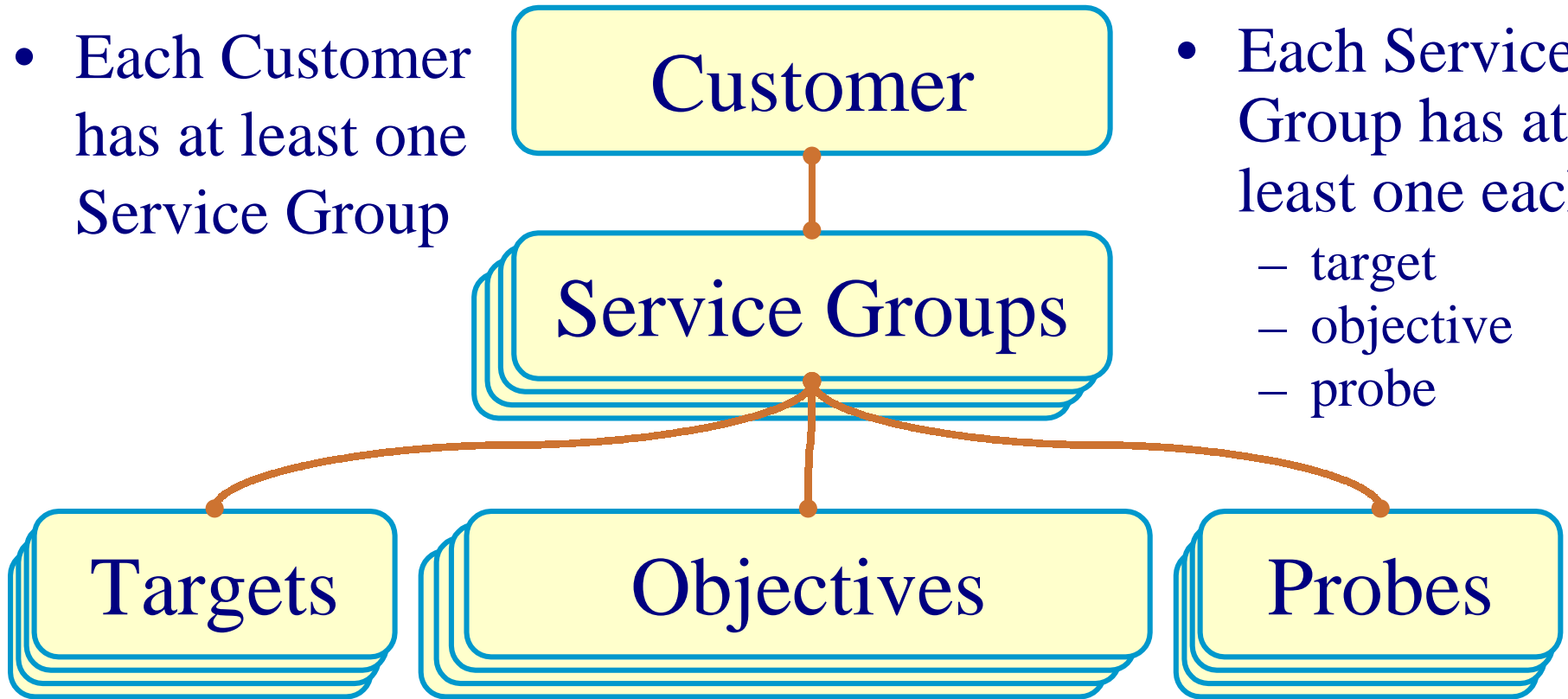
# HTTP and HTTPS probes

- Can use a proxy if desired
- Supports standard HTTP authentication
- By default, do not download embedded images and frames
- Can match returned HTML with a pattern to find out if desired page was returned, or an error (page not found, etc)



# Structure of Services in VP-IS

- Each Customer has at least one Service Group



- Each Service Group has at least one each:
  - target
  - objective
  - probe

# Structure of Services in VP-IS

(cont'd)

- “Customer” is a client whose services will be tracked
- Service Group
  - A named container used to group one or more service elements that make up a service provided to the customer
  - One service *only* (HTTP, DNS, etc.) per service group
  - “University of Malacca” has two service groups:
    - one named “DNS” has service target, objectives, and probe to test the DNS server that provides UM’s internet DNS service
    - one named “Web Presence” has service targets, objectives, and probes to test all the HTTP servers that host UM’s web presence

# Structure of Services in VP-IS

(cont'd)

- Service Target
  - The origin for all or part of the service named by a Service Group
  - Polled by a VP-IS probe for service measurements
- Service Level Objective (SLO)
  - Defines the criteria to determine if the service provided by a target is available and is performing acceptably
- Probe Location
  - the location of the measurement process that measures the performance of one or more service targets

# Configuring VP-IS

- Three approaches:
  - Wizard
    - for step-by-step set up of Internet service monitoring
    - simple to use, but not fast in large environments
  - Configuration manager
    - straightforward manipulation of **VP-IS** configurations
  - Configuration command line
    - for bulk configuration
    - requires understanding of XML
    - fast (once set up), but not simple

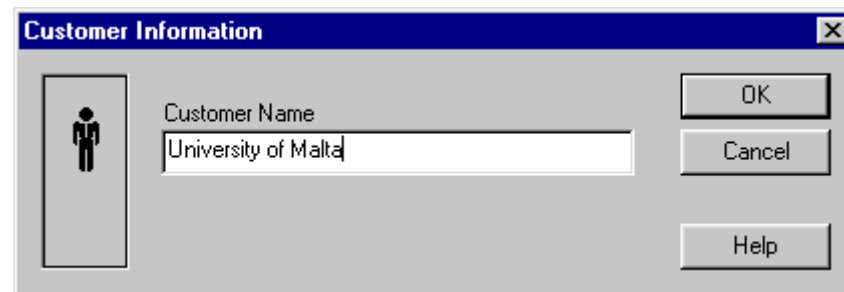


# Configuration Steps

(Configuring VP-IS cont'd)

## 1. Creating a Customer

- Requires only a name (“University of Malta”)



## 2. Creating one (or more) Service Groups

- Each requires a name (“Dial-in Authentication Service”) and a service type (“RADIUS”)

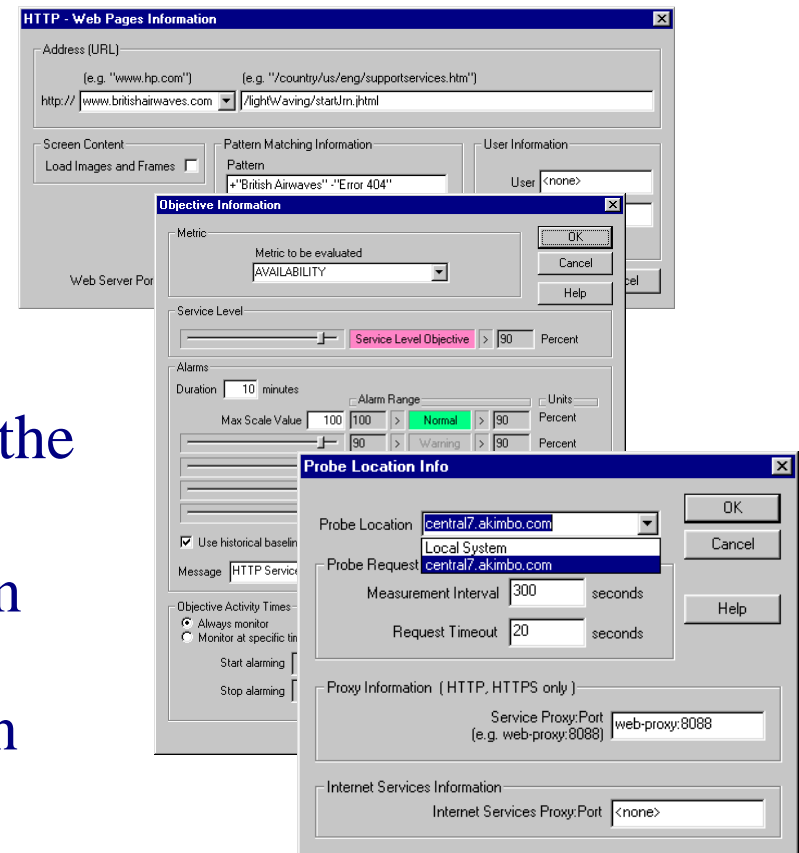


# Configuration Steps

(Configuring VP-IS cont'd)

## 3. Defining Service Target(s), Service Objective(s), and Probe Location(s) for each Service Group

- the specific information needed to configure the target(s) depends on the service type of the Service Group
- information for probe configuration includes location, polling interval, timeout, and any proxy information
- configuring a service objective is covered in detail shortly



The screenshot displays three overlapping configuration windows from the HP OpenView interface:

- HTTP - Web Pages Information:** Shows the URL configuration for a web page. The address is set to `http://www.britishairwaves.com/lightWaving/startJm.html`. The pattern matching information is set to `*"British Airwaves"-"Error 404"`.
- Objective Information:** Shows the configuration for a service objective. The metric is set to `AVAILABILITY`. The service level is set to `Service Level Objective` with a value of `90` Percent. The alarm range is set to `Normal` with a value of `90` Percent.
- Probe Location Info:** Shows the configuration for a probe location. The probe location is set to `central7.akimbo.com`. The probe request is set to `central7.akimbo.com`. The measurement interval is set to `300` seconds and the request timeout is set to `20` seconds. The proxy information is set to `web-proxy:8088`.

# Defining Service Targets

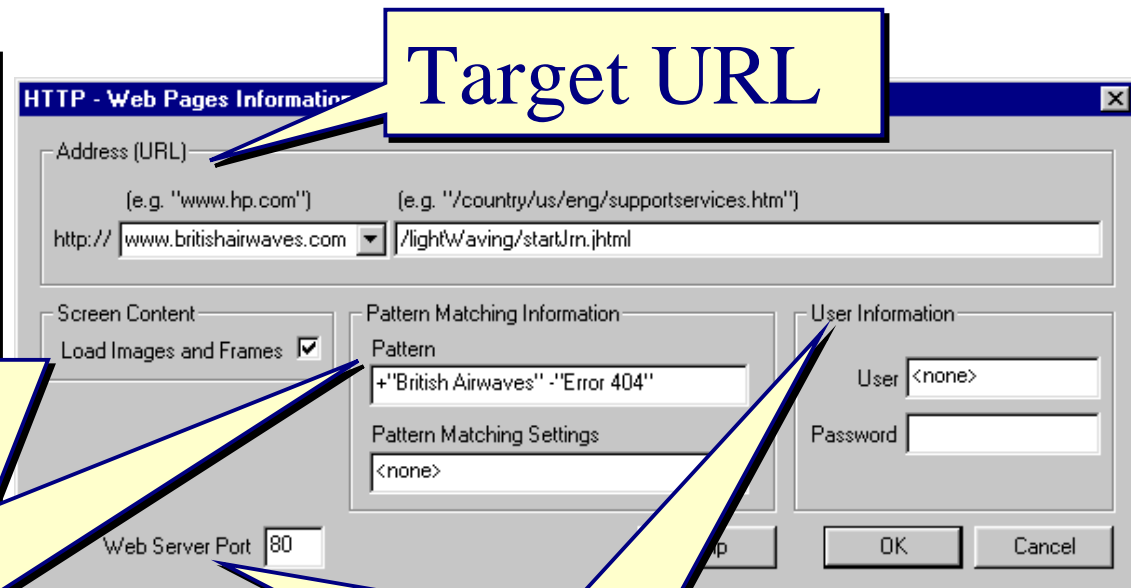
(Configuring VP-IS cont'd)

- Example: HTTP

Loading images, advertisements, etc. mimics the user experience, and is the default. But this material often comes from diverse servers, not the target server. By not loading this screen content, you get a more focussed measure of the target server's performance.

Pattern matching permits content validation to determine if desired page was fetched, or an error

Specify non-standard port numbers and user logon information as necessary



The screenshot shows the 'HTTP - Web Pages Information' dialog box. The 'Address (URL)' field is highlighted with a yellow callout box labeled 'Target URL'. The 'Pattern Matching Information' section is also highlighted with a yellow callout box. The 'Web Server Port' field is set to 80. The 'User Information' section shows 'User' set to <none> and 'Password' empty. The 'Screen Content' section has 'Load Images and Frames' checked.

# Defining Probe Locations

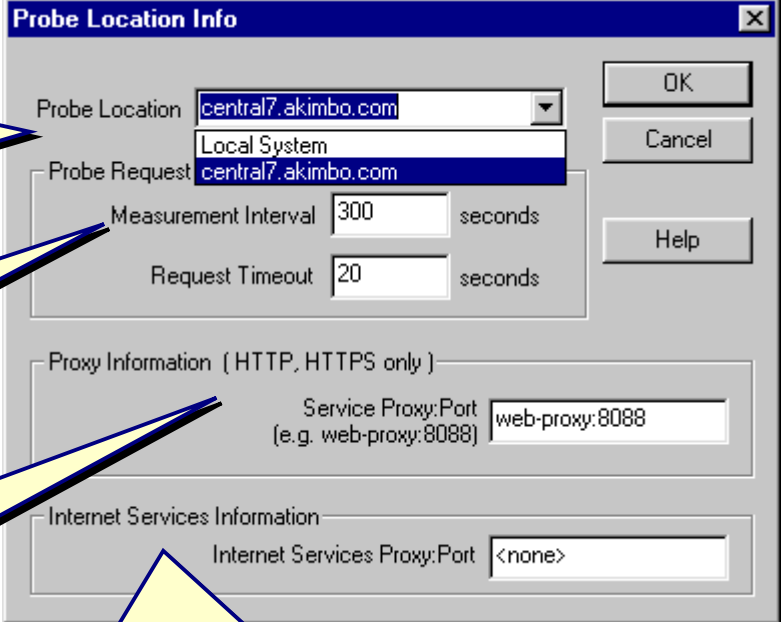
(Configuring VP-IS cont'd)

- Example: an HTTP probe

Location is “Local System”, or the full name of a host running a VP-IS probe (remote probes discussed later)

Polling interval, timeout should keep probe busy, not overtaxed

Proxy Information lets you probe through a proxy

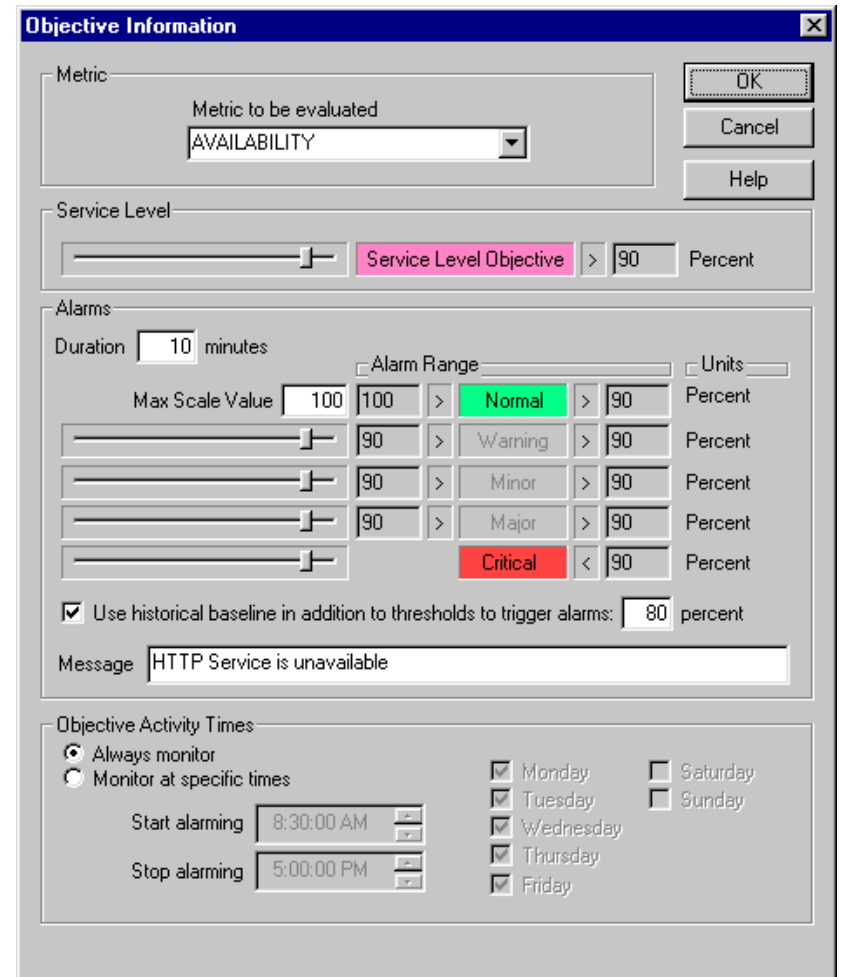


Internet Services Proxy lets remote probe use a proxy to return data

# Defining Service Objectives

(Configuring VP-IS cont'd)

- Sets up the measurement tests to be performed against the data from targets defined in this service group
  - Only tests data collected by the probes defined in this service group



The image shows a screenshot of the 'Objective Information' dialog box in HP OpenView. The dialog is titled 'Objective Information' and has a close button (X) in the top right corner. It contains several sections:

- Metric:** A dropdown menu labeled 'Metric to be evaluated' with 'AVAILABILITY' selected.
- Service Level:** A slider control for 'Service Level Objective' set to 90 Percent.
- Alarms:** A section for configuring alarms. It includes a 'Duration' field set to 10 minutes, a 'Max Scale Value' field set to 100, and a table of alarm ranges. The table has columns for 'Alarm Range', 'Units', and 'Percent'. The 'Normal' range is highlighted in green, and the 'Critical' range is highlighted in red. The 'Use historical baseline in addition to thresholds to trigger alarms' checkbox is checked, with a value of 80 percent.
- Message:** A text field containing 'HTTP Service is unavailable'.
- Objective Activity Times:** A section for monitoring. It has two radio buttons: 'Always monitor' (selected) and 'Monitor at specific times'. Below are 'Start alarming' (8:30:00 AM) and 'Stop alarming' (5:00:00 PM) time pickers. There are also checkboxes for days of the week: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday.

# Defining Service Objectives

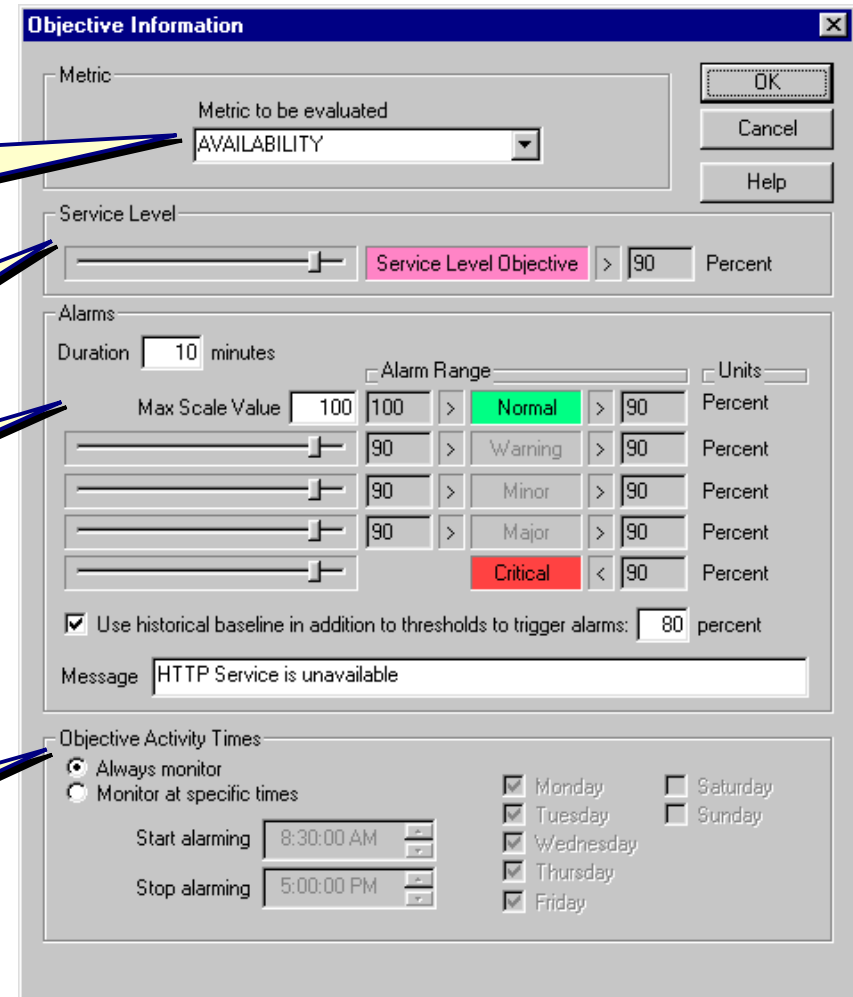
(Configuring VP-IS cont'd)

Select the metric you want to measure. Metrics offered vary by service type.

Define the acceptable level of performance for the metric: the “Service Level Objective”

Set alarm values, typically below the SLO violation level

Define when (the hours and days) to take measurements



The dialog box 'Objective Information' is used for configuring service objectives. It includes the following sections:

- Metric:** A dropdown menu labeled 'Metric to be evaluated' with 'AVAILABILITY' selected.
- Service Level:** A slider and input field showing 'Service Level Objective' at 90 Percent.
- Alarms:** A table of alarm levels with their respective thresholds and units.

Alarm Range	Max Scale Value	Threshold	Units
Normal	100	90	Percent
Warning	90	90	Percent
Minor	90	90	Percent
Major	90	90	Percent
Critical	90	90	Percent
- Use historical baseline:** A checkbox checked, with a value of 80 percent.
- Message:** A text field containing 'HTTP Service is unavailable'.
- Objective Activity Times:** Radio buttons for 'Always monitor' (selected) and 'Monitor at specific times'. A list of days with checkboxes: Monday, Tuesday, Wednesday, Thursday, Friday (checked); Saturday, Sunday (unchecked). Time pickers for 'Start alarming' (8:30:00 AM) and 'Stop alarming' (5:00:00 PM).

# Defining Service Objectives

(Configuring VP-IS cont'd)

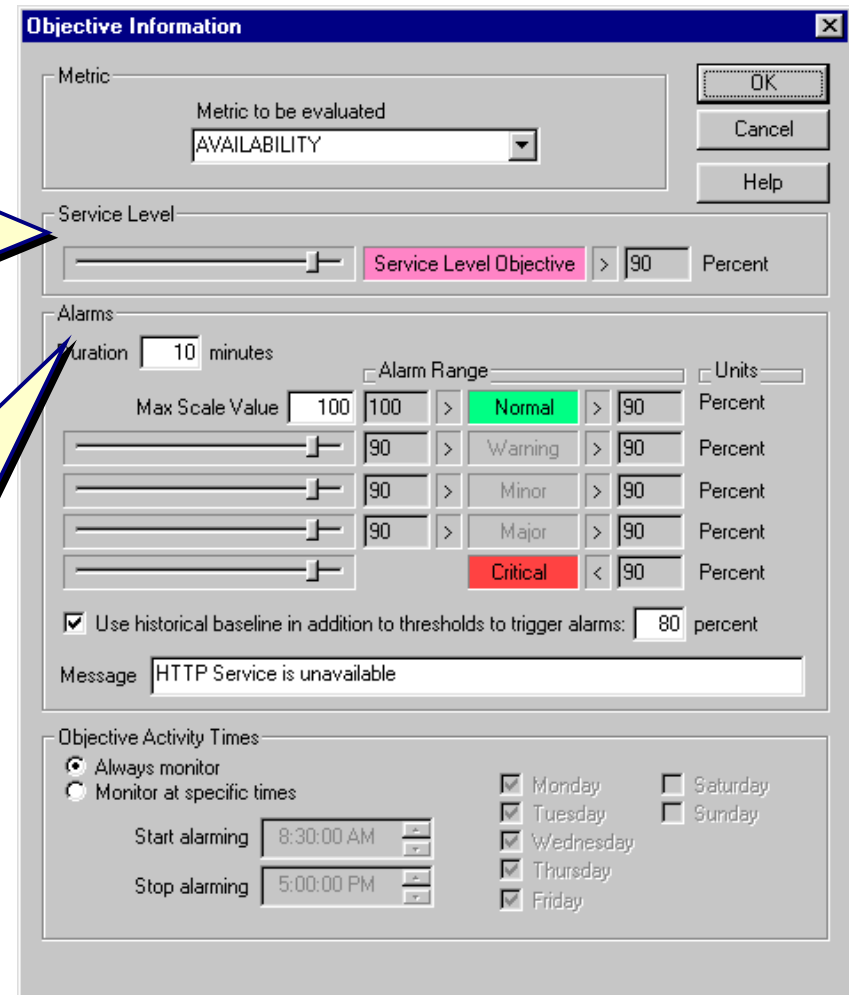
- The Service Level Objective (SLO) is independent of Alarms

- An SLO violation is stored in the VP-IS database, but does not *itself* send an alarm

- Alarms are independent of the SLO

- Not stored in the VP-IS database
  - Sent to a destination that can receive and process alarms, like NNM or ITO

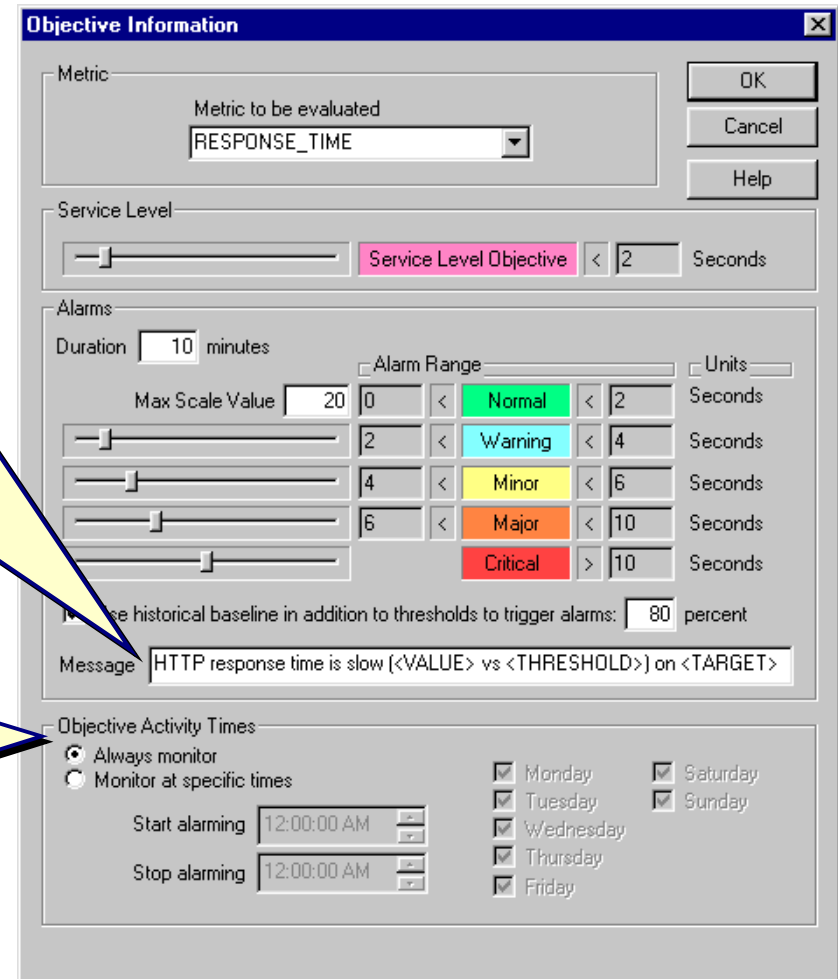
- **Duration** is the time this metric must exceed an alarm threshold before the alarm is sent



# Defining Service Objectives

(Configuring VP-IS cont'd)

- Create custom messages for alarms as desired
- Variables convey specifics about each alarm
  - For example, **<VALUE>** inserts the current value of the metric into the alarm message
  - Several other variables are available; see the online help for details
- Activate monitoring of this metric based on known usage patterns to reduce unnecessary data collection



Alarm Level	Threshold	Units
Normal	2	Seconds
Warning	4	Seconds
Minor	6	Seconds
Major	10	Seconds
Critical	10	Seconds



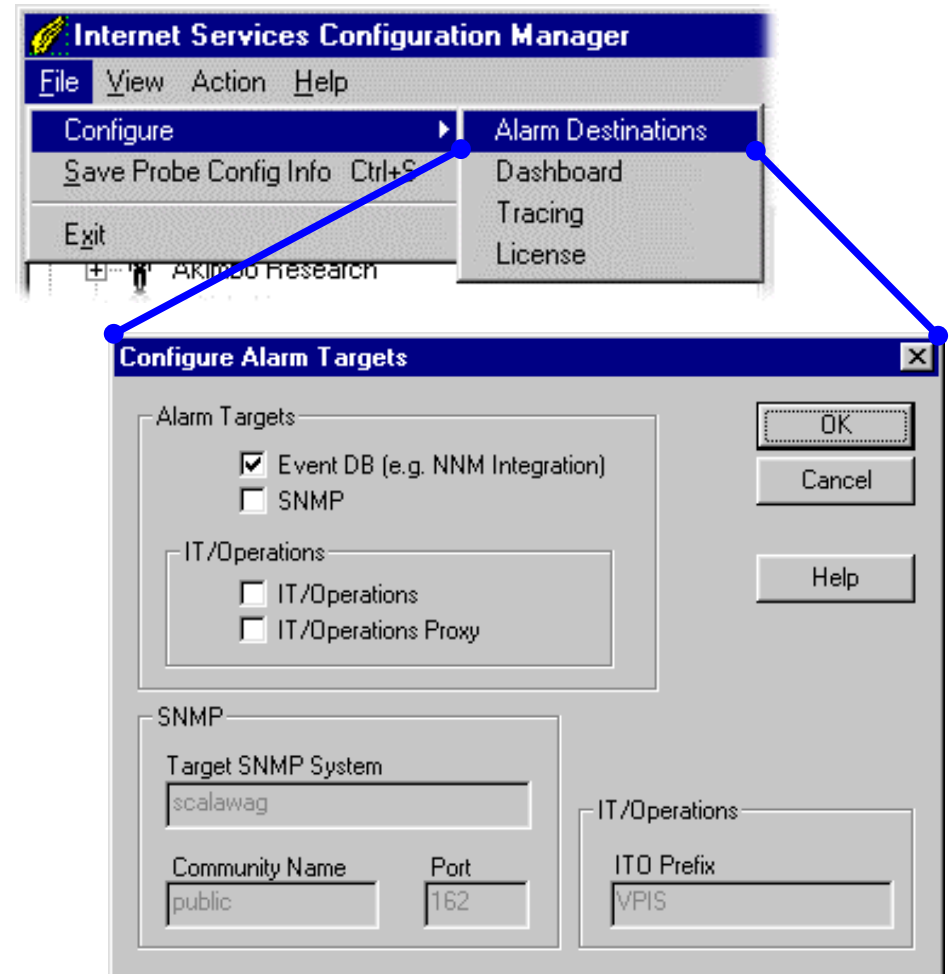
# Service Alarms

(Configuring VP-IS cont'd)

- Be sure to configure the alarm destinations (“targets”)

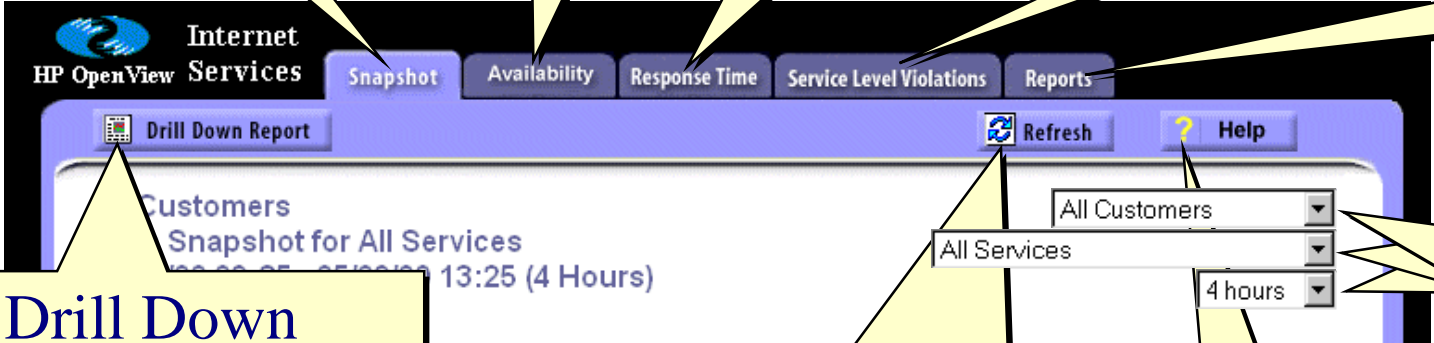
File ⇒ Configure ⇒ Alarm Destinations

- VP-IS can send its alarms to:
  - HP OpenView NNM
  - HP OpenView IT/Operations
  - generic SNMP management servers
- NNM and ITO integration covered later



# User's Overview of VP-IS

- Common Features of the Web Interface Pages



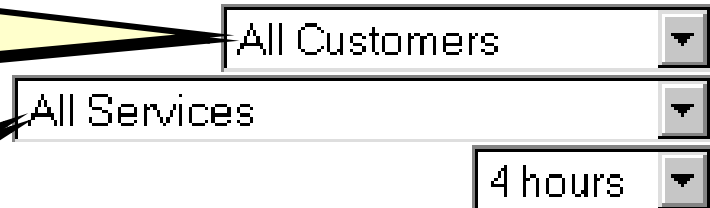
The screenshot shows the HP OpenView web interface for Internet Services. The top navigation bar includes tabs for Snapshot, Availability, Response Time, Service Level Violations, and Reports. Below the navigation bar, there are buttons for Drill Down Report, Refresh, and Help. The main content area displays a 'Customers Snapshot for All Services' with a time range of 13:25 (4 Hours). Below this, there are dropdown menus for 'All Customers', 'All Services', and '4 hours'. Callout boxes point to these elements and provide descriptions:

- Snapshot View**: Points to the Snapshot tab.
- Availability View**: Points to the Availability tab.
- Response Time View**: Points to the Response Time tab.
- Service Level Violation View**: Points to the Service Level Violations tab.
- Reports View**: Points to the Reports tab.
- Drill Down Report button (reports vary with the view)**: Points to the Drill Down Report button.
- Data Refresh button (browser refresh may only repaint with cached data)**: Points to the Refresh button.
- Help button**: Points to the Help button.
- Data Filtering Selectors**: Points to the dropdown menus for Customers, Services, and Time.

# Data Filtering Selectors

- Used to filter the data into smaller subsets
  - Used in combination to zero-in on detailed information
  - Filter selections carry over between views
  - The less filtering is done (e.g., all customers, all services, 30-day interval), the more processing time required

by Customer; lets you view the data for a single customer only, or for all customers combined



A screenshot of three dropdown menus. The top menu is labeled 'All Customers', the middle one 'All Services', and the bottom one '4 hours'. Each menu has a downward-pointing arrow on its right side.

by Service; lets you view the data for a single service only, or for all services combined

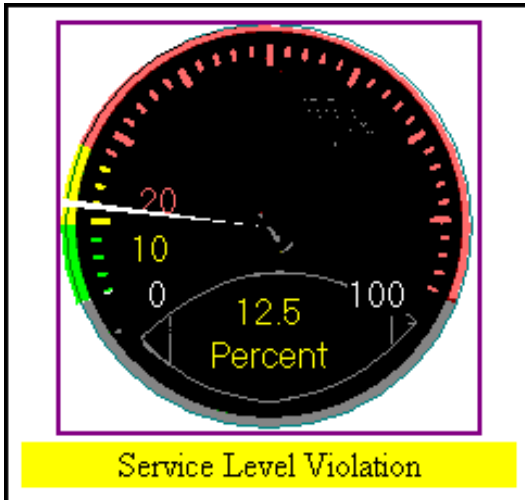
by Interval; lets you view the data for various intervals of time prior to the present

# Service Level Violation Meter

(The Snapshot View, cont'd)

- Shows the percentage of all metrics (in current interval) that violate an SLO

Response Time SLO: < 0.5 sec ⓘ  
 Critical Alarm Threshold: > 1.0 sec 🚨



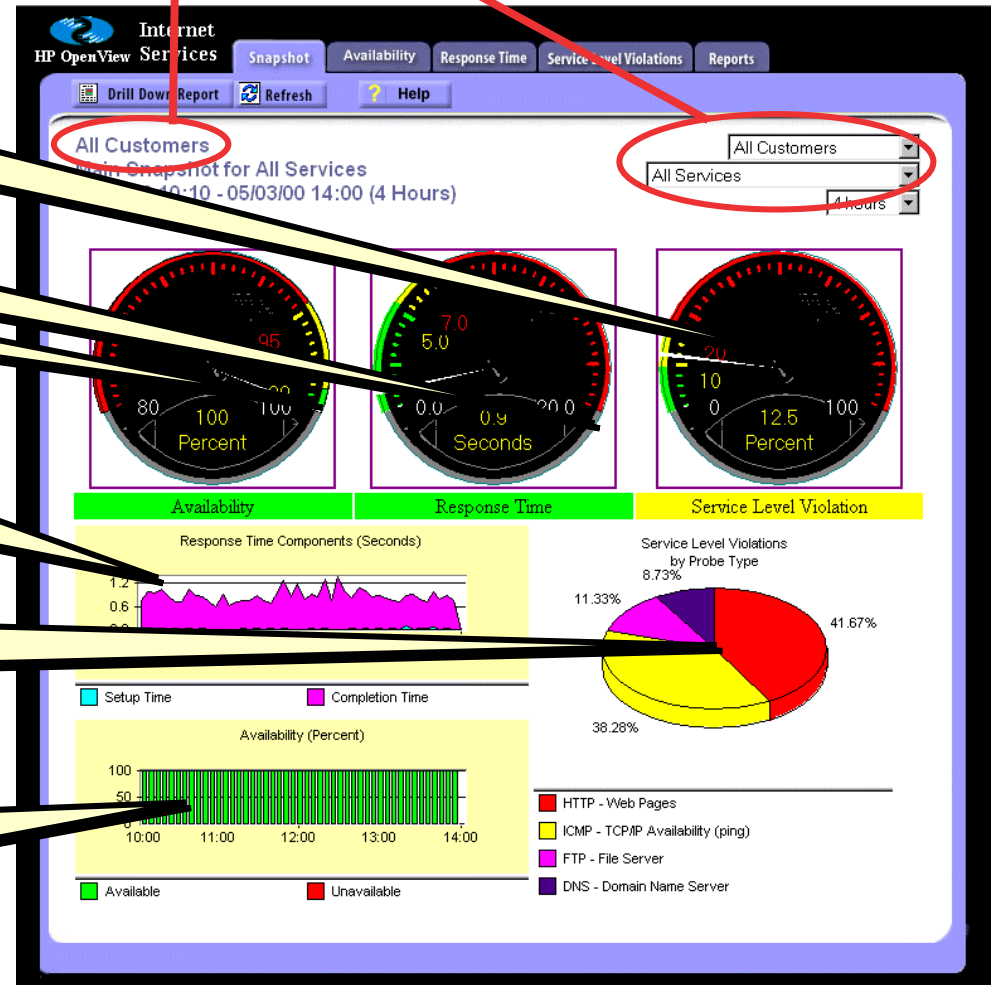
	Time 0	Time 1	Time 2	Time 3
Target				
pat.com	0.7 ⓘ	0.3	1.8 ⓘ 🚨	0.3
kim.com	0.3	0.3	0.7 ⓘ	0.4
lou.com	0.3	0.2	0.3	0.2
	$\frac{1}{3}$ 33%	$\frac{0}{3}$ 0%	$\frac{2}{3}$ 67%	$\frac{0}{3}$ 0%
<b>Service Level Violation Meter Reading</b>	$\frac{1}{3}$ 33%	$\frac{1}{6}$ 17%	$\frac{3}{9}$ 33%	$\frac{3}{12}$ 25%



HP OPENVIEW

# What is the Overall Status of my Service Offerings?

- Percentage of service violations
- Average service response time
- Overall availability of services
- Response time variations during the snapshot interval
- Which service types experience the most (or fewest) service violations?
- Distribution of service availability over snapshot interval



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HP OPENVIEW

# What is the Status of Services for “Akimbo Research”?

Percentage of service violations

Average response time for Akimbo

Overall service availability for Akimbo

Response time variations for Akimbo during the snapshot interval

Distribution of service violations among Akimbo's services

Distribution of service availability for Akimbo over snapshot interval



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HP OPENVIEW

# What is the Status of HTTP for “Akimbo Research”?

Of Akimbo's service violations, what percentage are related to HTTP?

Average HTTP response for Akimbo

Overall HTTP availability for Akimbo

HTTP response time variations for Akimbo during the snapshot interval

Which of Akimbo's HTTP service groups have the most violations?

Distribution of HTTP availability for Akimbo over snapshot interval



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# Integrating ITO and VP-IS

- Two modes let you send **VP-IS** alarms to **ITO** :
  - IT/Operations
    - The default, sends alarms to ITO with the **VP-IS** server name set in the **opcmsg** node attribute
    - **VP-IS** server must be configured in the ITO node bank
  - IT/Operations (proxy)
    - Sets the **opcmsg** node attribute to the IP-address of the target
    - All target nodes must be configured in the ITO node bank

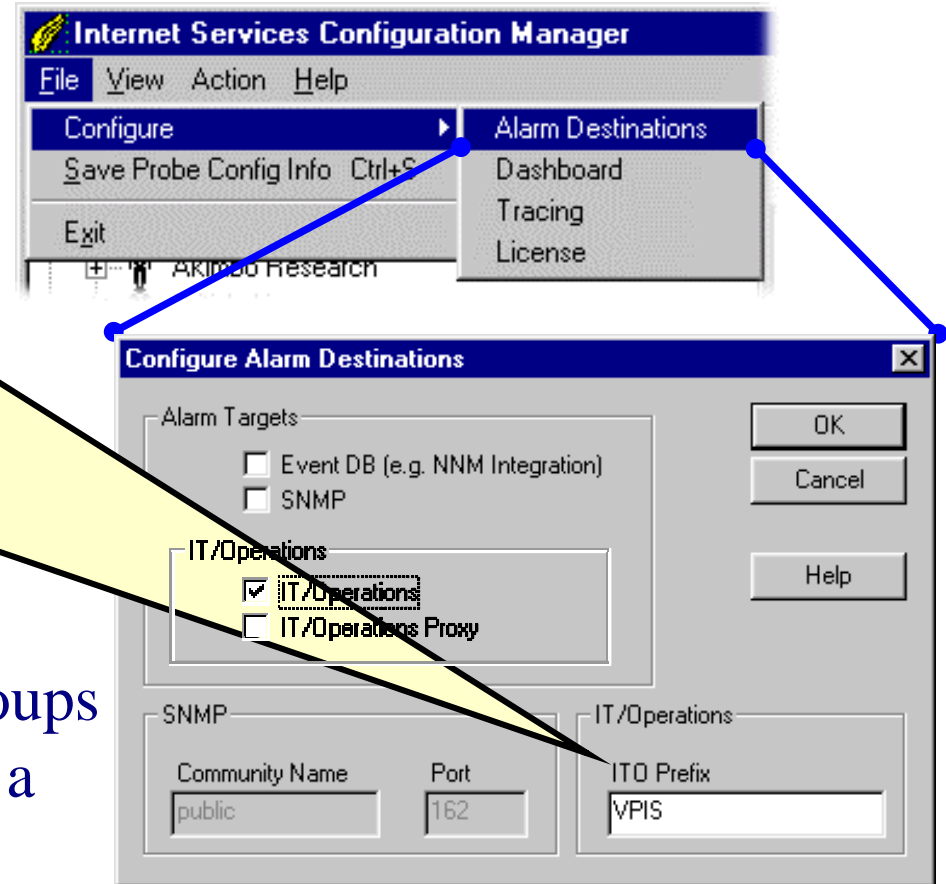


# Integrating ITO and VP-IS

- ITO integration sets the `opcmsg` application attribute with this prefix
- ITO integration also sets the `opcmsg` message group attribute to:  
`<ITO Prefix>_<Probe Name>`  
For example:

`VPIS_HTTP`  
`VPIS_ICMP`

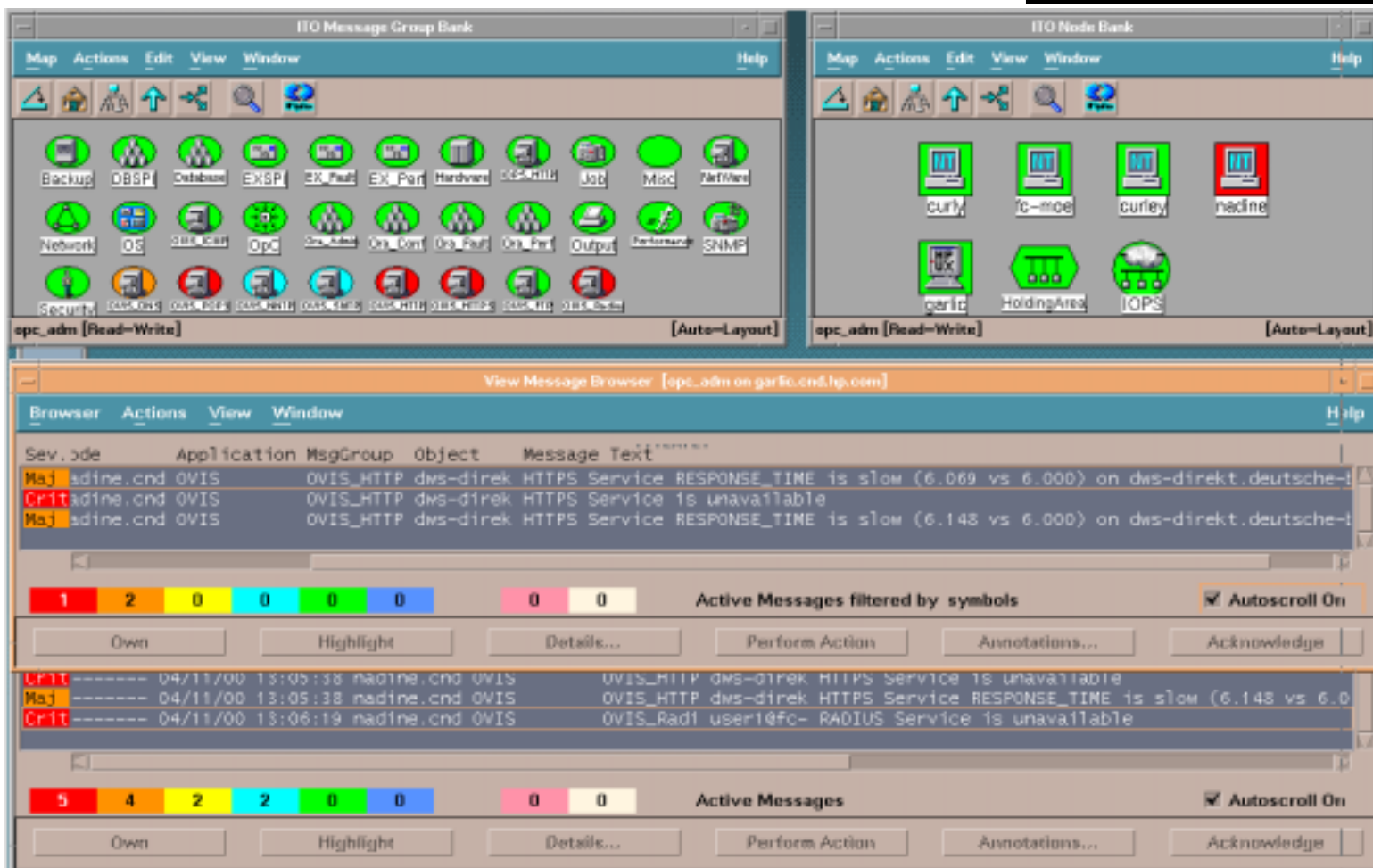
- So you can, e.g., create message groups for all monitored services, or set up a message template with specific conditions



# Integrating ITO and VP-IS

1. Add the **VP-IS** server to the **ITO** node bank
2. Install an **ITO** agent on the **VP-IS** server
3. If proxy mode, add target nodes to **ITO** node bank
  - Ensure node(s) belong to a node group and are added to the ITO administrator/operator Responsibility matrix
4. Add the **opcmsg ( 1 | 3 )** message template to the **VP-IS** server node and distribute this template
5. Test: **opcmsg a=VPIS o=VPIS\_Test msg\_text="Test"**
6. Set the **VP-IS** alarm destination as shown earlier

# Integrating ITO and VP-IS



The screenshot displays the HP OpenView interface, showing two main windows: 'ITO Message Group Bank' and 'ITO Node Bank'. The 'ITO Message Group Bank' window displays a grid of icons representing various system components like Backup, DBSP, Database, EXSP, EX\_Port, Hardware, OS, Job, Misc, NetWare, Network, OS, OSA, Opc, Osa-Act, Osa-Cont, Osa-Ext, Osa-Int, Output, Printer, and SNMP. The 'ITO Node Bank' window displays icons for nodes such as curly, fc-moe, curly, nadine, geric, HoldingArea, and IOPS. Below these windows is a 'View Message Browser' window showing a list of messages with columns for Sev, Jde, Application, MsgGroup, Object, and Message Text. The messages include details about OVIS\_HTTP services and their response times or availability status.

Sev	Jde	Application	MsgGroup	Object	Message Text
Maj	adine.cnd	OVIS	OVIS_HTTP	dws-direk	HTTPS Service RESPONSE_TIME is slow (6.069 vs 6.000) on dws-direkt.deutsche-
Crit	adine.cnd	OVIS	OVIS_HTTP	dws-direk	HTTPS Service is unavailable
Maj	adine.cnd	OVIS	OVIS_HTTP	dws-direk	HTTPS Service RESPONSE_TIME is slow (6.148 vs 6.000) on dws-direkt.deutsche-

Sev	Jde	Application	MsgGroup	Object	Message Text	
Crit	-----	04/11/00	13:05:38	nadine.cnd	OVIS	OVIS_HTTP dws-direk HTTPS Service is unavailable
Maj	-----	04/11/00	13:05:38	nadine.cnd	OVIS	OVIS_HTTP dws-direk HTTPS Service RESPONSE_TIME is slow (6.148 vs 6.0
Crit	-----	04/11/00	13:06:19	nadine.cnd	OVIS	OVIS_Rad1 user1@fc- RADIUS Service is unavailable

# Integrating NNM and VP-IS

- **NNM** integration lets you send **VP-IS** alarms to **NNM**
- **NNM** integration adds **VP-IS** information to service-providing nodes in **NNM** submaps
  - New symbols under such nodes represent
    - **Customers** to which the node provides services
    - **Services** provided those customers
    - **Service Level Objectives** of each service
- Integration also populates views in *Customer Views*, if present

# Integrating NNM and VP-IS

- Requirements

- NNM version 6.0 or higher
  - *Customer Views for NNM* is optional
- IP submaps must be persistent to all levels
  - On Windows NT, the persistence default is not suitable
  - See NNM's *A Guide to Scalability and Distribution*
    - Chapter 2: background about on-demand submaps and persistence
    - Chapter 4: instructions for changing the level of persistence
  - Potentially requires additional memory to maintain NNM performance

# Integrating NNM and VP-IS

1. Ensure that **VP-IS** is fully installed and operational, to create a **VP-IS** server with which to integrate

Remaining steps occur at the **NNM** station(s) you want to integrate with

2. Set submap persistence to “All Levels” (if necessary)
3. Install integration package using instructions on **CD-ROM** cover
4. Start **NNM** as usual

# Integrating NNM and VP-IS

- What's new:
  - New Alarm category
    - Default destination for VP-IS alarms
  - New menu
    - Items for obtaining details on VP-IS tagged nodes, and for launching VP-IS interface
  - New symbols in submaps to represent **VP-IS** customers, services, and service-level objectives



HP OPENVIEW

# Alarms

(Integrating NNM and VP-IS, cont'd)

- Alarms in this category originate from the **VP-IS** system
- **VP-IS** alarms work the same as other **NNM** alarms
  - Use standard NNM methods to configure and manage them as necessary
  - Acknowledge or delete them as usual
  - Acknowledging/deleting an alarm does not change the status of the associated service objective symbol in the map (described later)



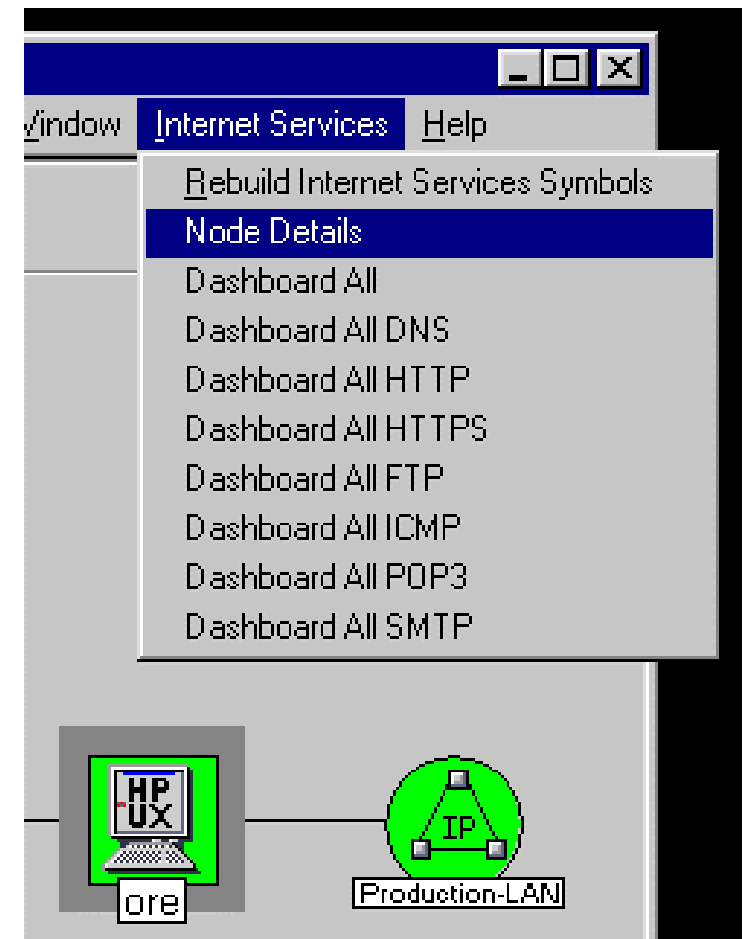
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# Internet Services Menu

(Integrating NNM and VP-IS, cont'd)

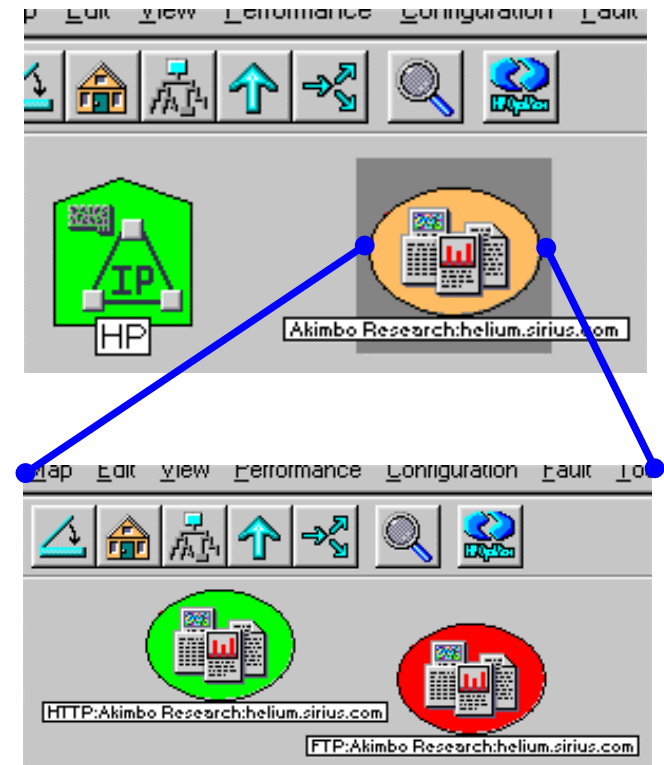
- **Rebuild Internet Services Symbols**
  - Rebuilds the **VP-IS**-added symbols in the map according to the current data
- **Node Details**
  - Show all details **VP-IS** has about a selected node
- **Remaining items launch VP-IS dashboard as indicated**
  - If using Netscape Navigator on Windows NT, dashboard items (excepting “**A11**”) are broken



# Internet Services Symbols

(Integrating NNM and VP-IS, cont'd)

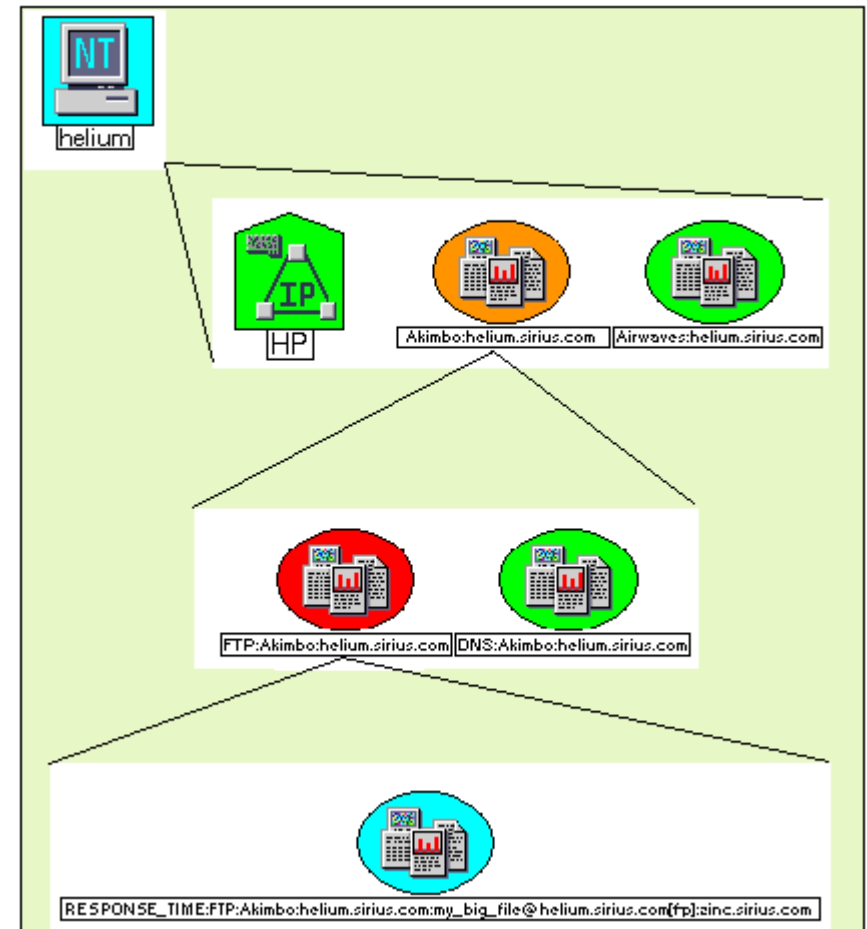
- The node-level submap of a **VP-IS** target node, if in the **NNM** management domain, gets new symbols that represent customers receiving services from the node
- Service symbols in the customer's child submap represent the services provided to that customer by this node



# Internet Services Symbols

(Integrating NNM and VP-IS, cont'd)

- In response to an alarm from **VP-IS**, **NNM** creates a symbol to represent the SLO sending the alarm
- SLO-symbol color reflects alarm severity
- SLO-symbol names can be long
  - Use Panner (or, on NT, right-click on symbol) for more readable view



# Batch Configuration

(Scalability and Distribution, cont'd)

---

- Consider batch configuration when:
  - Large numbers of services to target
  - Targets available in some machine-readable form
- Create a tool to reformat the targets and feed them into the **VP-IS** batch configuration interface
- Use batch interface to save **VP-IS** configurations (and potentially distribute to other **VP-IS** installations)

# Batch Configuration

(Scalability and Distribution, cont'd)

---

- The **IOPSload** program is the batch configuration interface
  - **IOPSload** uses **XML** to define configurations
  - Command options:
    - save** <file> :stores current configuration into <file> of **XML**
    - load** <file> :adds configuration data in <file> of **XML** to current configuration (does not replace current configuration)
    - check** :verifies syntax of <file> of **XML**
    - remove** <file> :removes configuration data defined in <file> of **XML** from current configuration

# Remote Probes

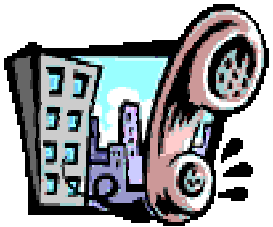
(Scalability and Distribution, cont'd)

---

- Manual process in the first release
  - Transfer certain binaries from the local **VP-IS** management station to the remote computer where the probe is wanted
  - Transfer configuration information created on the local **VP-IS** management station to the remote computer where the probe is wanted
  - Start up the remote probe



# Case Study - VantagePoint Internet Services



## Internal E-Services

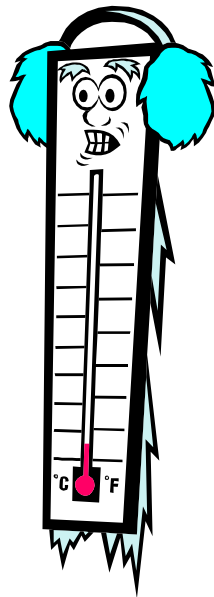
Service Level Management  
Configuration/Change  
Help Desk  
Service Reporting

# Jim's Challenge:

## End-to-end service response time analysis per customer

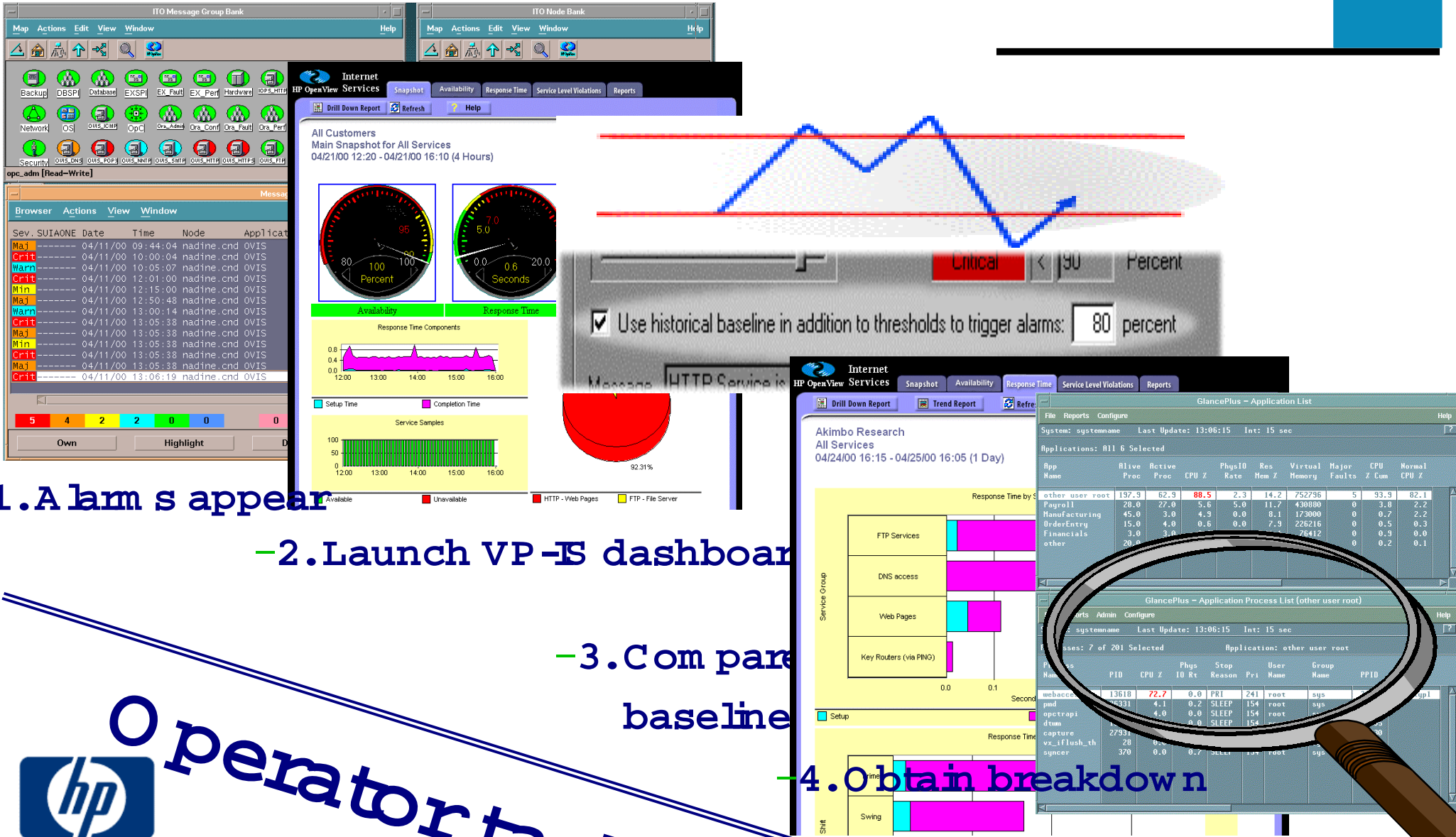


- Empower his operators, help desk staff and account managers with the tools for managing internet service levels
- How can he leverage existing troubleshooting tools while providing staff with at-a-glance information by customer and by service?





# Example – first the problem



The screenshot displays the HP OpenView interface with several key components:

- Internet Services Dashboard:** Shows a 'Main Snapshot for All Services' for the period 04/21/00 12:20 - 04/21/00 16:10 (4 Hours). It includes two gauges: 'Availability' at 95% and 'Response Time' at 7.0 seconds. A line graph shows response time fluctuations, with a peak reaching a 'Critical' threshold. A checkbox is checked for 'Use historical baseline in addition to thresholds to trigger alarms: 80 percent'.
- Service Group Performance:** A horizontal bar chart shows response times for 'FTP Services', 'DNS access', 'Web Pages', and 'Key Routers (via PING)'. 'FTP Services' shows the highest response time.
- Application Process List:** A table titled 'GlancePlus - Application List' shows system details. A magnifying glass highlights a row for 'other user root' with a CPU usage of 88.5%. Below it, the 'GlancePlus - Application Process List (other user root)' table shows process details for 'webacce' with a CPU usage of 72.7%.

- 1. An alarm appears

- 2. Launch VP-IS dashboard

- 3. Compare current response times to baseline

- 4. Obtain breakdown

- 5. Pinpoint problem



Operator tasks



HP OPENVIEW

# Example – customer care

**To Do Overview Specialist**

Specialist: MILLT | Thomas Miller

Startdate: 24/10/1998 to 26/10/1998

Pool: FMSLOC2

Nr.	Status	Description
<input type="checkbox"/> 9639	REGISTERED	Hardware Failure
<input type="checkbox"/> 9625	DISPATCHED	Unix netconfig needs
<input type="checkbox"/> 9585	REGISTERED	Oracle OPS\$ databas
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		

Buttons: Help, Select all, Deselect

**Internet HP OpenView Services**

Snapshot | Availability | Response Time | Service Level Violations | Reports

Drill Down Report | Refresh | Help

All Customers | All Customers (dropdown)  
All Services (dropdown)  
4 hours (dropdown)

Main Snapshot for All Services  
04/21/00 12:20 - 04/21/00 16:10 (4 Hours)

**Availability** | **Response Time**

Response Time Components

Service Samples

Legend: Available (green), Unavailable (red)



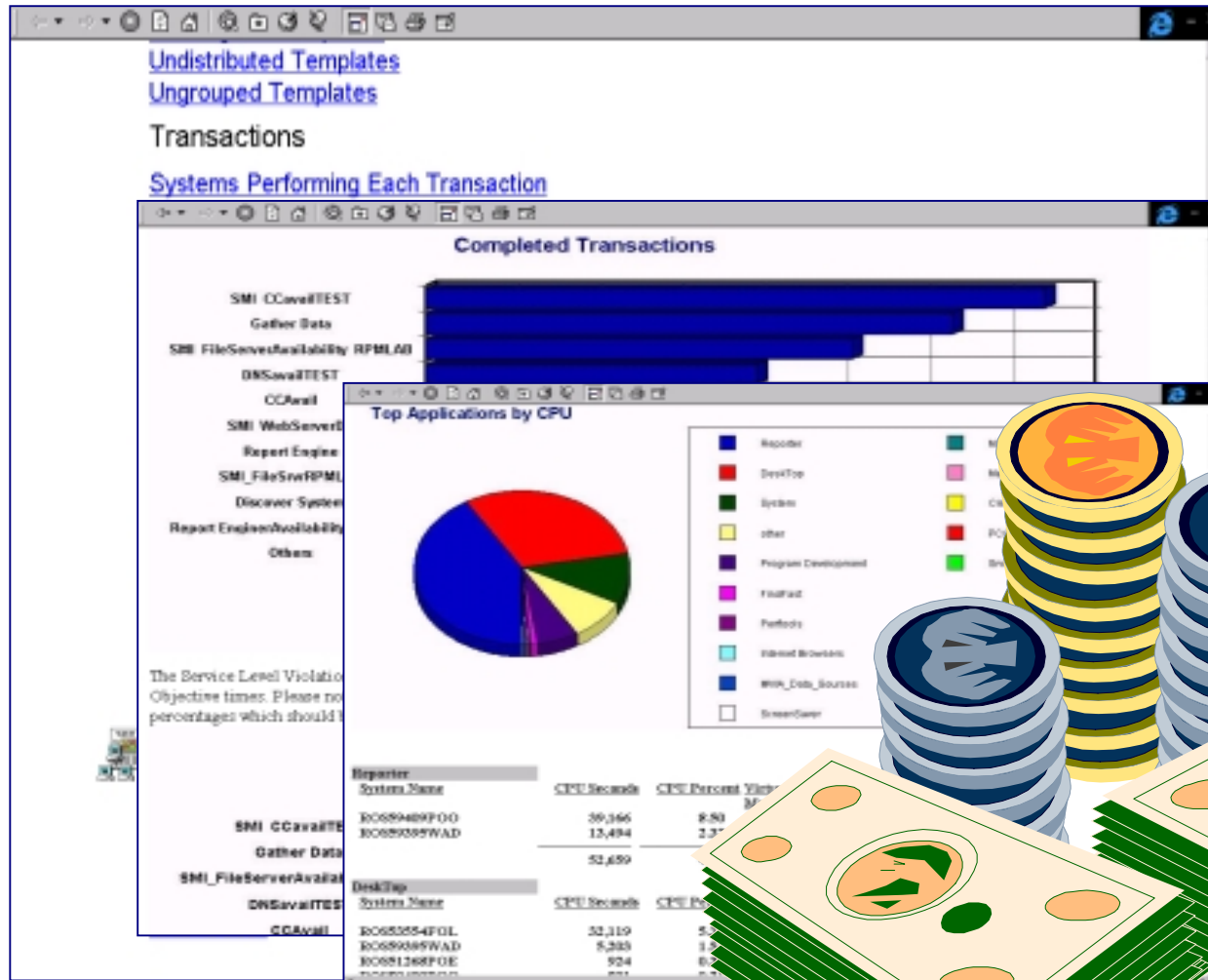
-1. Trouble ticket

-2. Who is affected?

-3. What are customers



# Example – account manager



-1.M onthly SLA reports

-2.SLA Credit Management



HP OPENVIEW

# HP OpenView VantagePoint Internet Services

## How VPIS compares to Micromuse ISM

- VPIS shows monthly, weekly and daily trend reports based on historical measurement data; this allows the users to get out of the firefighting mode to become proactive  
*Micromuse only does near-time alarming but no historical trend reporting*
- VPIS offers a UI for defining SLAs and alarms whenever these SLA is violated  
*Micromuse doesn't allow for the definition of SLAs*
- VPIS is tightly integrated with NNM and VP Operations  
*Micromuse doesn't have such a strong integration with market-leading troubleshooting tools*



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## How VPIS compares to Agilent Firehunter

- VPIS allows customers to get all support from HP  
*With Firehunter the customers get yet another vendor that they have to establish support agreements with*
- VPIS integrates tightly into the suite of OV troubleshooting tools  
*Firehunter is a point product only with less strong of an integration with OV troubleshooting tools*
- VPIS support leading edge technologies such as WAP  
*Firehunter doesn't offer a solution for WAP management*

