



Leveraging OpenView to Manage HP-UX and NT and Look Good to Your Boss

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What We'll Cover

- Introductions
- Overview of OpenView
 - OV Operations, Performance and NNM Focus
- The Implementation Approach
- Managing HP-UX and NT with OpenView
 - How to ... food for thought
- Impressing Your Boss (and his boss)
 - Reporting
- Questions ... Answers ?

Who We Are



- InoTech: An Overview
 - Focus on Network, Systems, and Application Management Solutions
 - Resale/Strategic Partners
 - Network, Systems, and Application Management Consulting
 - Operations Management: Sys Admin and NOC
 - Management Application/Agent Development
 - One of Original 16 OpenView Channel Partners
 - OpenView Crystal Award Winner: E-Services Mgmt
 - One of Fastest 500 Growing Technology Firms

Who Are You ?

- Areas of Responsibility?
 - Systems, Network, Apps Only? All?
 - Number of Servers ?
 - Types of Systems ?
(HPUX, MPE, NT, OTHER)

Where Are You ?

<u>Level</u>	<u>Maturity</u>	<u>Processes</u>
4	Value	IT/Business Metric Linkage
3	Service	Capacity Planning, Service-Level Management
2	Proactive	Performance, Change, Problem Configuration, Availability Management Automation, and Job Scheduling
1	Reactive	Event Up/Down, Console, Trouble Ticket, Backup, Topology, Inventory
0	Chaotic	Multiple Help Desks, Non-Existent IT Operations, User Call Notification



Effective Management System

Clearly and Quantitatively

- ✓ Proactively *Prevents* Problems
- ✓ *Quickly Find* the Root Cause of Problems that Occur
- ✓ Monitor and Communicate the *Health* of Your Infrastructure
- ✓ Provide Useful *Business Metrics* to Senior Management
- ✓ Monitor and Report *SLO* and *SLA Status*
- ✓ Monitor and Report *Customer Satisfaction* Metrics

Solutions



Operators



Users



Management

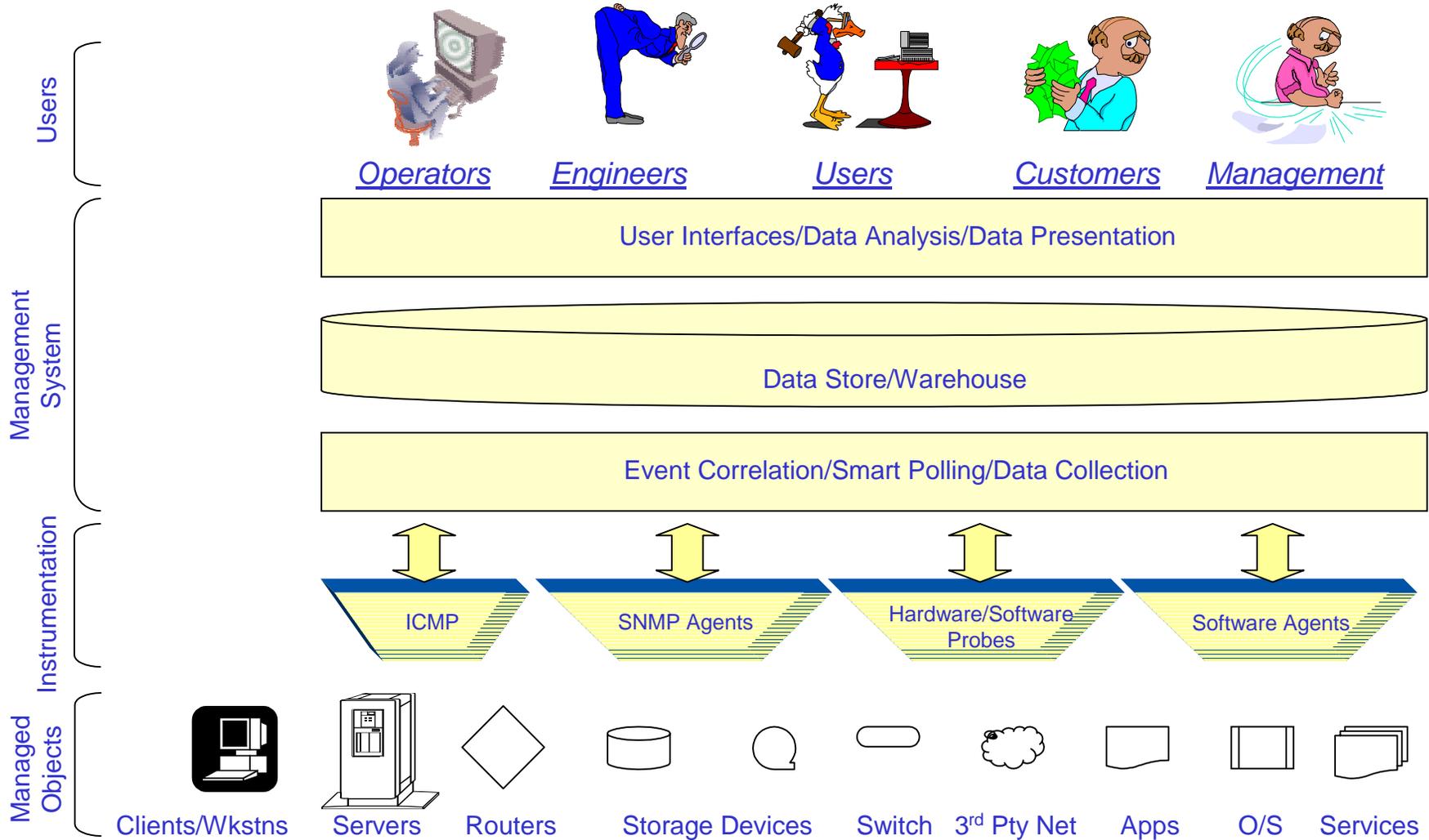


Engineers



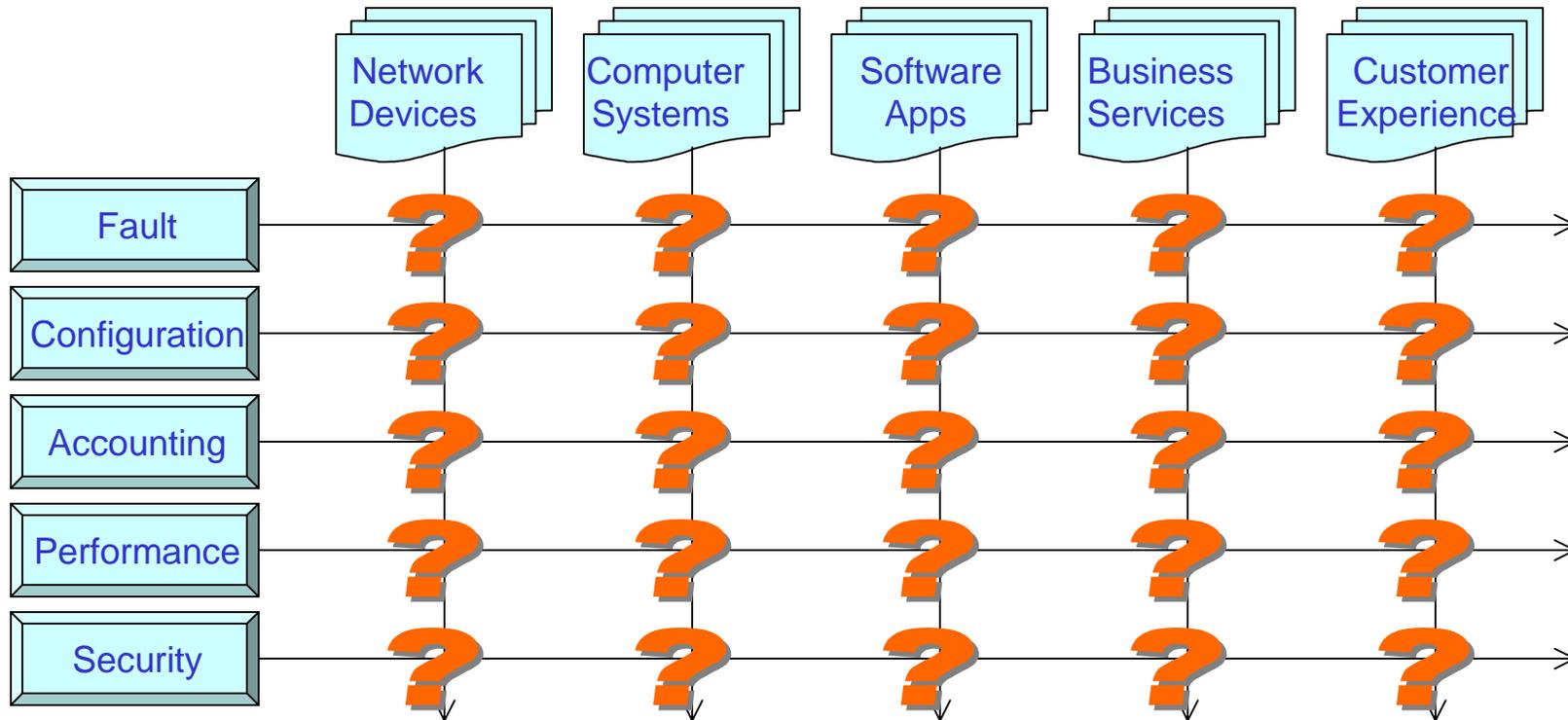
Customers

Solutions



Solutions

User Interfaces Event Mgmt Reporting



The OpenView Family

management software

→ application management

Business application and computing resources support

→ availability management

Ensure availability of critical IT resources

→ network management

Keep your network devices up and running

→ performance management

Ensure performance of critical IT resources

→ service management

Centralizes control of all back office operations

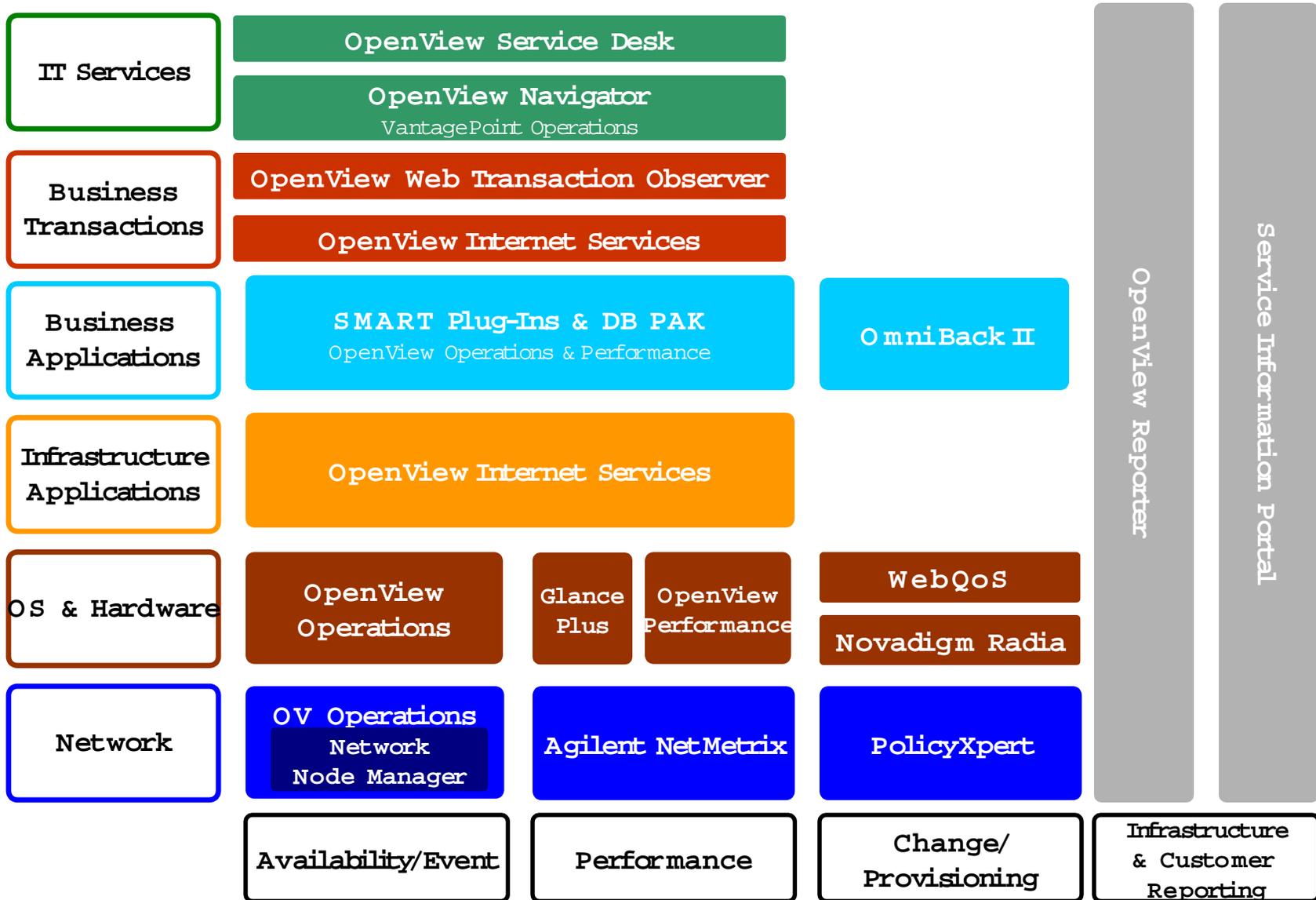
→ systems management

Effectively monitor your entire computing environment

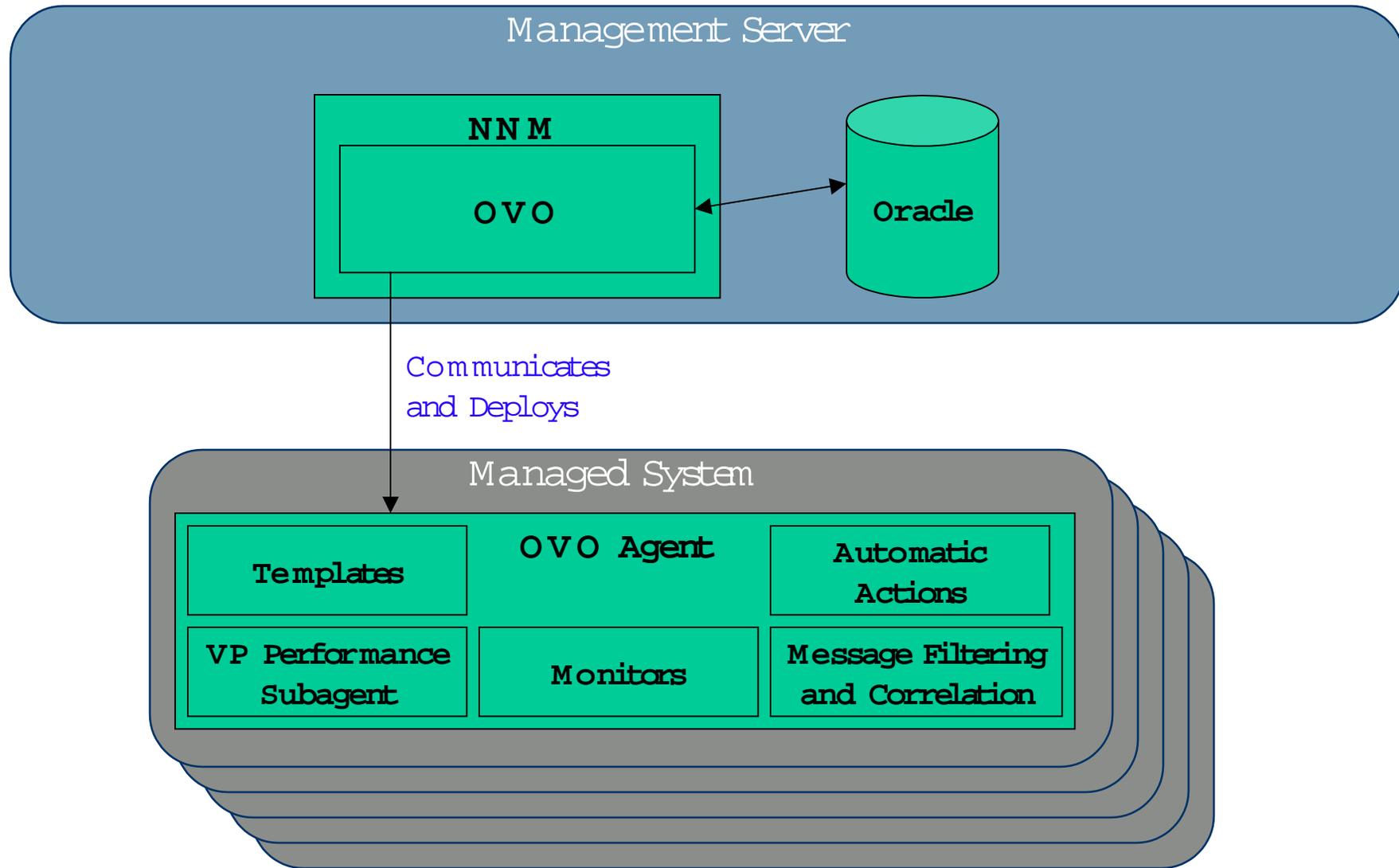
→ storage & data management

Ensures that the data is there when you need it

OpenView – Building Block Architecture



IT Operations Mgmt – OpenView Operations



IT Operations Mgmt – OpenView Operations

OpenView Operations Agent

Collecting

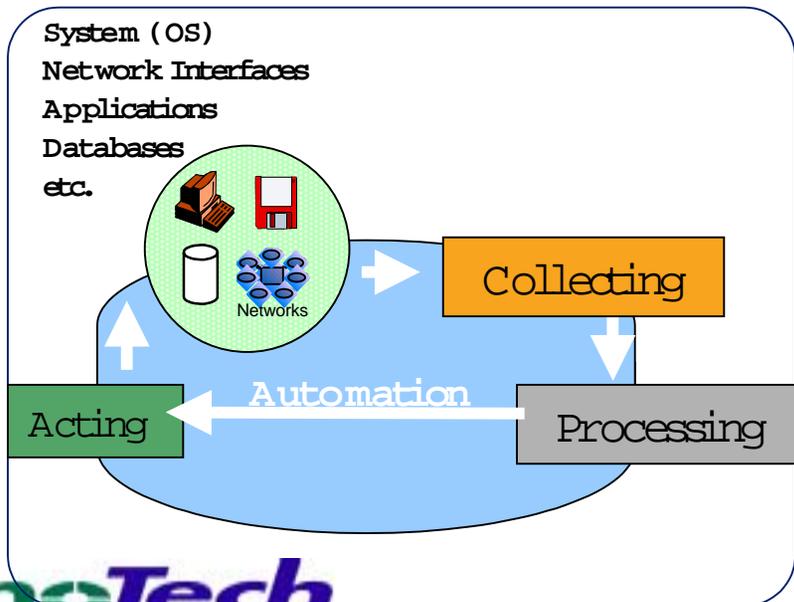
- ❖ SNMP traps & variables
- ❖ Application log files
- ❖ System messages
- ❖ User defined collection attributes

Processing

- ❖ Event filtering, prioritizing (critical, major, etc.), and grouping of messages
- ❖ Event correlation

Acting

- ❖ Buffering messages if management system is down
- ❖ Forwarding messages to pre-defined OVO management servers
- ❖ Performing automatic action



IT Operations Mgmt – OpenView Operations

OpenView Operations Console

Collecting

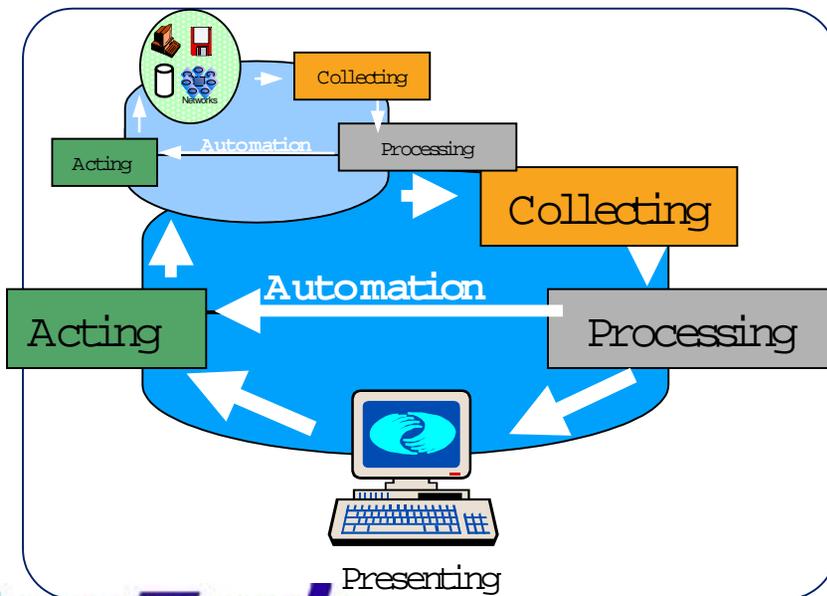
- ❖ Messages sent from agents via RPCs

Processing & Presentation

- ❖ Event correlation
- ❖ Central storage of events and configuration data
- ❖ Presentation of messages and problem resolution steps to responsible operators
- ❖ Forward Messages to trouble-ticket systems and to other management systems

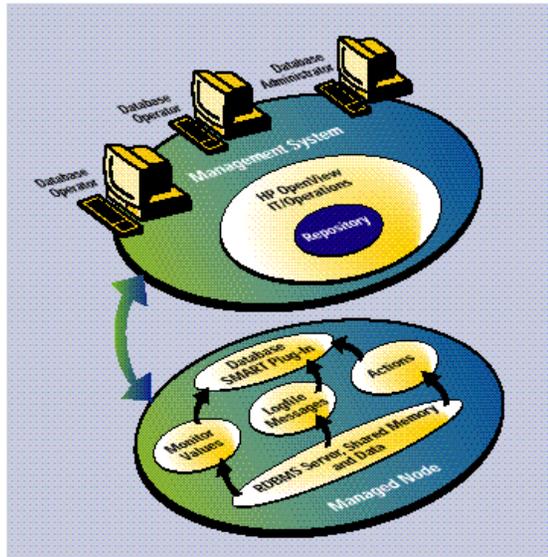
Acting

- ❖ Start any  integrated application/script
- ❖ Operator-initiated actions & automatic actions
- ❖ Escalate to other management systems
- ❖ Triggering of external remote notification services (e.g., pager)



IT Operations Mgmt – OpenView Operations/SPIs

SPI technology



- ❖ HP OpenView Operations SPIs
 - SPI's sold by HP and channel partners
 - Events, processes, actions, performance metrics, service reports/ views/discovery, transactions, etc.
 - Full OpenView support
- ❖ SPI Gallery
 - Free download from OV web
 - Event, process monitoring and some actions
 - Self-help community
 - Co-marketed by ISV, included in SPI solutions guide
 - Customers may make and submit enhancements
- ❖ Partner SPIs
 - SPI's sold by partners
 - Events, processes, actions, performance metrics, service reports, etc.
 - Full support by partner
 - Reference selling through SPI solutions guide

IT Operations Mgmt – OpenView Operations

Sample Smart Plug-Ins

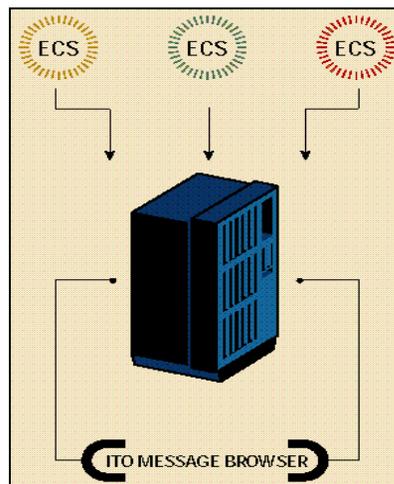


IT Operations Mgmt – OpenView Event Correlation

Event Correlation

What is Correlation?

- ❖ Correlate events from networks, systems, applications, databases, etc., resulting in reduced and more meaningful messages for the operators
- ❖ Correlation at central management server and local intelligent agents
- ❖ Integrate other correlation applications and use them as an additional information resource or to execute commands as part of the event processing ('annotate node')



ECS Runtime

- ❖ Included with OVO and NNM, enabling out-of-the box correlation

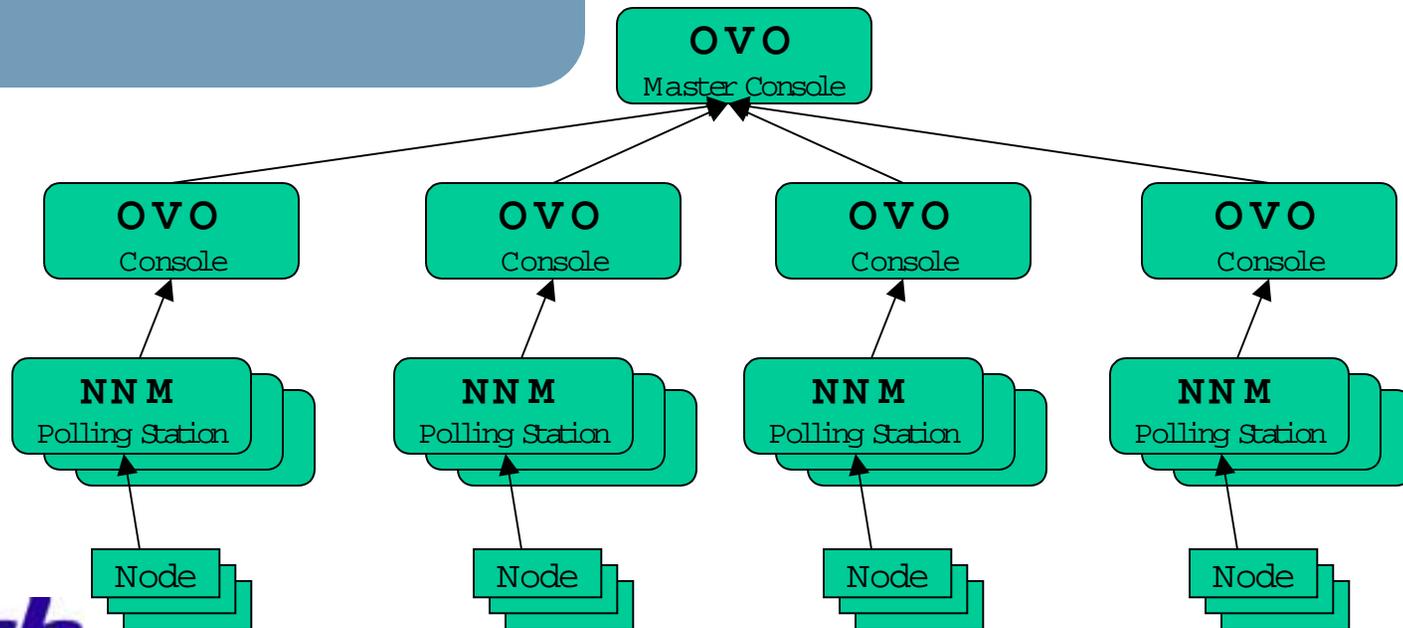
ECS Designer for OVO and NNM

- ❖ Ability to design new and edit default event correlation templates (circuits)
- ❖ Test, simulate and debug correlation rules

IT Operations Mgmt – OpenView Multi-Tier

Multi-Tiered Architecture

- ❖ Multiple NNM polling stations can report into a single OVO console
- ❖ Multiple OVO consoles can report into one “master” console
- ❖ Known as Managers of Managers or MoM .
- ❖ Allows OVO to scale into very large enterprises – Scalability
- ❖ Allows NNM to scale into very large NOCs





The Implementation Approach



(Yeah, right ...)



The Implementation Approach

Iterative Process!

1. Understand Domain to be Managed

- IT Resource Perspective
(Yours and Vendors)
- Business Services Perspective
- Customer Perspective
- User Perspective



The Implementation Approach

2. Consider Value

- IT Now on Front-Line
- Basic Business Equation

$$\text{Revenue} - \text{Cost} = \text{Profit}$$



The Implementation Approach

3. Consider Revenue

- Ensure/Enhance Customer Experience
(Can't improve what you're not measuring)
- Collect Valuable Sales and Marketing Data
- Differentiate Your Organization
(Automated, real-time communication with customers)
- Stay In Front of Competitors
(Measure customer experience at competitors' sites)



The Implementation Approach

4. Consider Costs

(Direct, Indirect, Corporate Valuation)

- Downtime
- Performance Degradation
- Lost Customers/Orders
- Troubleshooting/Corrective Action
- Time To Effectiveness for New IT Ops Staff



The Implementation Approach

5. Deploy

- Instrumentation
- Technology Integration
- Event Flow, Data Collection and Data Management
- User Interfaces - Ops, Escalation, Mgmt, Customers
- Reporting



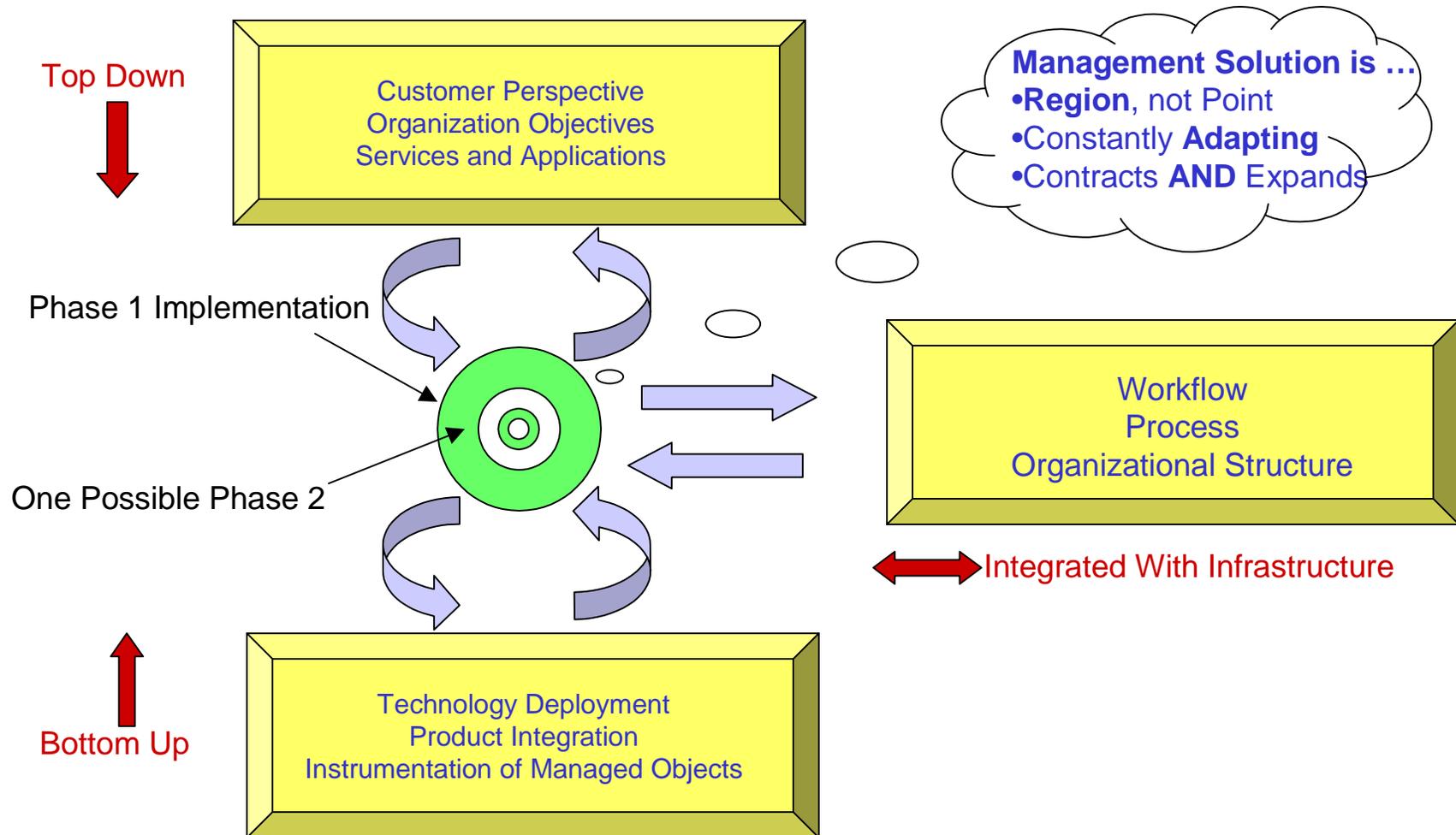
The Implementation Approach

5. Deploy (cont'd)

- Go for High Value/ROI (IRR)
- 80/20 Rule: Get the Basics
- Go for the Pain & What's Important
- Set-up for Success: SMART Objectives

The Implementation Approach

Rapid Value and Adaptability ...





The Implementation Approach

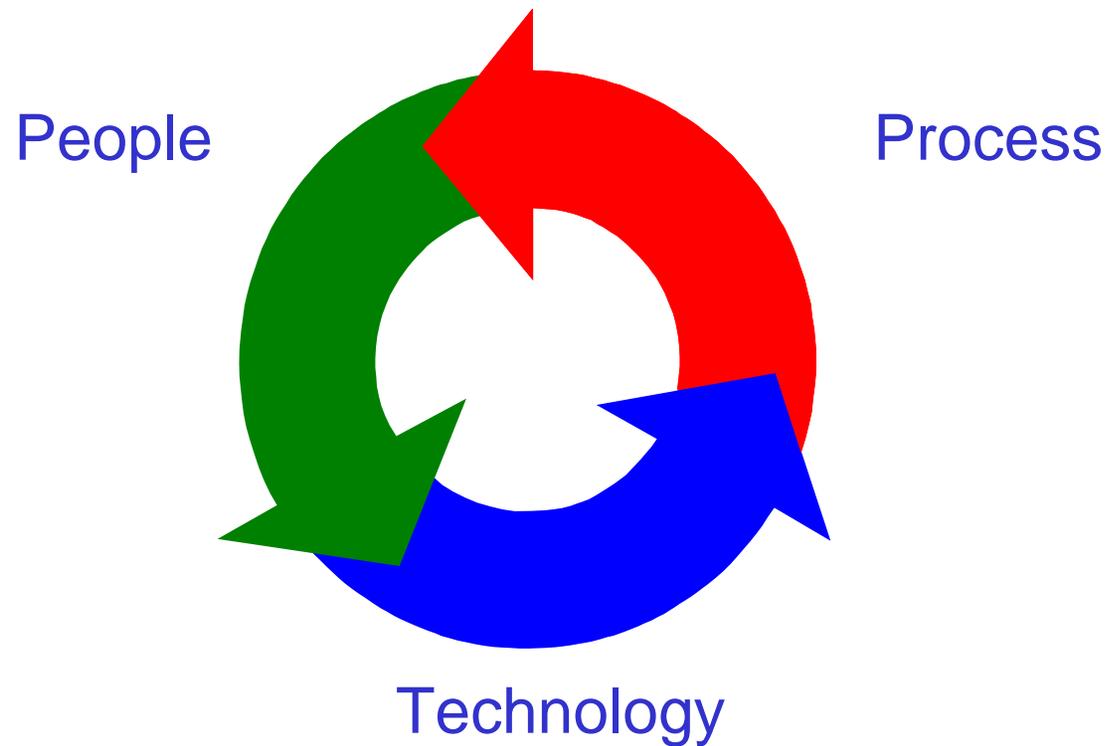
6. Operate

- People
- Process/Work Flow/Change Management
- Key Performance Indicators/Metrics (Mgmt System)
- Management of Management System
- Minor Enhancements & Capture Knowledge



The Implementation Approach

6. Operate - Balance





The Implementation Approach

7. Quarterly Review

- Changes in Managed Domain (Infrastructure, Scale)
- Opportunities for Value and Cost Savings
- Key Performance Indicators/Metrics (Mgmt System)
- Last Quarter's Events, Problems, Outages
- Captured Institutional Knowledge



The Implementation Approach

8. Quarterly Management System Enhancement

- Additional Instrumentation
- Integration/Upgrade/Patching of Components
- Process/Work Flow Changes
- Training of New Personnel
- Changes to Event Flow, Data Collection, and Data Mgmt



The Implementation Approach

8. Quarterly Management System Enhancement (cont'd)

- Enhance User Interfaces: Ops, Escalation, Mgmt, Customers
- Enhance/Expand Reporting

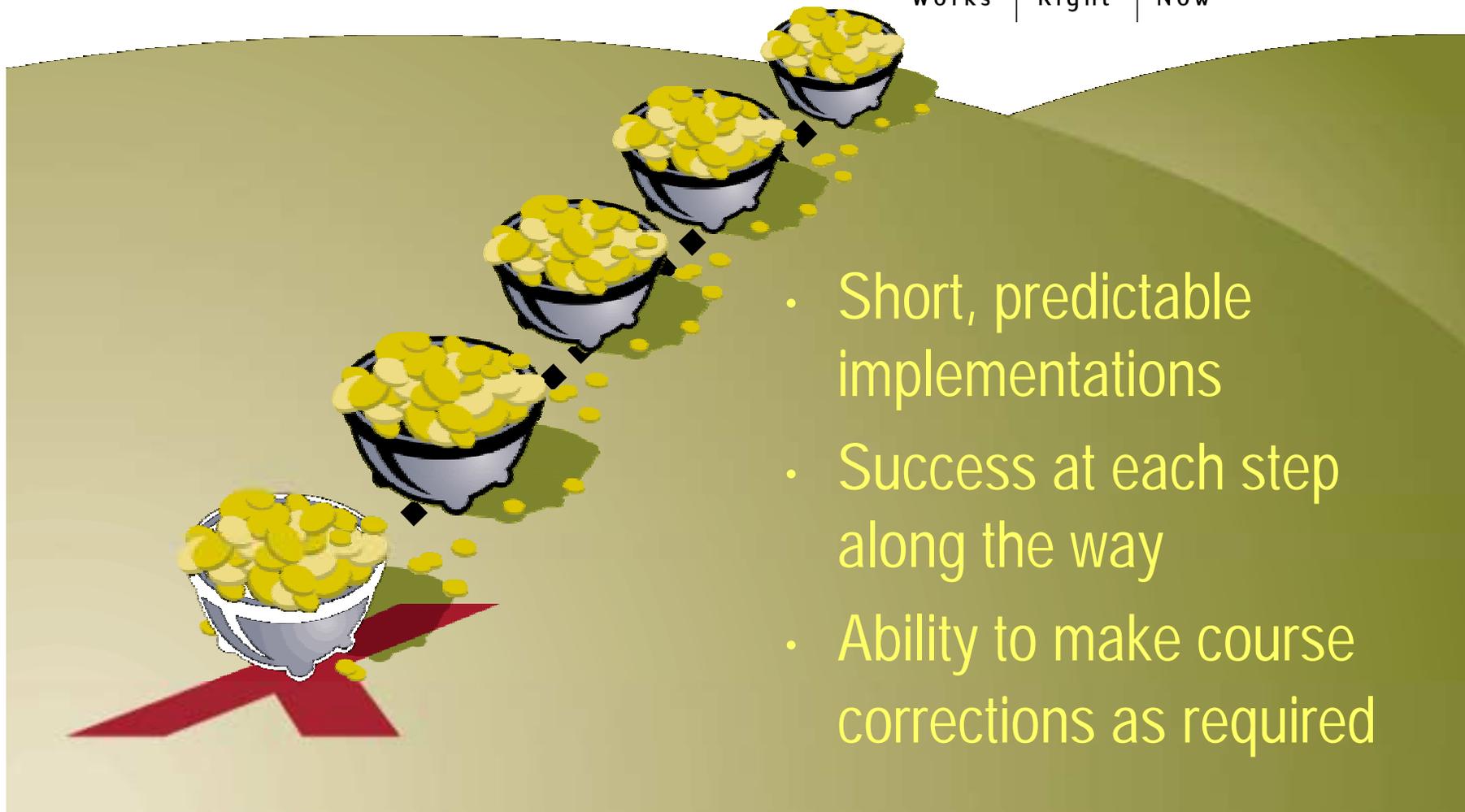


The Implementation Approach



HP OPENVIEW

Works | Right | Now



- Short, predictable implementations
- Success at each step along the way
- Ability to make course corrections as required

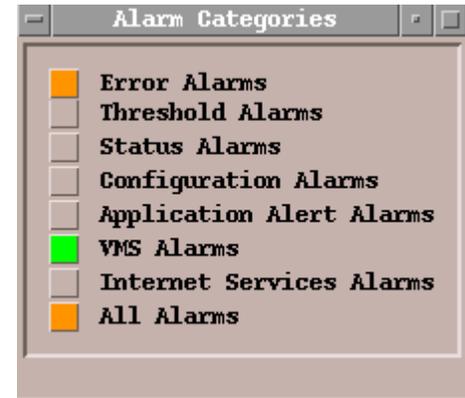
Instrumentation

- Three Levels
 - Raw embedded snmptrap command
 - Extensible SNMP Agent
 - OpenView Operations Agent

Instrumentation

- Embedded snmptrap command
 - Obtain and compile
 - Embed into existing shell scripts (Unix/NT)
 - NT – Windows Scripting Host, perl, mks toolkit
 - Identify unique specific-trap (event) and use generic-trap 6 (enterpriseSpecific)
 - Configure event in OV NNM

NNM Alarms



All Alarms Browser

File Actions View Help

Ack Co	Source	Message
	08:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)
	23:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED
	23:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)
	28:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED
	28:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)
	33:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED
	33:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)
	38:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED
	38:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)
	43:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED
	43:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)
Normal	Thu Jul 05 08:48:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED
Normal	Thu Jul 05 08:48:29 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)
Normal	Thu Jul 05 08:49:11 comtekdemo.comtekservices.com	NO FORMAT DEFINED
Normal	Thu Jul 05 08:49:11 comtekdemo.comtekservices.com	NO FORMAT DEFINED (#2)

855 Alarms - Critical:0 Major:1 Minor:0 Warning:0 Normal:854

NNM Event Configuration

Event Configurator / Modify Event for space

Event Name	Event Type	Event Object Identifier
EnterpriseDefault	Enterprise Default	.1.3.6.1.4.1.*

Event Description

This is the default event format used when an enterprise specific event (trap) is received for which no format has been configured (i.e. no event definition exists).

To configure the event (trap), select HP OpenView Network Node Manager's "Options:Event Configuration" menu item, then "Edit:Add->Event..." and create a definition.

This default definition is used if no definition has been configured for a given event. If this default event

Event Sources (all sources if list is empty)

Source: [Empty List] [Add From Map] [Delete] [Delete All] [Add]

Category: Error Alarms [Forward Event] Severity: Normal

Event Log Message

Received event \$o (enterprise:\$e generic:\$G specific:\$S), no format in trapd.conf. \$# args: \$*

Pop-up Notification (Optional)

[Empty Field]

Command for Automatic Action (Optional)

[Empty Field]

OK Reset Cancel Help

Instrumentation

- Extensible SNMP Agent
 - Obtain Agent Development Kit
 - (i.e. SNMP Research – Emanate SADK)
 - Develop sub-Agent
 - Register or watch out for conflicting private MIB
 - Compile MIB into NNM
 - Configure event in OV NNM

NNM Data Collection

The screenshot shows a window titled "Data Collection & Thresholds: SNMP for space". The window has a menu bar with "File", "Edit", "Actions", and "Help". Below the menu bar is a section titled "MIB Objects Configured For Collection" which contains a table with the following data:

Origin	Status	Label	MIB Object ID
DataCollect	Suspended	ifInOctets	.1.3.6.1.2.1.2.2.1.10
DataCollect	Suspended	ifOutOctets	.1.3.6.1.2.1.2.2.1.16
DataCollect	Suspended	ifInErrors	.1.3.6.1.2.1.2.2.1.14
DataCollect	Suspended	ifOutErrors	.1.3.6.1.2.1.2.2.1.20
DataCollect	Suspended	15MinLoadAvg	.1.3.6.1.4.1.11.2.3.1.1.5
DataCollect	Suspended	snmpInPkts	.1.3.6.1.2.1.11.1
DataCollect	Suspended	If%util	If%util
DataCollect	Suspended	Disk%util	Disk%util

Below this table is a section titled "MIB Object Collection Summary" which contains a table with the following data:

Interval	Store	Threshold	Instances	Source
12h	Yes	>97.00 <=5.00	ALL	0.0.0.0

Modify ifOutOctets Collection for mars.inotech.com [X]

Set Collection Mode:

List Of Collection Sources

Source:

Source List:

Instances:

Collection Node Filter:

Only Collect On Sources With SysObjectIDs:

Create Event When SNMP Data Request Fails: Polling interval:

Threshold Parameters

Threshold

Fixed Threshold:

Statistical Threshold: Standard Deviation

For: Consecutive Samples

Rearm

Fixed Rearm:

Statistical Rearm: Standard Deviation

For: Consecutive Samples

Rearm Value Type

Percent Of Threshold

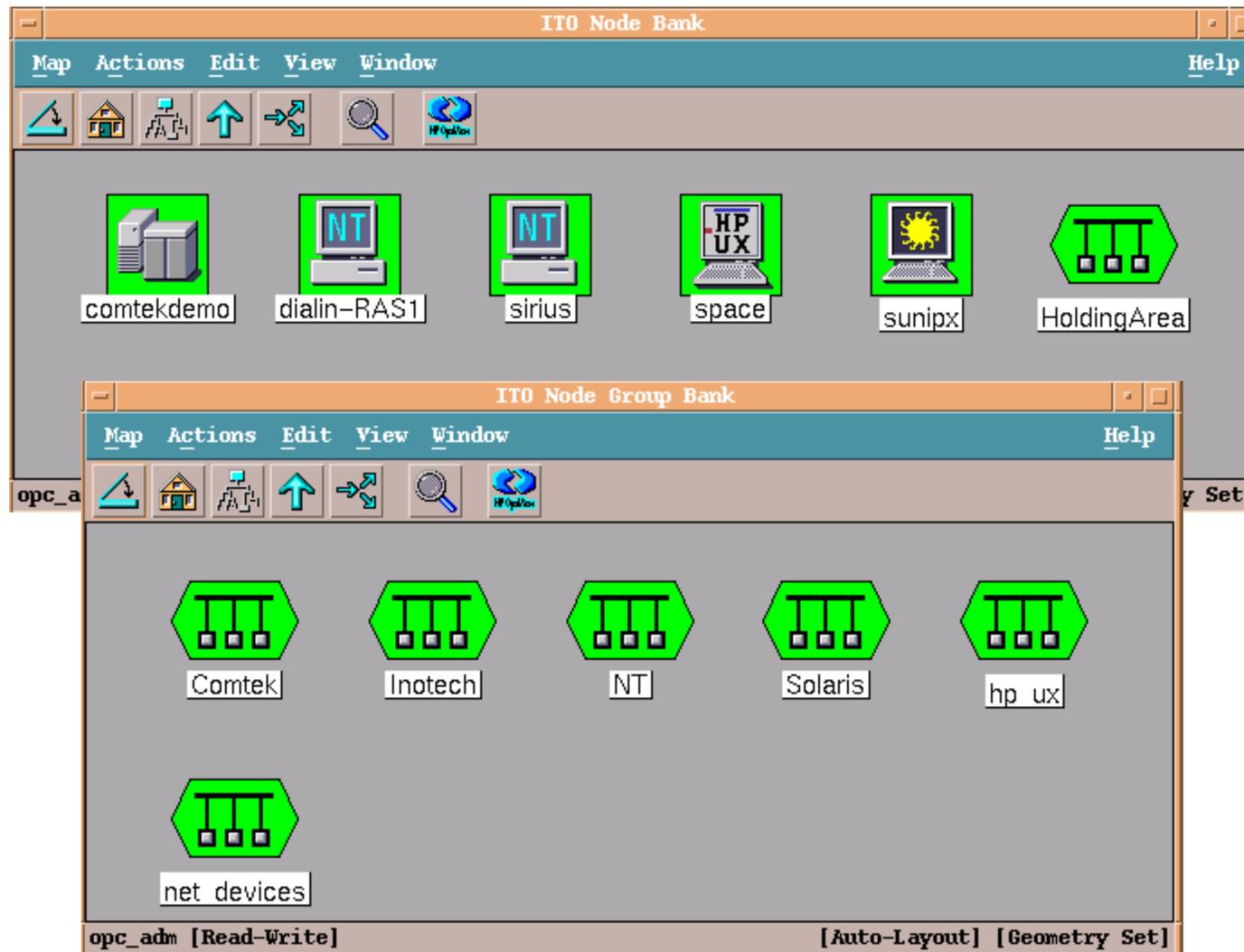
Absolute

Threshold Event Num:

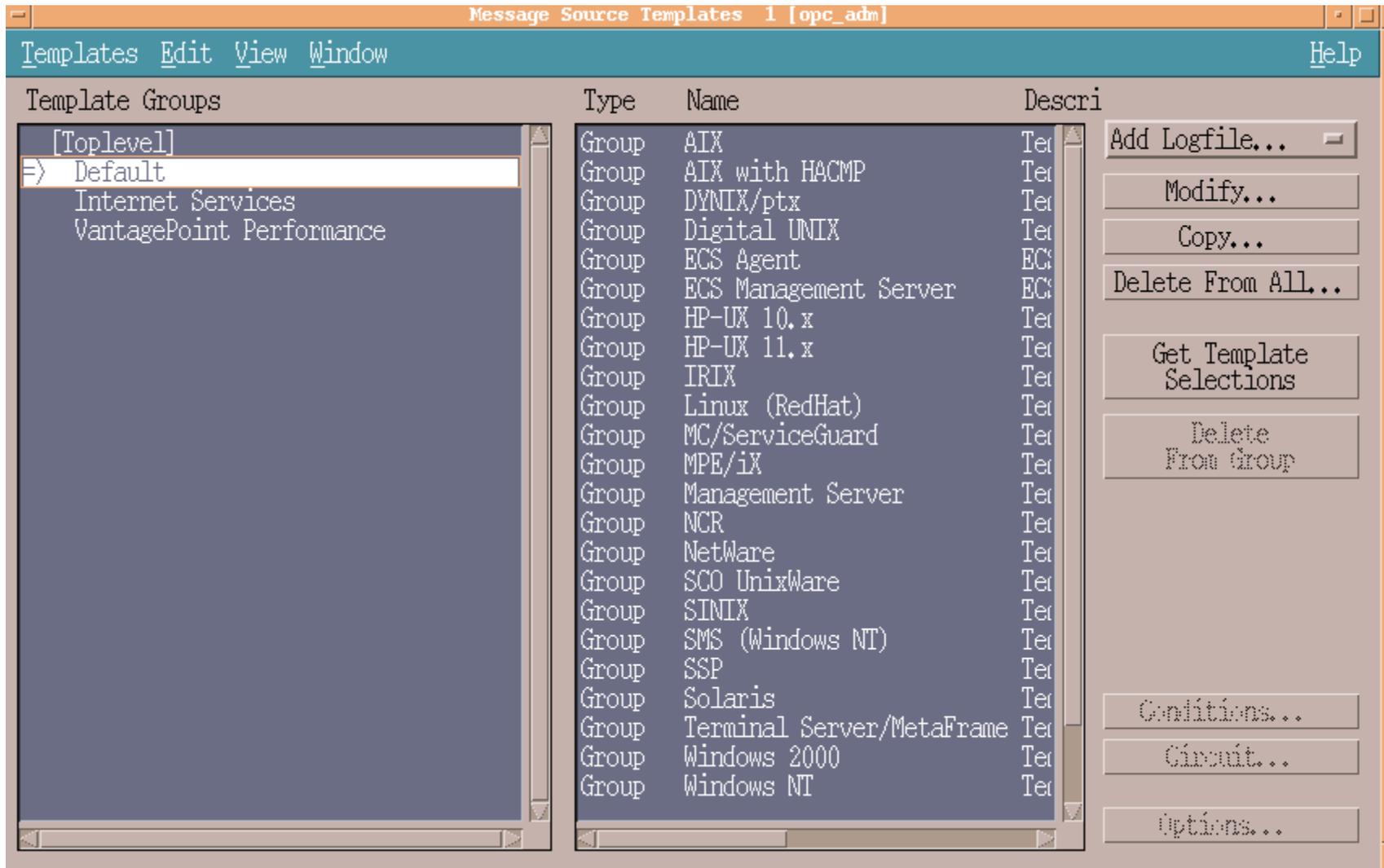
Instrumentation

- OpenView Operations Agent
 - Add Nodes to OV Operations
 - Select/Customize Templates
 - Push Templates to Agents on Managed Nodes
 - Configure Operators/Sys Admin Roles/Responsibilities/Capabilities
 - Events/Workflow/Corrective Action

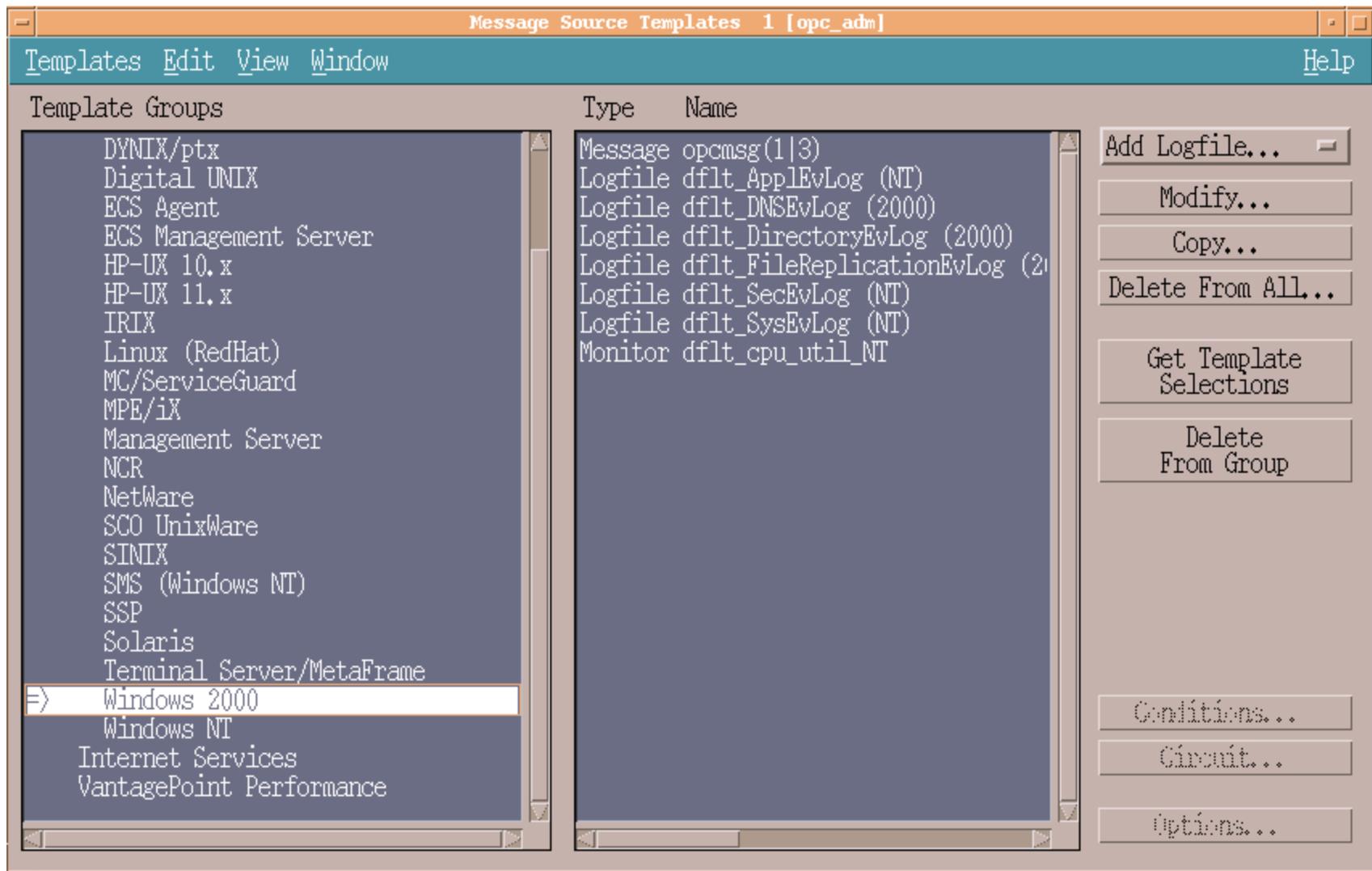
OV Operations – Add Nodes



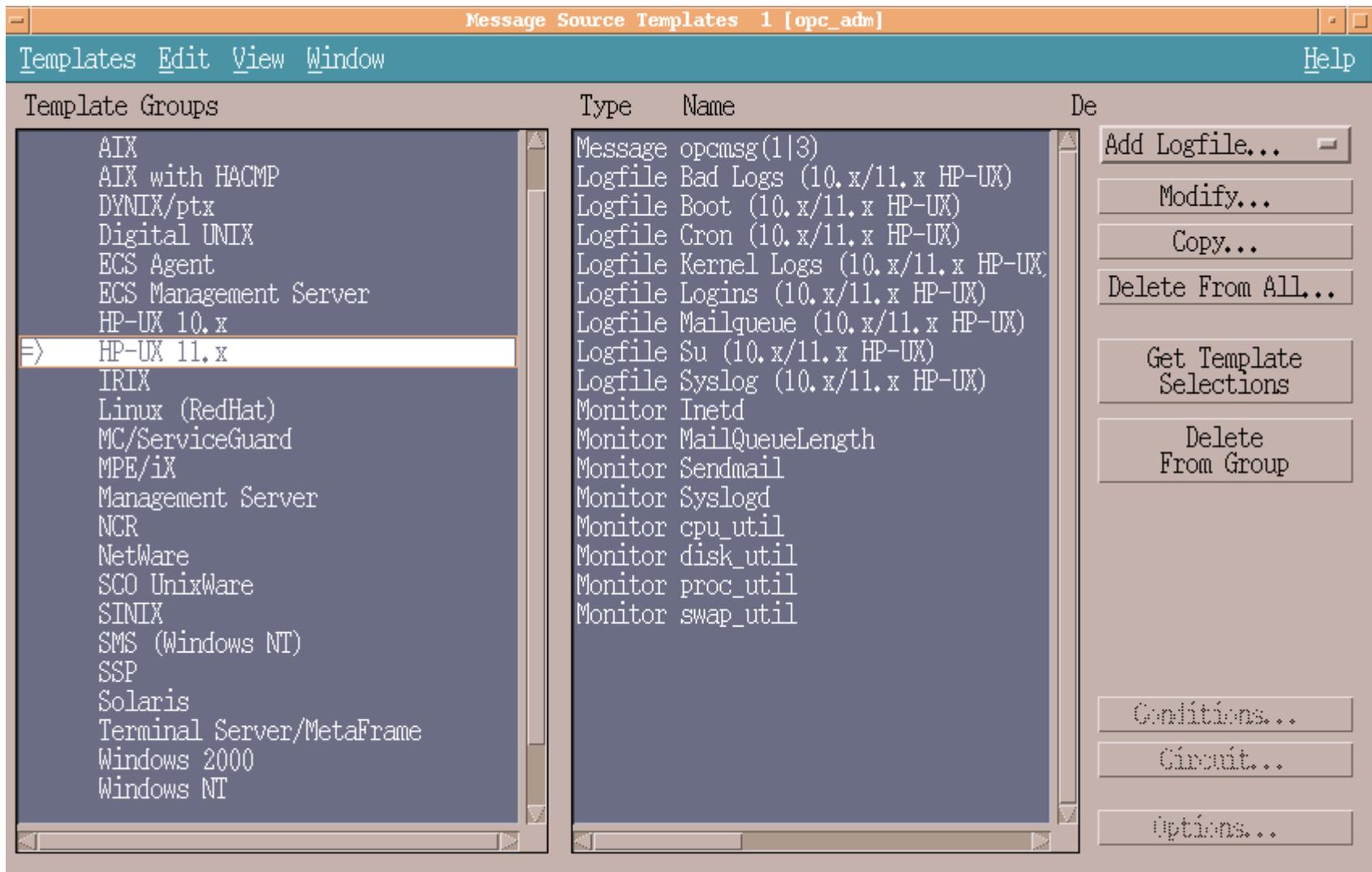
OV Operations – Templates



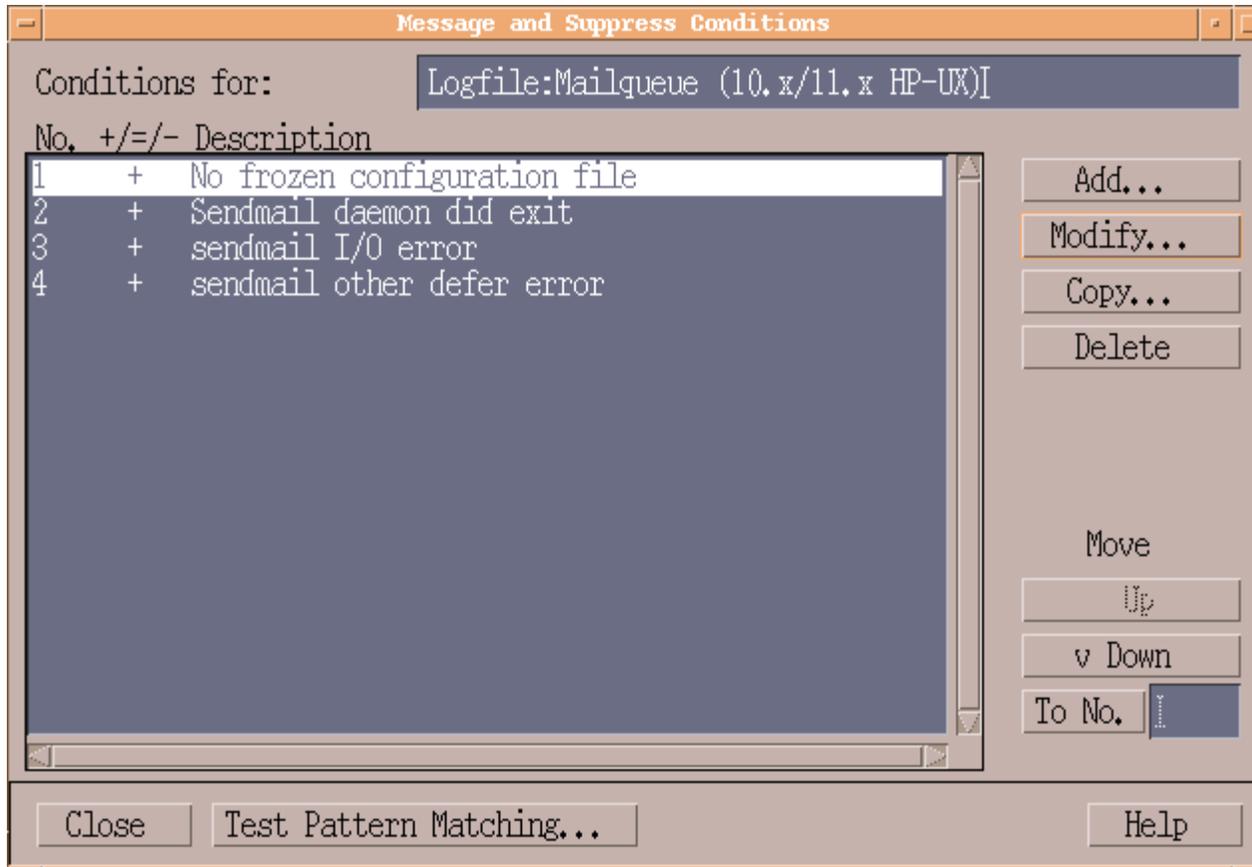
OV Operations – Templates



OV Operations – Templates



OV Operations – Templates



Description

No frozen configuration file

Condition

Node

[redacted]

Message Text

<@,machine> sendmail\[<#,.pid>\]: Cannot open frozen configuration file <@,fcfile>

- Suppress Matched Condition
- = Suppress Unmatched Condition
- + Message on Matched Condition

Advanced Options...

Set Attributes

Severity	Node	Application	Message Group	Object
warning	<machine>	[redacted]	[redacted]	Config
Message Text				
frozen (compiled) configuration file "<fcfile>" could not be opened by the sendmail daemon				
Service Name				
[redacted]				
Message Type				
[redacted]				

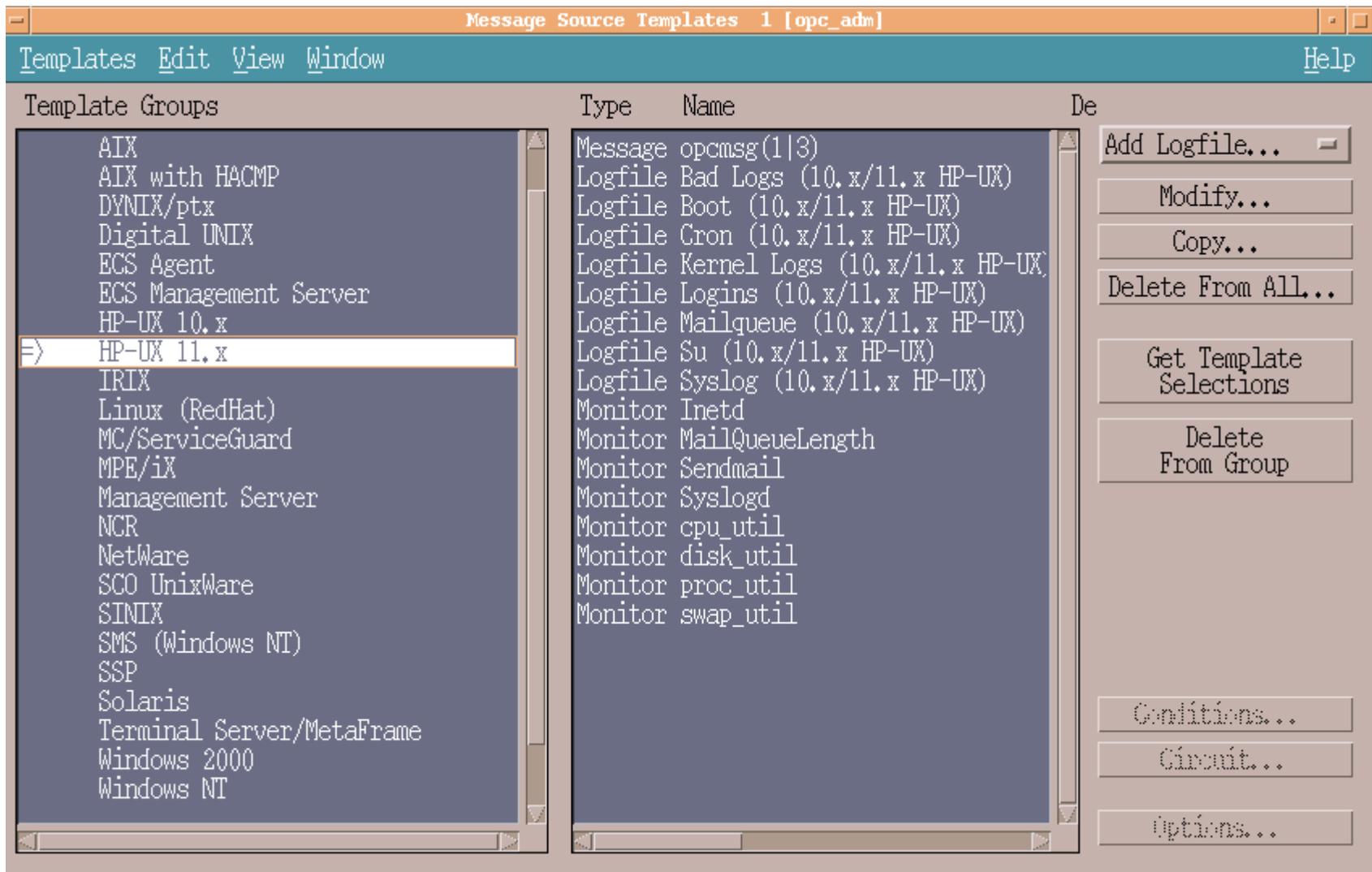
Instructions... Message Correlation...

Actions

On Server Log Only (put directly into History Log)

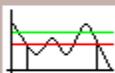
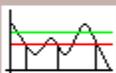
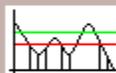
	Node	Command	Anno.	Ackn.
Automatic	<machine>	. files in /etc/mail:" && ls -l /etc/mail/sendmail*	Yes	No
Operator initiated	<machine>	/usr/sbin/sendmail -bz	Yes	Yes
<input type="checkbox"/> Forward to Trouble Ticket				No
<input type="checkbox"/> Notification				

OV Operations – Templates



OV Operations – Templates

Modify Threshold Monitor

Monitor Name	Sendmail				Description	Check whether sendmail is running				
Monitor	Program				Monitor Program or MIB ID	vp_chk.sh sendmail Sendmail				
	MIB Object				Polling Interval	On Node				
	External					5m				
Threshold Type	<input type="radio"/>  Maximum				<input checked="" type="radio"/>  Minimum					
					Message Generation					
					<input checked="" type="radio"/>  with Reset		<input type="radio"/>  without Reset		<input type="radio"/>  Continuous	
Message Defaults	Severity: warning									
	Node		Application		Message Group		Object			
	Service Name									
	Instructions...			Message Correlation...			Advanced Options...			
OK	Cancel							Help		



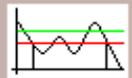
Description

Check whether sendmail is running

Condition

Object Pattern

.....



Threshold

0.5

Reset

0.6

Duration

.....

- Suppress Matched Condition

= Suppress Unmatched Condition

+ Message on Matched Condition

Advanced Options...

Set Attributes

Severity	Node	Application	Message Group	Object
warning	sendmail	OS	daemon

Message Text

The "sendmail" process is not running anymore

Service Name

.....

Message Type

.....

Instructions... Message Correlation...

Actions

On Server Log Only (put directly into History Log)

	Node	Command	Anno.	Ackn.
Automatic	No	No
Operator initiated	st_mail.sh	Yes	Yes
<input type="checkbox"/> Forward to Trouble Ticket				No
<input type="checkbox"/> Notification				

Add Logfile Monitor

Template Name: [] Description: []

Logfile: []

Monitoring Options

File to be executed: []

File to be read: []

Polling Interval: 1m

Logfile Characterset: ISO 8859-1

Read from Last File Position
 Read from Begin (First Time)
 Read from Begin (Always)

Message on No Logfile
 Close after Read

Message Defaults

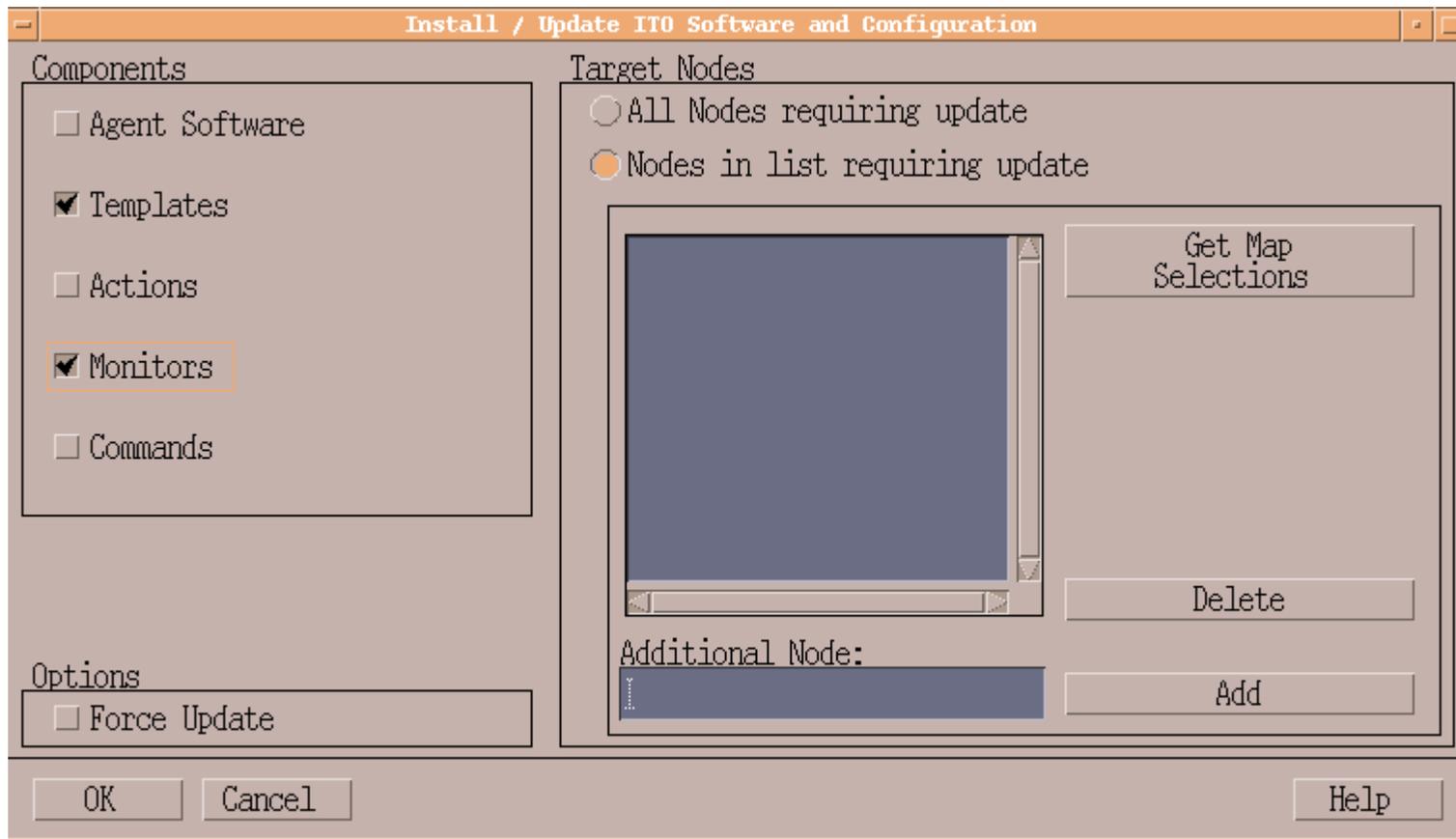
Severity	Node	Application	Message Group	Object
unknown	[]	[]	[]	[]

Service Name: []

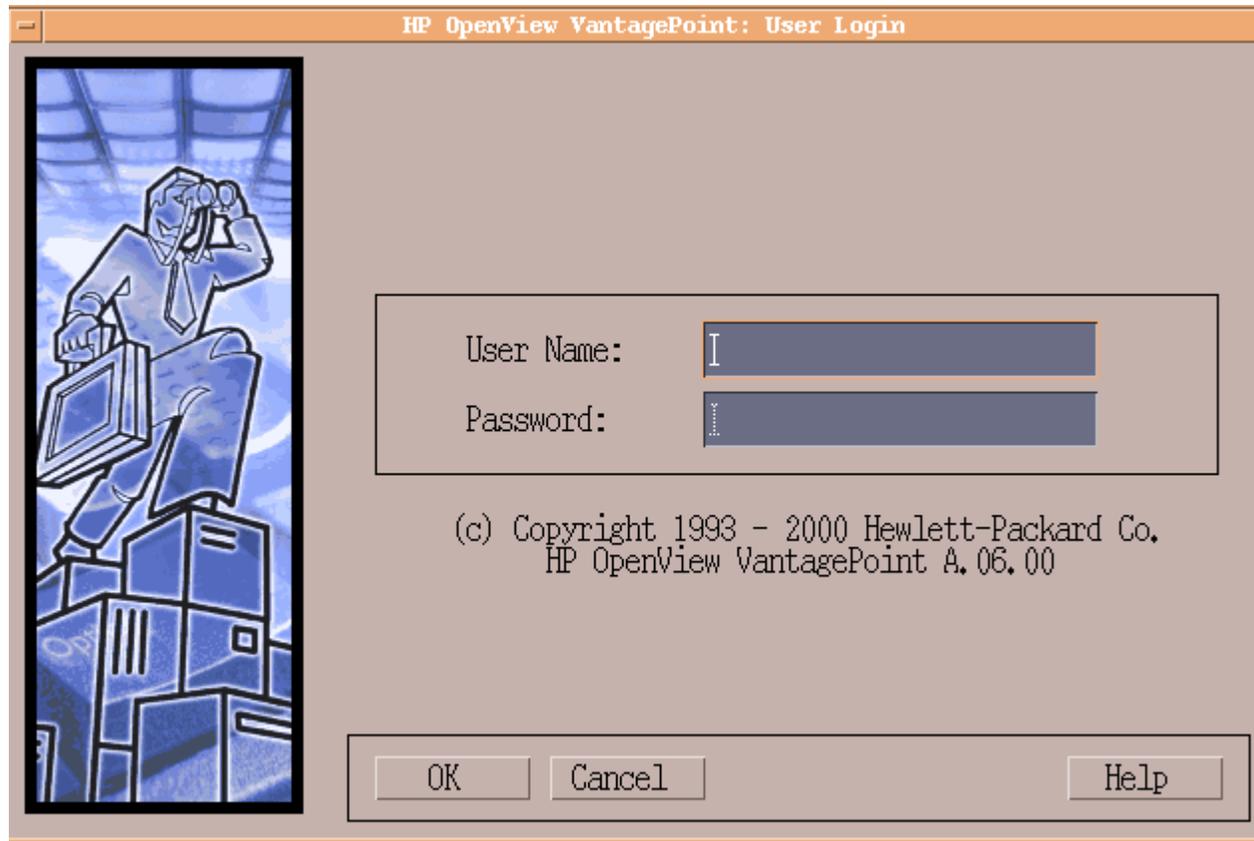
Instructions... Message Correlation... Advanced Options...

OK Cancel Help

OV Operations – Push Templates



OV Operations – User Config



OV Operations – User Config

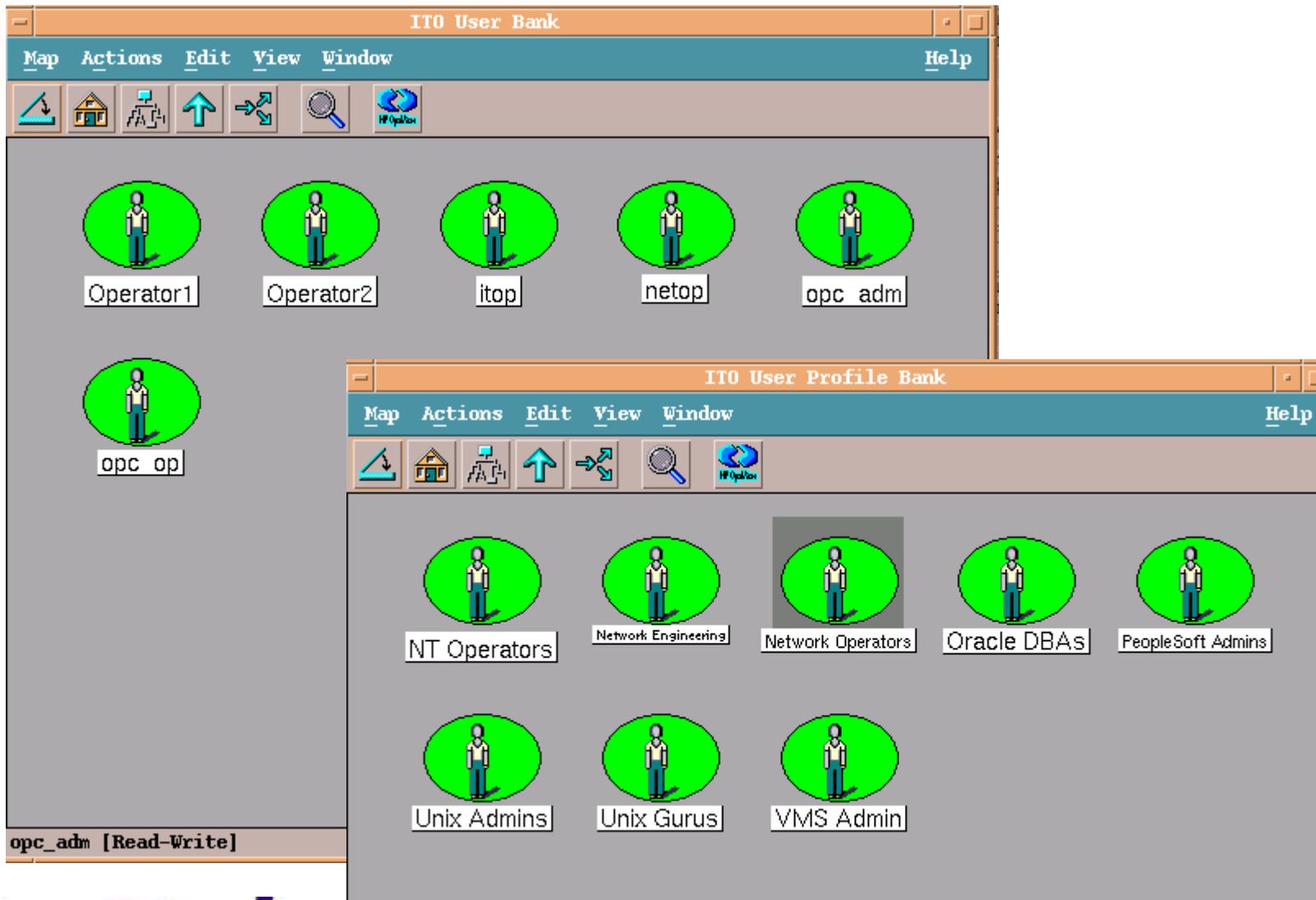
The screenshot displays three windows from the InoTech OV Operations software:

- ITO Message Group Bank:** A window showing a grid of icons for various system components such as Backup, DBSPI, Database, EXSPI, EX_Fault, EX_Perf, Hardware, IOPS_HTTP, Job, Misc, NetWare, Network, OS, OVIS_ICMP, OpC, Ora_Admin, Ora_Conf, Ora_Fault, Ora_Perf, Output, Performance, SNMP, Security, OVIS_DNS, OVIS_POP3, OVIS_NNTP, OVIS_SMTP, OVIS_HTTP, OVIS_HTTPS, OVIS_FTP, and OVIS_Radius.
- ITO Node Bank:** A window showing icons for nodes including curly, fc-moe, curley, nadine, garlic, HoldingArea, and IOPS.
- Message Browser [opc_adm on garlic.cnd.hp.com]:** A window displaying a list of messages with columns for Sev., SUIAONE, Date, Time, Node, Application, Message ID, Object, and Message Text. The messages are color-coded by severity (Maj, Crit, Warn, Min).

Sev.	SUIAONE	Date	Time	Node	Application	Message ID	Object	Message Text
Maj	-----	04/11/00	09:44:04	nadine.cnd	OVIS	6115716	www.hp.co	DNS Service RESPONSE_TIME is slow (5.558 vs 2.000)
Crit	-----	04/11/00	10:00:04	nadine.cnd	OVIS		mhaent@je	POP3 Service RESPONSE_TIME is slow (13.039 vs 4.0)
Warn	-----	04/11/00	10:05:07	nadine.cnd	OVIS		comp.os.1	NNTP Service RESPONSE_TIME is slow (6.229 vs 6.00)
Crit	-----	04/11/00	12:01:00	nadine.cnd	OVIS		mhaent@je	POP3 Service RESPONSE_TIME is slow (13.009 vs 4.0)
Min	-----	04/11/00	12:15:00	nadine.cnd	OVIS		www.hp.co	DNS Service RESPONSE_TIME is slow (1.141 vs 1.000)
Maj	-----	04/11/00	12:50:48	nadine.cnd	OVIS		dws-direk	HTTPS Service RESPONSE_TIME is slow (6.069 vs 6.0)
Warn	-----	04/11/00	13:00:14	nadine.cnd	OVIS		mhaent@je	SMTP Service RESPONSE_TIME is slow (0.631 vs 0.50)
Crit	-----	04/11/00	13:05:38	nadine.cnd	OVIS		62.52.71.	HTTP Service RESPONSE_TIME is slow (14.931 vs 10.)
Maj	-----	04/11/00	13:05:38	nadine.cnd	OVIS		195.71.13	HTTP Service RESPONSE_TIME is slow (6.299 vs 6.00)
Min	-----	04/11/00	13:05:38	nadine.cnd	OVIS		ptcweb.ro	HTTP Service RESPONSE_TIME is slow (13.799 vs 4.0)
Crit	-----	04/11/00	13:05:38	nadine.cnd	OVIS		dws-direk	HTTPS Service is unavailable
Maj	-----	04/11/00	13:05:38	nadine.cnd	OVIS		dws-direk	HTTPS Service RESPONSE_TIME is slow (6.148 vs 6.0)
Crit	-----	04/11/00	13:06:19	nadine.cnd	OVIS		user1@fc-	RADIUS Service is unavailable

At the bottom of the Message Browser window, there is a summary bar showing 5 Maj, 4 Warn, 2 Min, 2 Info, 0 Crit, and 0 Debug messages. It also includes buttons for 'Own', 'Highlight', 'Details...', 'Perform Action', 'Annotations...', and 'Acknowledge', along with an 'Autoscroll On' checkbox.

OV Operations – User Config



OV Operations – User Config

Modify User: op2

Name: op2 Label: Operator2

Password: **** Real Name: []

Description: []

Template Administrator
 Operator

Capabilities

- Perform/Stop Actions
- Own/Disown Messages
- Modify Message Attributes
- (Un-) Acknowledge Messages

Configuration

Node Hierarchy: USA Get Map Selection

Responsibilities... Applications... Profiles...

Use Configuration of Selected User

OK Cancel Help

OV Operations – User Config

Responsibilities for Operator [op2]

Specify operator responsibilities by assigning message groups to desired node groups:

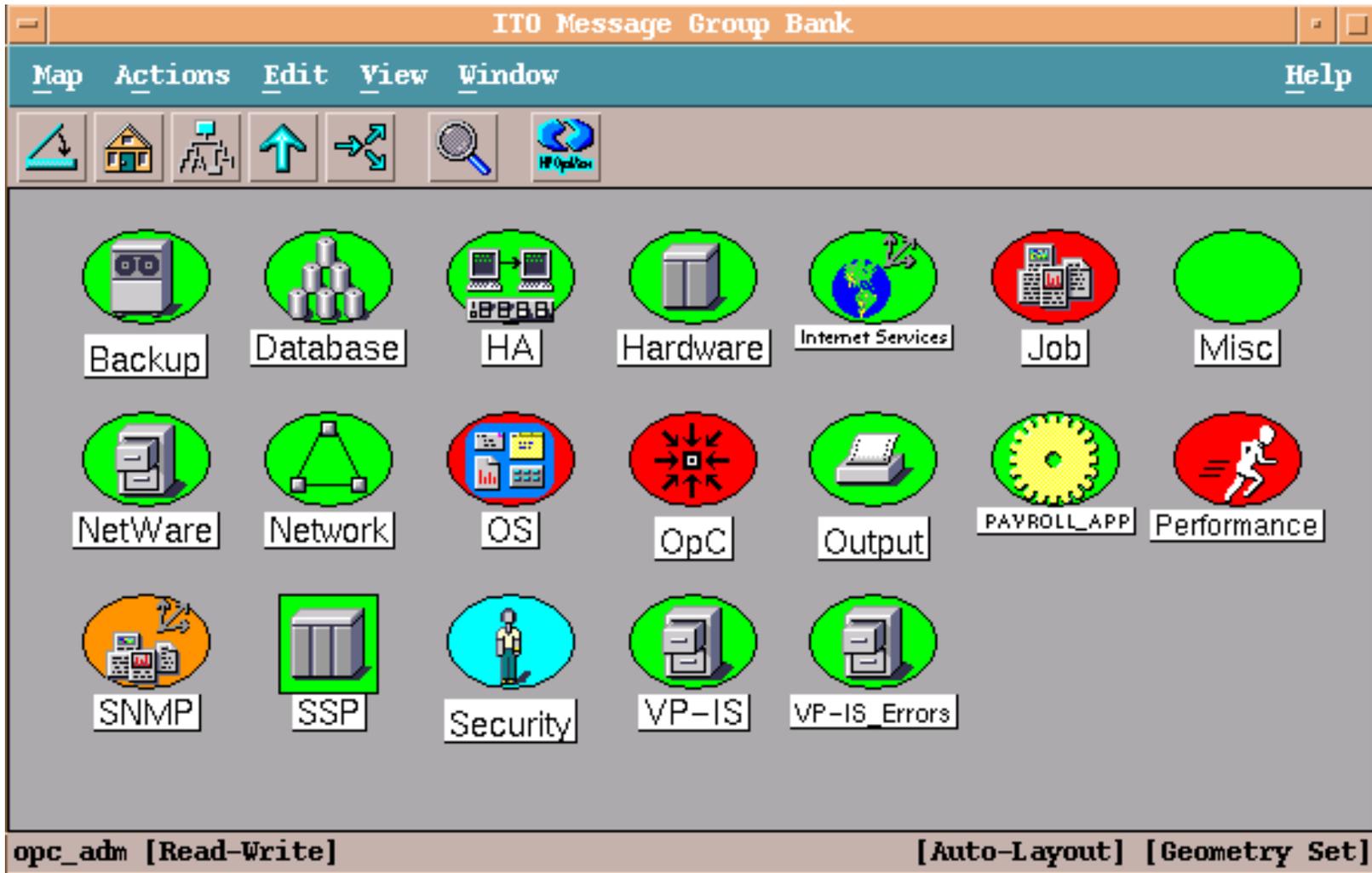
Node Groups

Message Groups	Comtek	Inotech	NT	Solaris	hp_ux	net_devices
Backup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Database	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hardware	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Internet Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Misc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NetWare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Network	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
OS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
OpC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Output	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SNMP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VP-IS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VP-IS_Errors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Close Help



Events/Workflow



Events/Workflow

Message Browser [opc_adm on space]

Browser Actions View Window Help

Sev.	Date	Time	Node	Application	MsgGroup	Object	Message Text
?	06/29/01	17:50:38	space	/usr/sbin/s	OS		Jun 29 17:49:35 space DTSESSION: pamauthentic
Norm	06/29/01	19:00:01	space	HP IT/Opera	OpC	opchistdw	Download of history messages started. (OpC40-
Crit	06/29/01	19:05:20	space	alarmgen	Performan	Disk	Disk Bottleneck probability= 97.21% (STA
Crit	06/29/01	19:15:03	space	alarmgen	Performan	Disk	Disk Bottleneck probability= 96.42% (STA
Norm	06/29/01	19:18:30	space	HP IT/Opera	OpC	opchistdw	History messages downloaded. (OpC40-274)
Norm	06/29/01	19:25:13	space	alarmgen	Performan	Disk	End of Disk Bottleneck Alert (START: 19:00:
Norm	06/29/01	20:00:01	space	HP IT/Opera	OpC	opcauddwn	Download of audit messages started. (OpC40-27
Norm	06/29/01	20:00:01	space	HP IT/Opera	OpC	opcauddwn	Audit messages downloaded. (OpC40-275)
Crit	06/29/01	22:20:40	sunipx.ino	alarmgen	Performan	Network	"Network error rate is greater than ten per m
Norm	06/29/01	22:35:53	sunipx.ino	alarmgen	Performan	Network	"End of network error rate condition" START:
Norm	06/29/01	22:36:37	sirius	HP IT/Opera	OpC	ovoareqsd	Control agent on node sirius is now running.
Crit	06/29/01	22:40:47	sunipx.ino	alarmgen	Performan	Network	"Network error rate is greater than ten per m
Norm	06/29/01	23:50:54	sunipx.ino	alarmgen	Performan	Network	"End of network error rate condition" START:
Min	06/29/01	23:55:02	space	alarmgen	Performan	Network	Network Bottleneck probability= 60.00% (;
Norm	06/30/01	00:00:07	space	alarmgen	Performan	Network	End of Network Bottleneck Alert (START: 23:!
Crit	06/30/01	00:10:40	sunipx.ino	alarmgen	Performan	Network	"Network error rate is greater than ten per m
Norm	06/30/01	00:20:48	sunipx.ino	alarmgen	Performan	Network	"End of network error rate condition" START:

24 453 28 146 156 24 7 0 Active Messages Autoscroll Off

Own Highlight Details... Perform Action Annotations... Acknowledge



Node	space	Severity	Critical
Application	alarmgen	Service Name	
Message Group	Performance	Message Key	
Object	Disk	Message Type	Performance_alarms_REPEAT_END
Source	e:opcmsg for VP Performance	Time Created on Managed Node	06/29/01 19:15:03
Annotations		Time Received on Mgmt. Server	06/29/01 19:15:03
Attributes		Number of Duplicates	0
Message ID	6ce4-71d5-1fd3-cff783170000	Time Last Received on Mgmt. Server	
Forwarding Manager		Owned by	opc_admin at 07/05/01 19:31:41

Message Text

Disk Bottleneck probability= 96.42% (START: 19:00:00 06/29/01 ; REPEAT: 19:10:00 06/29/01)

Actions

	Status	Node	Command	Anno.	Ackn.
Automatic				No	No
Operator Initiated	available	space	[pv.sh space 'Disk' -b 993855600 -e 993856200	No	No
Notification					
Trouble Ticket	No				No

Escalations

Escalated to by at

Instructions...

Show Original Message...

Disown

Modify...

Close

Highlight

Perform Action

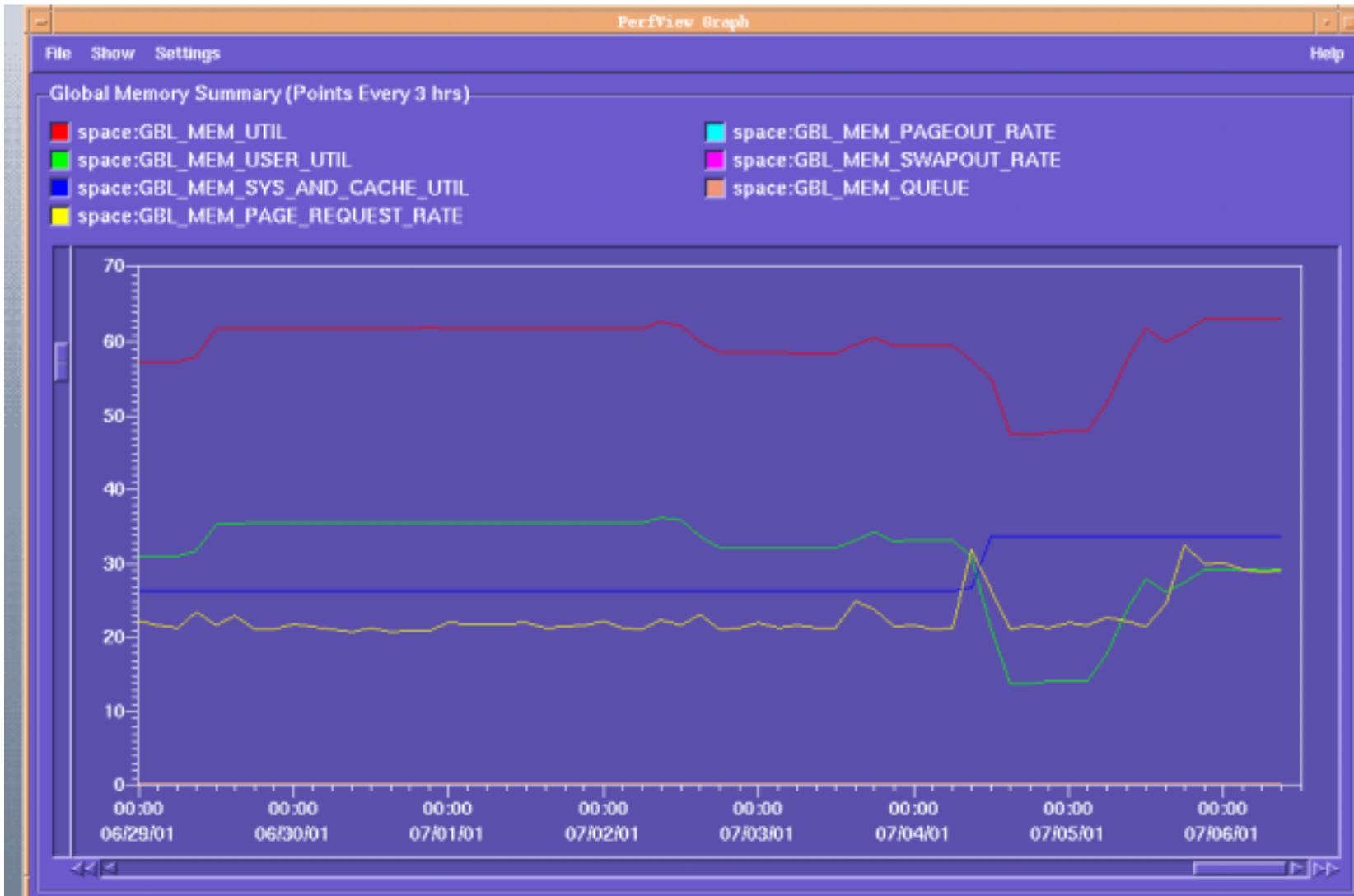
Annotations...

Acknowledge

Help



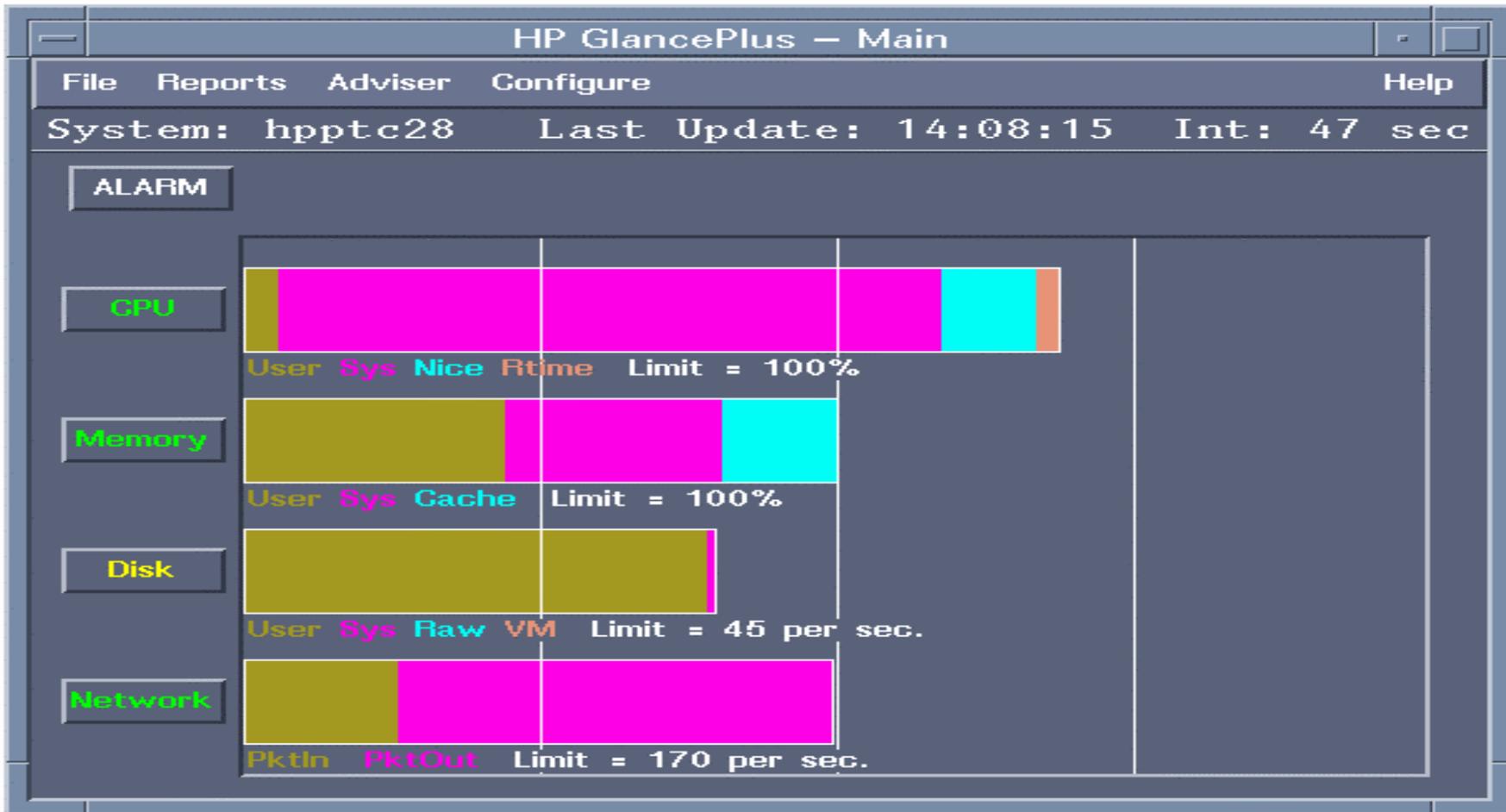
Events/Workflow



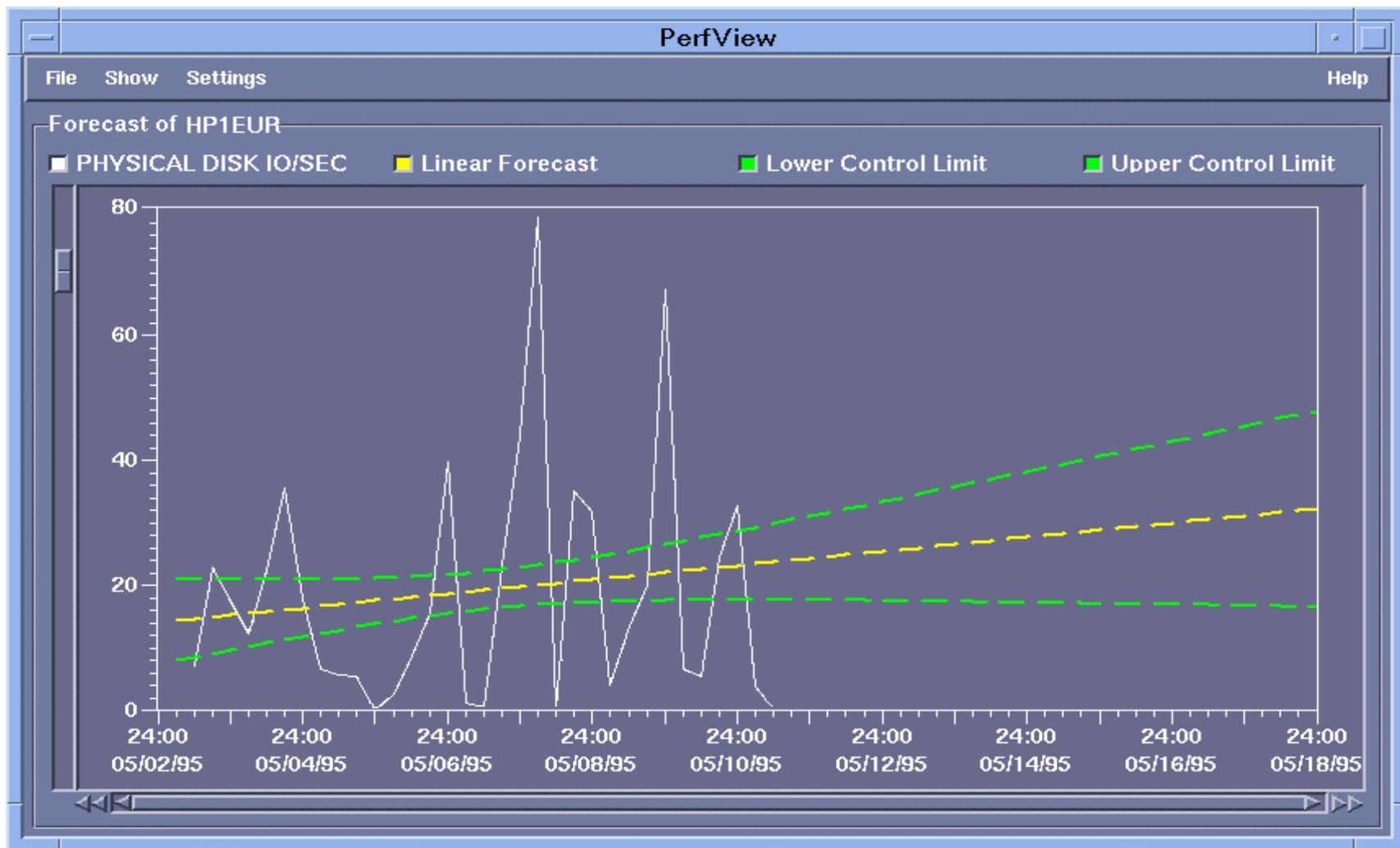
Reporting

- Audience
 - Management – Pat yourself on the back!
 - Internal/External Customers – What's the Status ?
 - Operators/Sys Admin – Troubleshooting, Trends, etc.

Reporting – Real-Time Server Management



Reporting – Planning Ahead



Reporting – Out-of-Box

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Reports for Groups of Systems

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Internet Services

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- [DIAL FAILURE Report](#)
- [DNS Report](#)
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- [HTTP_TRANS Report](#)
- [HTTPS Report](#)
- [ICMP Report](#)

Done My Computer

ITO Configuration

- [ITO Inconsistent Agent MSI Setting](#)
- [ITO Inconsistent Server MSI Setting](#)
- [ITO Unassigned Nodes](#)
- [ITO Unassigned Responsibilities](#)
- [ITO Unassigned Templates](#)
- [ITO Undistributed Templates](#)
- [ITO Ungrouped Templates](#)

ITO Services

- [ITO Top Active Messages by Service](#)
- [ITO Message Trend by Service](#)
- [ITO Service Status All Data](#)
- [ITO Service Severity for the Last Full Month](#)
- [ITO Service Severity for the Last Full Week](#)
- [ITO Service Severity for Yesterday](#)

ITO Summarized

- [ITO Messages by System and Application](#)
- [ITO Messages by Application and severity](#)
- [ITO Operator Acknowledgments](#)



Reports for Groups of Systems

- [HP-UX](#)
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ITO Nodes

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ITO Acknowledgments

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Availability

- [System Up Time](#)

My Computer

Reporting – System Up Time

HP OPENVIEW VantagePoint Reporter

System Up Time

This report was prepared: 7/6/01, 2:05:50 AM

System Up Time is calculated based on the amount of time that the system's agent was running. **Prime Shift** is defined as shown at the end of this report. **Off Shift** is all other times. The "All Day" percent is based on 24 hour days for the range of dates in the database.

Graveyard

System Name	Dates in Database	Days in Database	All Day Up Time %	Graveyard Up Time %	Off Shift Up Time %
space	6/29/01 -7/5/01	7	99.93%	99.93%	99.93%
sunix.inotech.com	6/29/01 -7/5/01	7	100.00%	100.00%	100.00%

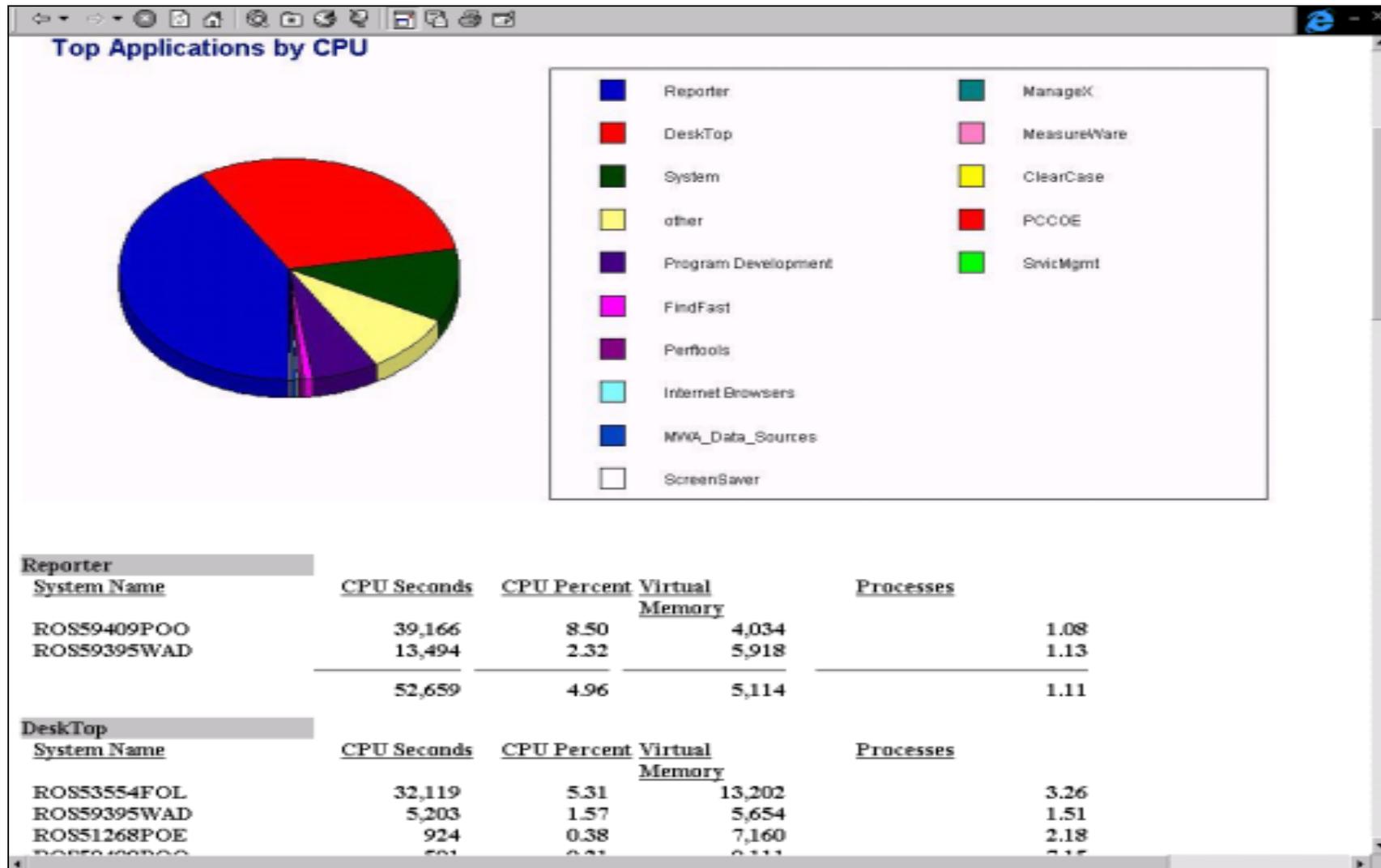
Graveyard Shift

	From	- To	Hours:Minutes
Monday	12:00:00AM	- 8:00:00AM	8:00
Tuesday	12:00:00AM	- 8:00:00AM	8:00
Wednesday	12:00:00AM	- 8:00:00AM	8:00
Thursday	12:00:00AM	- 8:00:00AM	8:00
Friday	12:00:00AM	- 8:00:00AM	8:00
			40:00

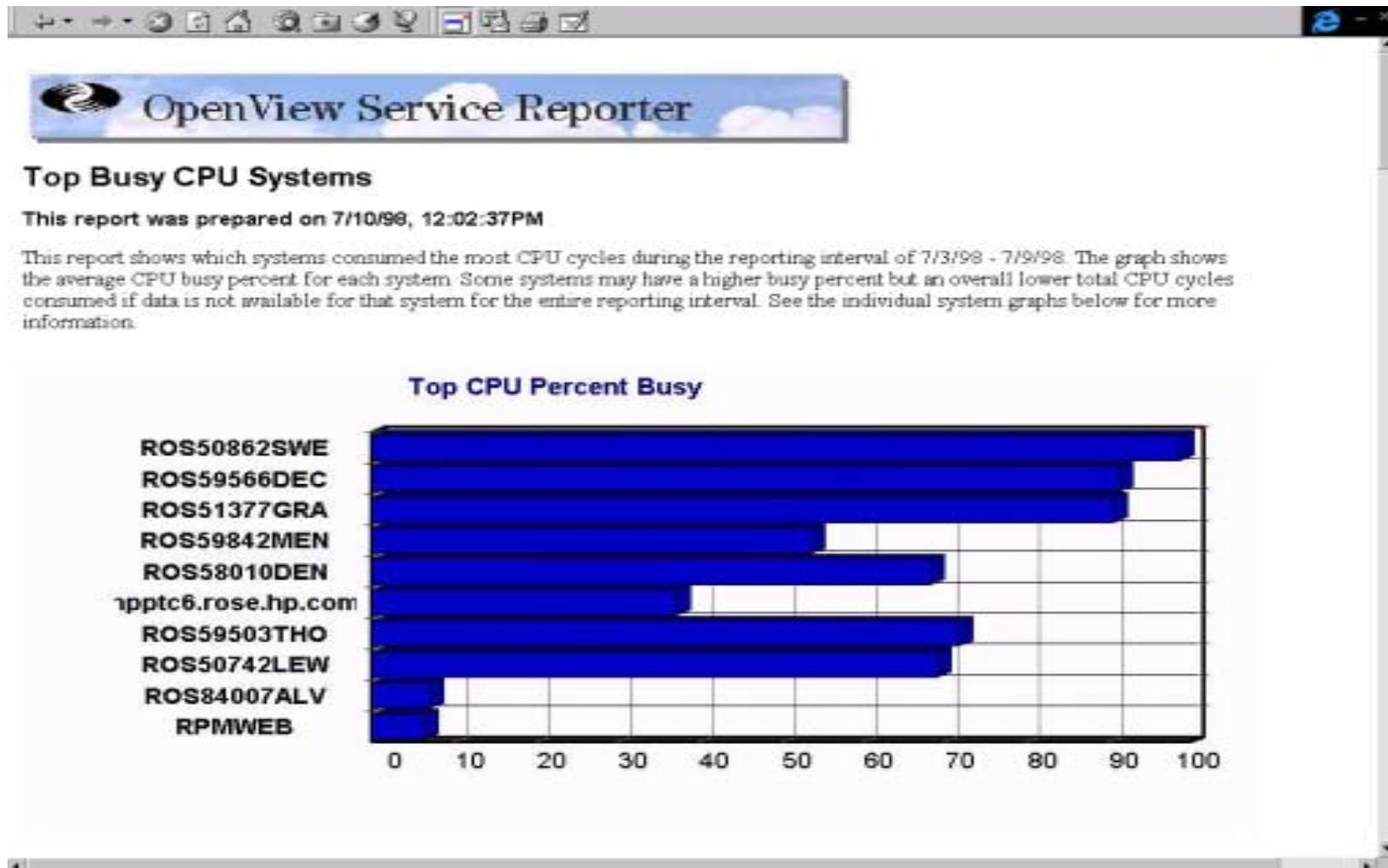
Prime



Reporting – Top Apps by CPU



Reporting – Top Busy CPU





Reporting – Management System Effectiveness

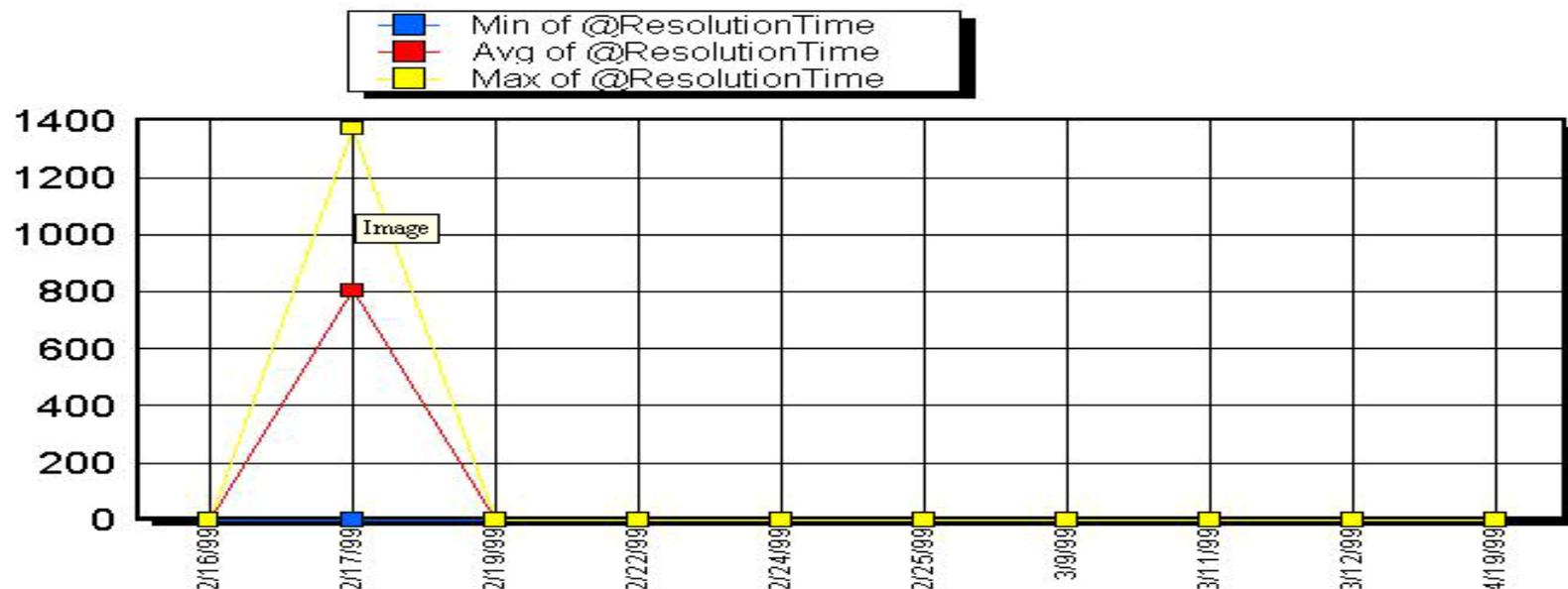


ITO Resolution Time Trend

This report shows the minimum, average, and maximum time to acknowledge messages each day.

This report was prepared: 7/6/99, 12:25:55 PM

ITO Management Server: plumas



Note: The resolution time is given in minutes.

Date	Minimum	Average	Maximum	Count
2/16/99	0.00	0.00	0.02	14





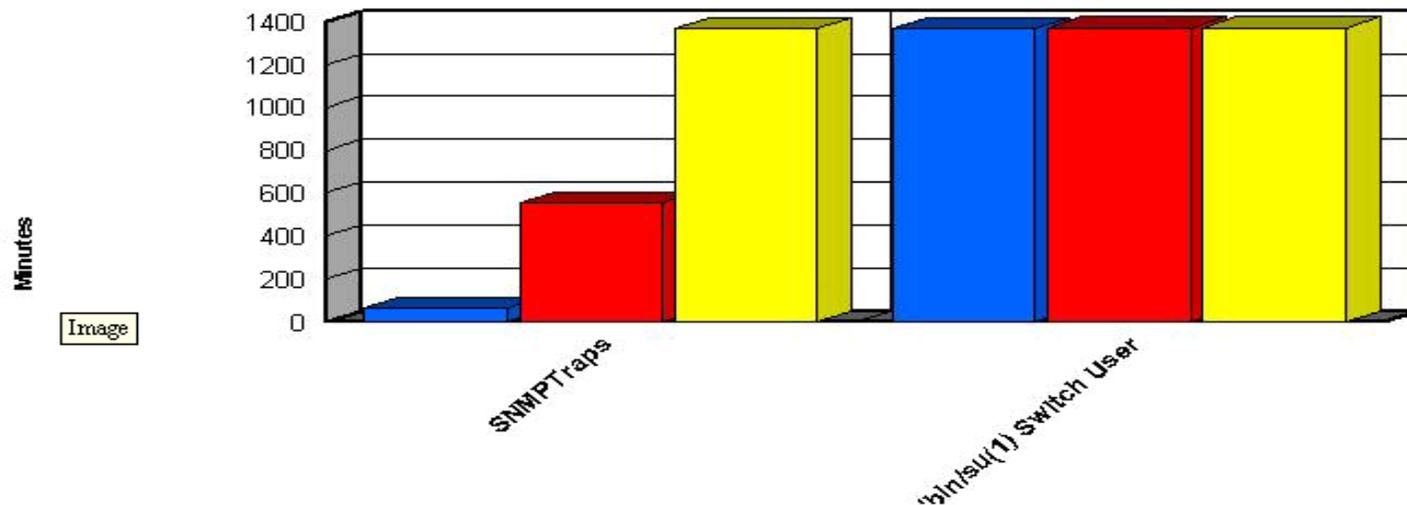
Reporting – Management System Effectiveness



ITO Resolution Time by Application

This report shows the time it takes to acknowledge a message for each application (minimum, average, and maximum).

This report was prepared: 7/6/99, 12:24:33 PM
ITO Management Server: plumas



The resolution time (in minutes) for an incoming message is:

<u>Application</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>	<u>Count</u>
SNMPTraps	64	554	1,367	4
/usr/bin/su(1) Switch User	1,368	1,370	1,372	6





Reporting – Management System Effectiveness

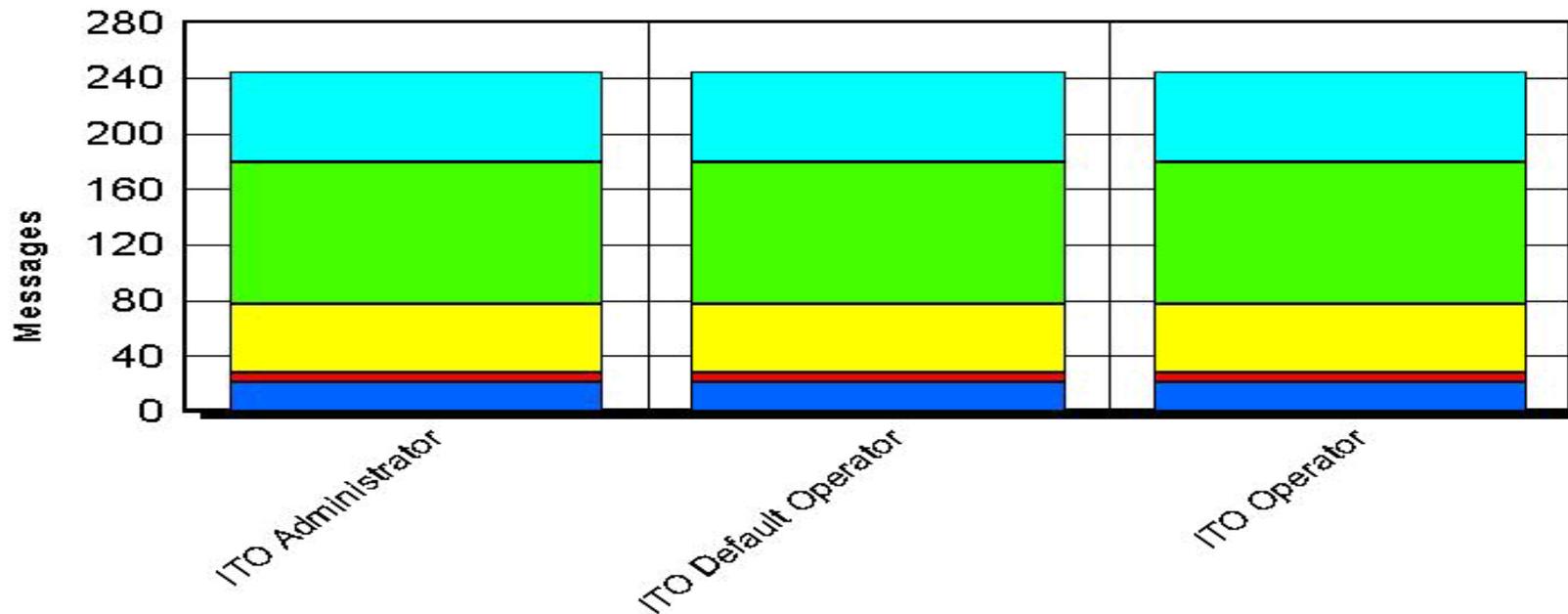
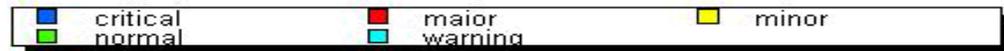


ITO Message Load per Operator

This report shows the number of messages received by each operator.

This report was prepared: 7/6/99, 12:24:53 PM

ITO Management Server: plumas



What We Covered

- Introductions
- Overview of OpenView
 - OV Operations, Performance and NNM Focus
- The Implementation Approach
- Managing HP-UX and NT with OpenView
 - How to ... food for thought
- Impressing Your Boss (and his boss)
 - Reporting
- Questions ... Answers ?

Questions ? ... More Info ?

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