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Solutions for
Business Transformation



presentation # 160
managing the hp platform

Jim Pitts

Hewlett-Packard

jim_pitts@hp.com



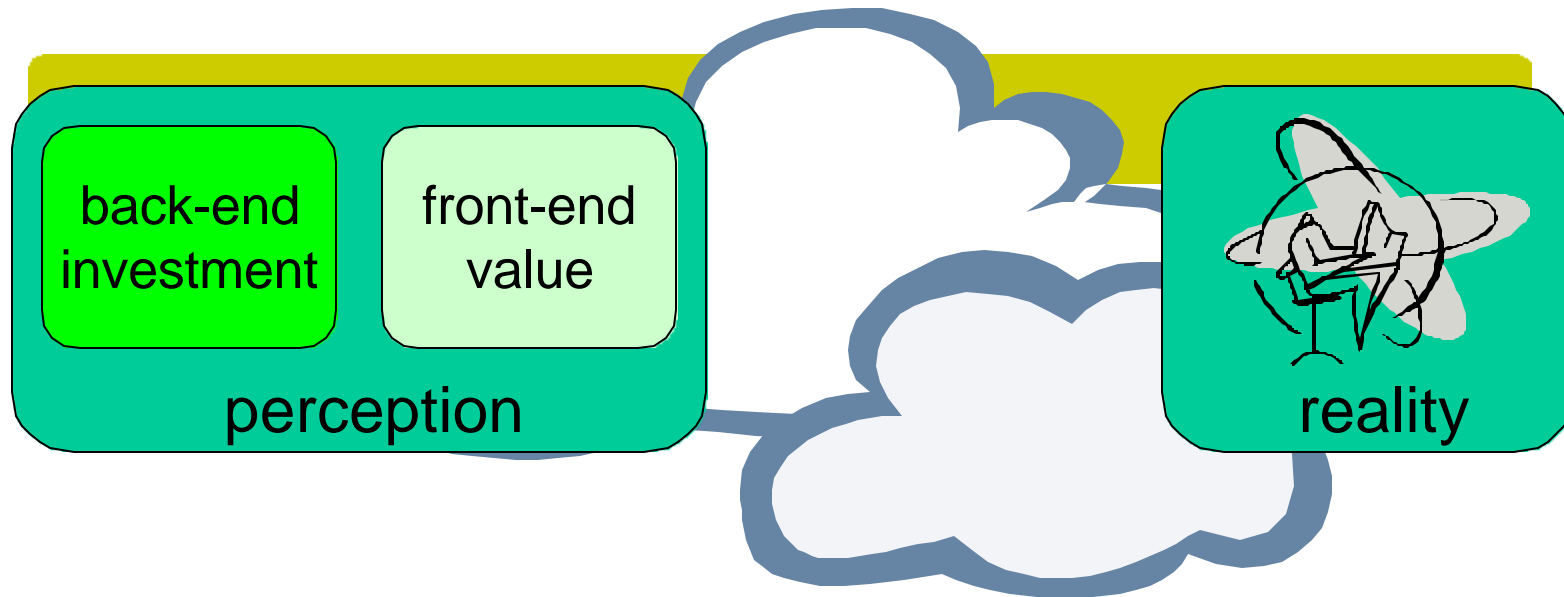
i n v e n t

agenda ...

- overview of hp's software strategy
- what is hp OpenView?
- the HP-UX 11i operating environment
- hp ServiceControl
- hp OpenView hp OpenView and SuperDome
- hp OpenView and high availability
- growing and enhancing customer environments
- understanding the hp environment



the investment: perception versus reality



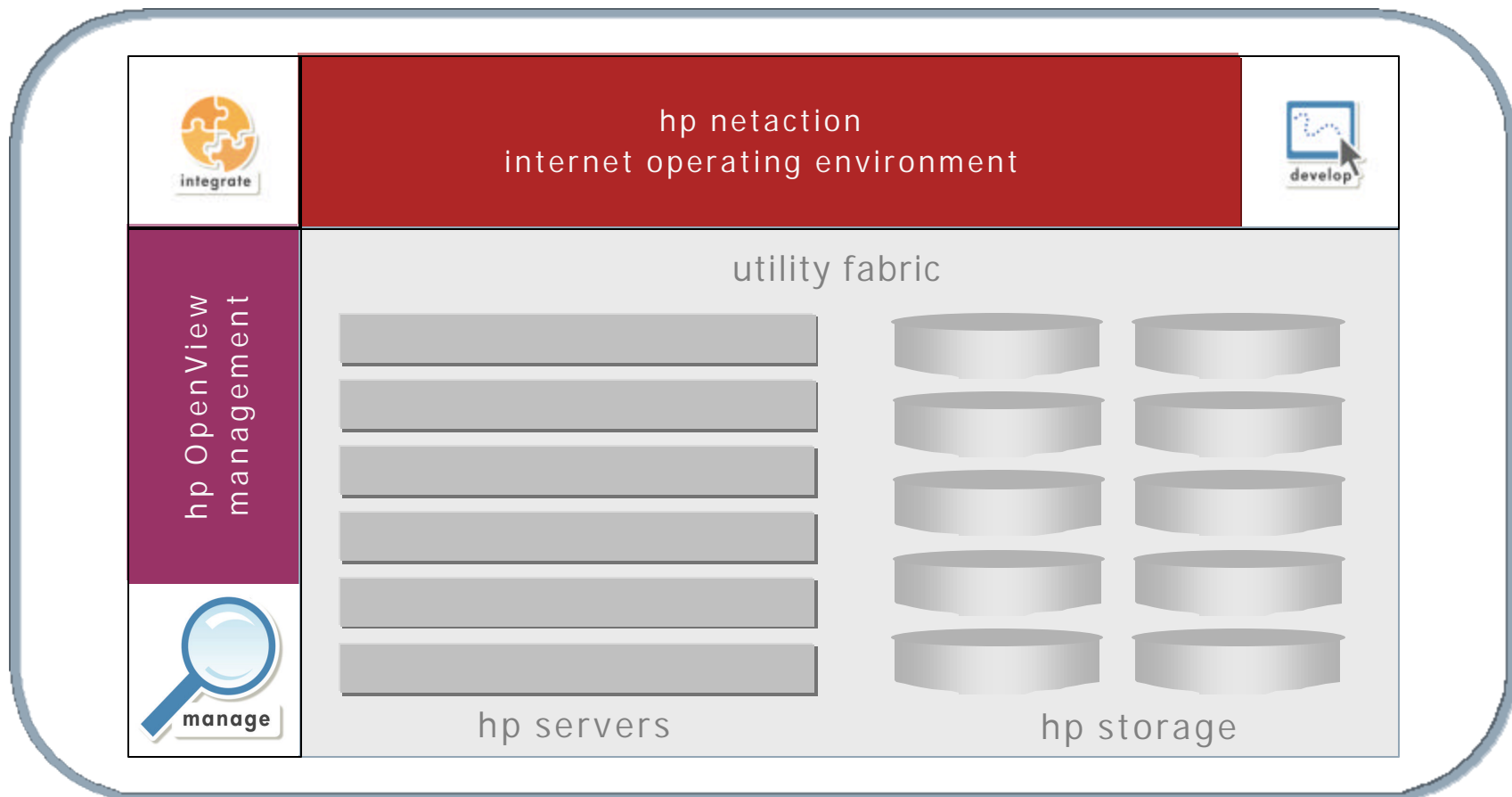
- what are e-services all about?
 - delivering value from a back-end investment
 - it's not always a "bolt on" to a core investment but often is the business itself
 - costs are hard to pin-down because of a gap between perception and reality
 - involves a blend of technologies and logistics that have traditionally been a challenge for customers to manage
 - one thing we know for sure is that managing all this it isn't just about data ...

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hp netaction and OpenView



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what you expect
from hp ...



i n v e n t

among other things ...

- strong relationships within hp that deliver *unique* value to each and every customers
- tight integration between hardware, software, and support
- quick time-to-market through partner-driven integrated solutions

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what you get
from hp ...

- among other things ...
- the most manageable platform in the industry
 - nobody manages the hp platform better than hp
 - tight and strategic integration based on internal partnering within hp

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What is hp OpenView?

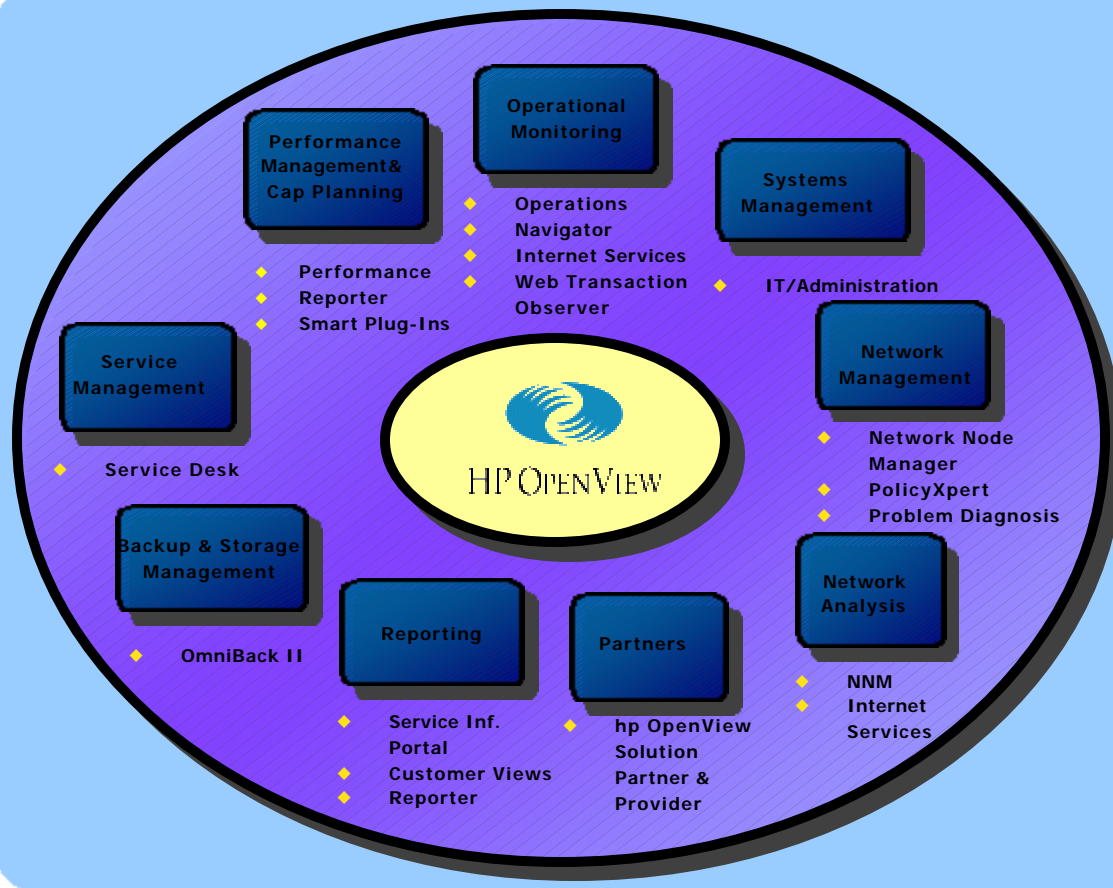
hewlett-packard believes that business success is all about providing customers an optimal experience **and** lower cost of ownership. hp OpenView delivers on this promise.

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hp OpenView building blocks



hp OpenView:

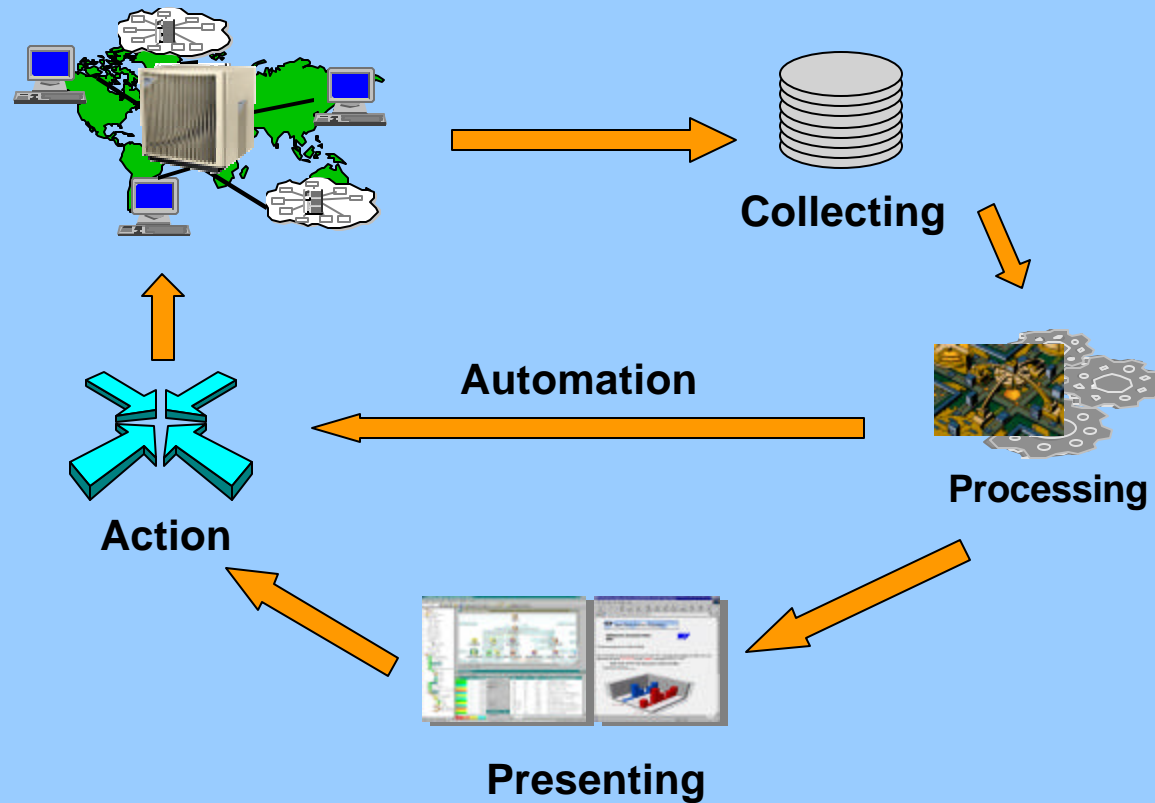
- manages the customer experience and helps deliver the optimal encounter
- spans the gap between component management and true service management
- maintains the trust-based relationship with customers
- lowers cost of ownership

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a process for improvement based on hp OpenView

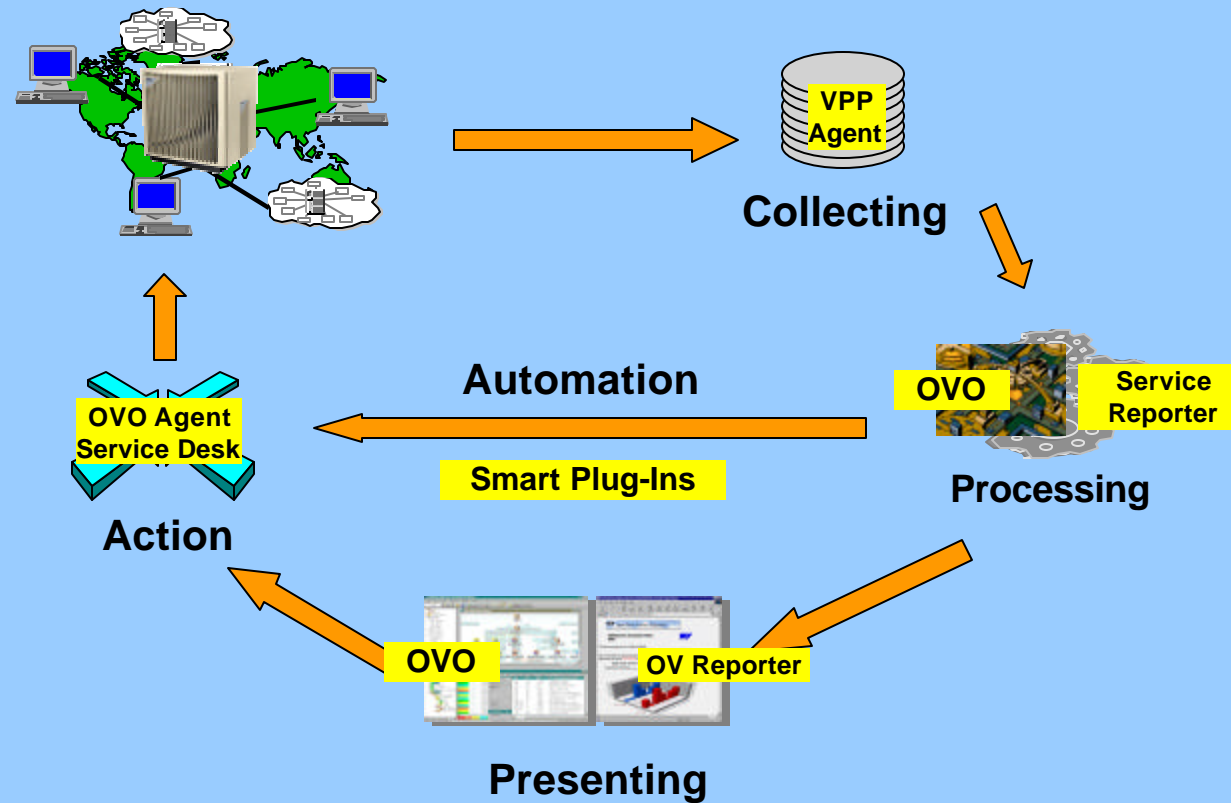


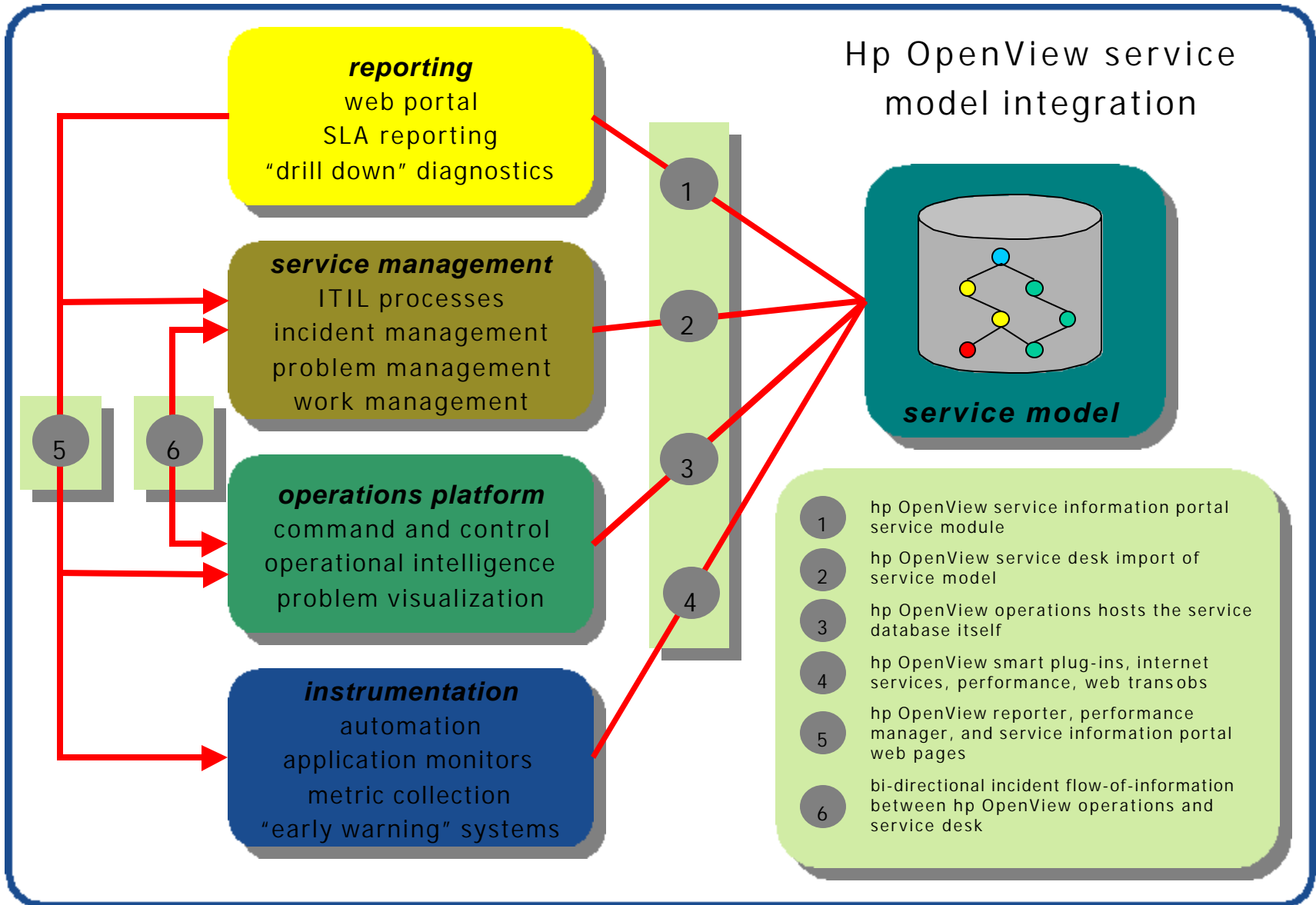
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a process for improvement based on hp OpenView





hp OpenView smart plug-ins

- typically include event and performance monitoring
- built by hp and partners to provide a rich foundation for application management
- leveraged by consultants and solution providers to build solutions portfolios
- easy to customize to the specific requirements of most customers
- easy to deploy and manage application intelligence



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hp OpenView
operating system smart
plug-in for HP-UX

operating system SPIs for
HP-UX includes:

- service discovery & views
- automatic & self configuration
- central performance monitoring
- process & filesystem monitoring
- monitor hardware status of the computer system
- monitor OS services
- canned applications
- MC/ServiceGuard support



hp OpenView service navigator in action - real
examples of service modeling

hp OpenView OS SPI for HP-UX

The screenshot displays the HP OpenView VantagePoint for UNIX interface. The left pane shows a tree view of the service map, with 'Operating System SPI' expanded to show 'Site1_Node1' selected. The main pane shows a detailed service map for 'Site1_Node1' with callouts:

- physical volume configuration of local system is discovered and mapped**: Points to the 'Physical Disk Drives' component.
- logical volume configuration of local system is discovered and mapped**: Points to the 'Volume Groups' component, which includes sub-components like '/dev/vg00', 'SG_Volume Groups', and 'vAvg02'.
- network configuration of local system is discovered and mapped**: Points to the 'Network Interfaces' component, which includes 'lan4', 'lan1', 'lan3', 'lan0', and an IP address of '15.27.248.102'.
- MC/ServiceGuard is supported and the service map reflects this fact**: Points to the 'SG_Volume Groups' component.

The status bar at the bottom indicates '6 services Site1_Node1: Normal'.

S P I includes:

- hp OpenView operations templates mapped to XP256/512 events
- monitoring of the RC (Remote Console) components (MS-SNMP agent, etc)
- hp OpenView service navigator integration delivers a logical view of the XP256/512 components and maps messages to the related components

hp OpenView smart
plug-in for the
XP256/512 disk array



launch the Show Config tool

The screenshot shows the HP OpenView VantagePoint for UNIX interface. The main window displays the configuration of a node (XP:35390 SM:35390). A context menu is open over the 'Services' section, with 'Start' selected, and a sub-menu is open over 'XP256 SPI', with 'Show Config. (RC)' selected.

HP OpenView VantagePoint for UNIX [merlot] [opc_admin]

File Edit View Actions Window Help

Operation View

Nodes

- ALL XP256
- duckjibe
- merlot

Message Gro

Services

Start

- Filter Active Messages
- Filter History Messages
- Start
- Start Customized...

XP256 SPI

- Discover XP (RC)
- RC Status
- Show Config. (RC)
- Start RC Service
- Stop RC Service

Configuration of XP:35390 SM:35390

KCMMAIN Microcode Version: 52-47-02-00/00
Version: 51-47-01/00

CHA 2V: CHS(SCS
CHA 2W: CHT
CHA 2X: CHT
CHA 2Y: CHA(ESCON 2port)

DKA:

- DKA 1B installed
- DKA 1C installed
- DKA 2H installed
- DKA 2J installed

DKU R1:
HDU-R10
R100: Model=DK30A, Capacity=32G, Serial=81050536, PDEV=00/01, Type=Data Drive

Reload configuration for current user

Browser displays max 50 messages.

XP256/XP512 service discovery

The screenshot shows the HP OpenView VantagePoint for UNIX interface. The left pane displays a tree view with 'Nodes' expanded to show 'ALL XP256', 'duckjibe', and 'merlot'. Under 'Services', 'XP256 Services' is selected. The main area shows a 'Service Graph [Services]' window with a diagram of 'Services' connected to 'XP256 Services'. A callout bubble points to the 'Services' node with the text: 'The main XP256 Service is empty, because the discovery was not started until now'. Below the graph, it says '1 services Services: Normal'. At the bottom, the 'Filtered Active Messages' table shows a warning message.

Severity	Dup.	SUIAONE	Date	Time	Node	Application	MsgGrp	Object
Warning		0-XS-X-	06/30/00	10:30:59	duckjibe.bbn.h...	OpC	OS	CPU

1 of 0 0 0 0 0 0 1 0

Launch the Discover XP tool ...

The screenshot shows the HP OpenView VantagePoint for UNIX interface. The main window displays a tree view of nodes and services. A context menu is open over the 'duckjibe' node, with the 'Start' option selected, leading to a sub-menu where 'Discover XP (RC)' is chosen. This action has opened a 'Discover XP (RC) Output' window showing the command output of the tool. Below this, a 'Filtered Active Messages' window is visible, displaying a table of messages.

Discover XP (RC) Output

```

Application started, please wait.

Command Output                                     No. 1 of 1
                                                    Node: merlot
                                                    Time: 07/06/00

Process nodes duckjibe.bbn.hp.com ...
- Remote Console duckjibe.bbn.hp.com
- Read XP configuration file
- Read default data
- Build service trees
- Build service tree for XP:35390 SN:35390
- Build service tree for XP:45641 SN:45641
- Write service file
- Replace service file rc_duckjibe.bbn.hp.com.xml
Successfully replaced service file
- Build toplevel services
- Replace service file xp_main.xml
Successfully replaced service file
- Replace service file xspicalcrules.xml
Successfully replaced service file
Successfully assigned services to operator opc_adm
Successfully assigned services to operator opc_op
    
```

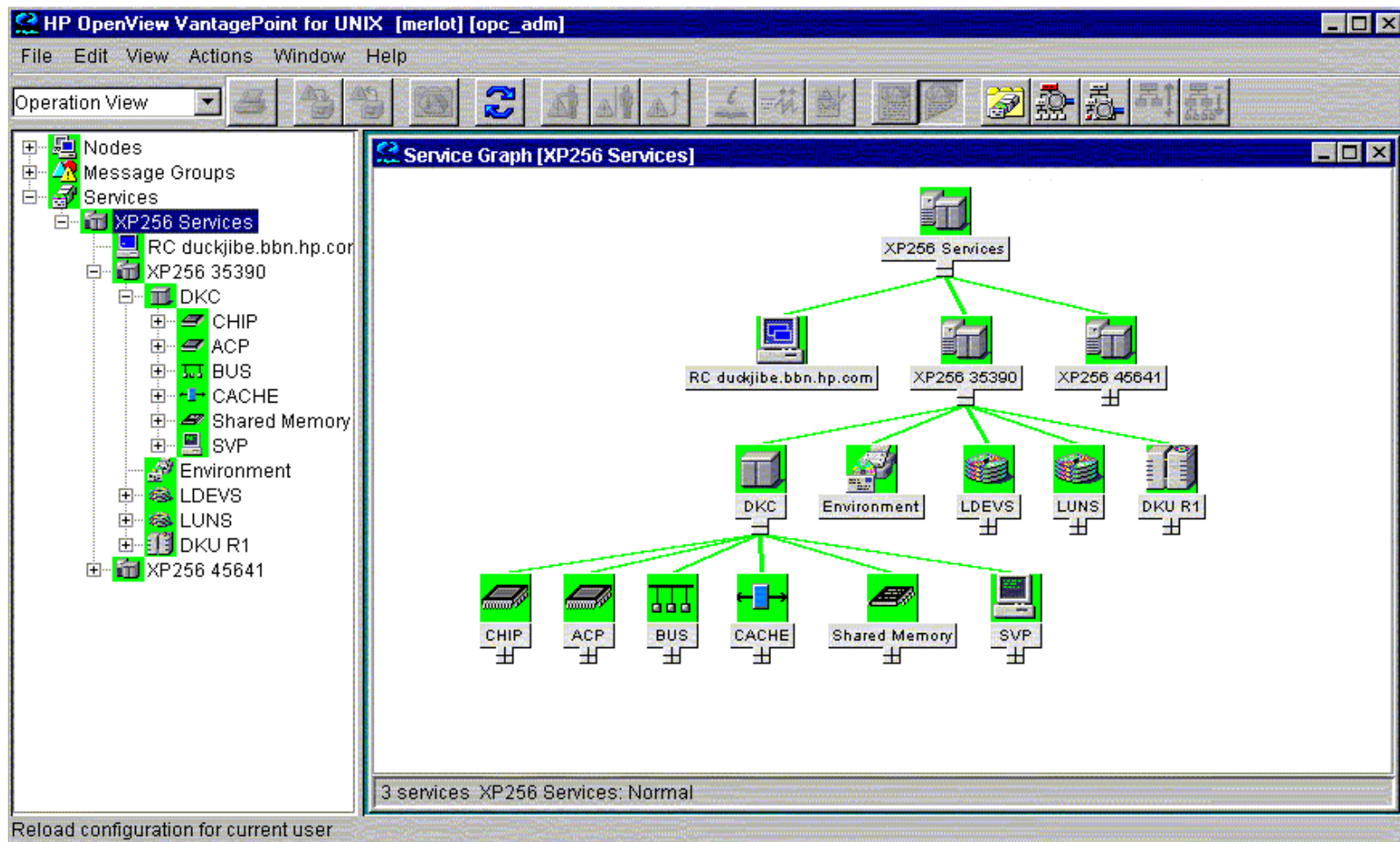
Filtered Active Messages

Severity	Dup.	SUIAONE	Date
Warning		0-XS-X-	06/30/00

1 of 0 0 0

Reload configuration for current user Browser displays max 50 messages.

XP256/512 top level services



Reload configuration for current user

XP256/512 error scenario

The screenshot displays the HP OpenView VantagePoint for UNIX interface. On the left, a tree view shows the hierarchy: Nodes > Message Groups > Services > XP256 Services > RC duckjibe.bbn.hp.com > XP256 35390 > DKC > CHIP > ACP > ACP Pair 2. A red arrow points to 'ACP Pair 2' in the tree, which has a context menu open with 'Get Root Causes' selected.

The main pane shows the status for 'ACP Pair 2':

- Major
- Multiple threshold
- Critical 0.34 %
- Major 0.34 %
- Minor 0.34 %
- Warning 0.0 %
- Normal 0.0 %

Below this is a table of filtered active messages:

Severity	Node	Message Text
Major	xp.35390	319010: DKA Processor: LDEV blockade Effect of proces
Major	xp.35390	319051: DKA Processor: LDEV blockade Effect of proces

At the bottom of the main pane, a progress bar shows: 2 of 0 2 0 0 0 0 0 0 0 0. A status bar at the bottom right indicates 'Browser displays max 50 messages.'

On the right, a 'Service Root Cause Graph' window shows a tree structure:

- ACP Pair 2 (Major)
 - DKA 1C
 - DKA 1C MP 0
 - DKA 2J
 - DKA 2J MP 1

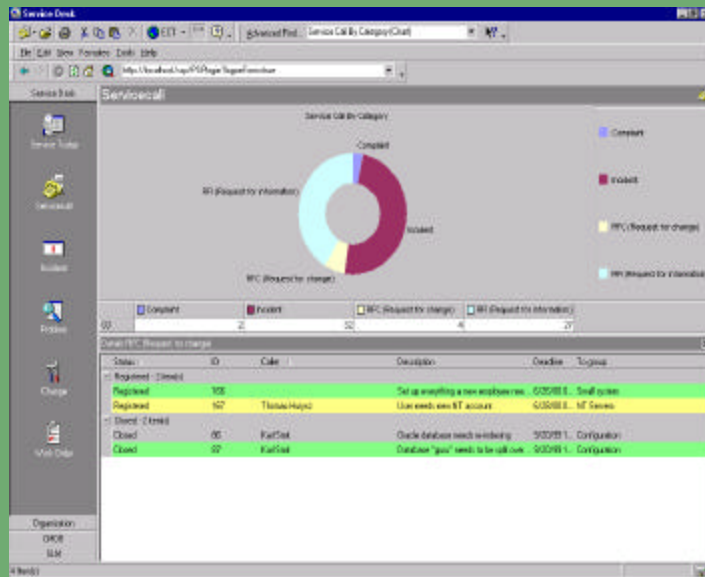
A callout box points to the graph with the text: 'Root Cause Graph: ACP Pair2 2 services ACP Pair2: Major'.

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hp OpenView service desk and ITIL service management



- hp OpenView service desk consolidates the critical components of an IT support organization in the following areas:
 - Configuration management
 - Call management
 - Incident Management
 - Problem Management
 - Change Management
 - Work Management
 - Service Level Management
 - Configuration Management
- service desk tracks and controls configuration items (e.g. assets) throughout their lifecycle
- from the standpoint of service desk a modeled service is just another configuration item

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Introducing the HP-UX 11i Operating Environment

11i enterprise

MirrorDisk/UX

ServiceControl Enterprise

11i Base

Base HP-UX
Apache Web Server
Java Dev Kit/RTE
e" speak
Nokia WAP Server
iPlanet Enterprise Dir. Serv.
PAM Kerberos
CIFS/9000
Network Drivers
Base VxVM

ServiceControl i-ssential

11i mission critical

Host Intrusion Detection
MC/ServiceGuard NFS
toolkit

**ServiceControl Mission
Critical**



The HP-UX 11i Operating Environment Features :

- Base – Included with each and **every** HP-UX Server
- Enterprise – Recommended for mid-sized to large enterprise deployments of HP-UX servers
- Mission Critical – Recommended for all Mission Critical applications

What is hp ServiceControl?



ServiceControl Features :

- i-ssential – Part of the Base HP-UX 11i Operating Environment for **all** HP-UX servers
- Enterprise – Includes components that improve robustness and reliability of services including hp OpenView GlancePlus Pak 2000
- Mission Critical – Includes WLM and MC/ServiceGuard to assure quality and availability of hosted e-services

ServiceControl Enterprise

OpenView GlancePlus Pak 2000
Online JFS 3.3
Process Resource Manager
EMS HA Monitors

ServiceControl i-ssential

ServiceControl Manager
SAM
System Configuration Repository
Ignite/UX
Software Distributor/UX
EMS Framework
WebQoS Peak
Virtual Partitions Core

ServiceControl Mission Critical

MC/ServiceGuard
HP-UX Workload
Manager
ECM toolkit

Components of hp ServiceControl



single point, multi-system
configuration management

ServiceControl Manager (SCM)
SAM
Ignite/UX
SD/UX
Online JFS
Secure Web Console
Central Web Console
System Configuration Repository (SCR)

resource management

HP-UX Workload Manager (WLM)
PRM
GlancePlus Pak 2000
MC/ServiceGuard
WebQoS
Virtual Partitions

fault management

EMS
EMS HA monitors

ServiceControl Targets the Root Cause of Down Time

Reduction/Elimination of:

Operator Errors

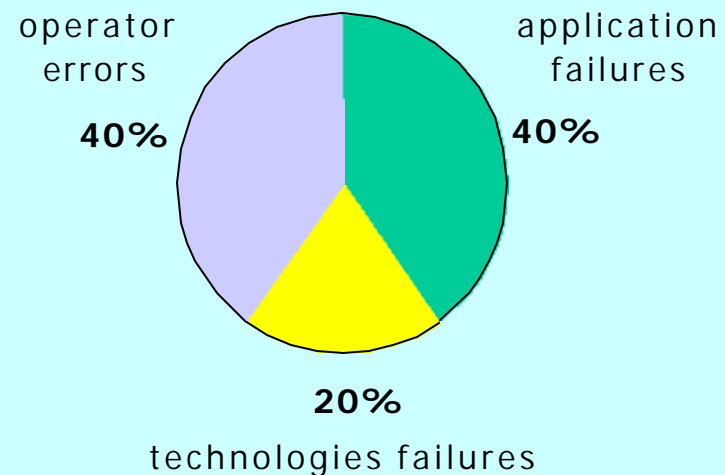
- Standardization of Tools and their Application with SAM and ServiceControl Manager
- Standardized Configuration and Deployment with Ignite/UX, SD-UX, and System Configuration Repository (SCR)
- Consistent easy-to-use Secure/Central Web Console

Technology Failures

- EMS Monitors monitor for hardware faults
- Online JFS and MC/ServiceGuard keep services up and running
- OpenView GlancePlus Pak 2000 locates resource bottlenecks to effectively manage performance

Application Failures

- PRM, Workload Manager (WLM), and WebQoS optimize the HP-UX Operating Environment for e-services delivery



SERVICECONTROL

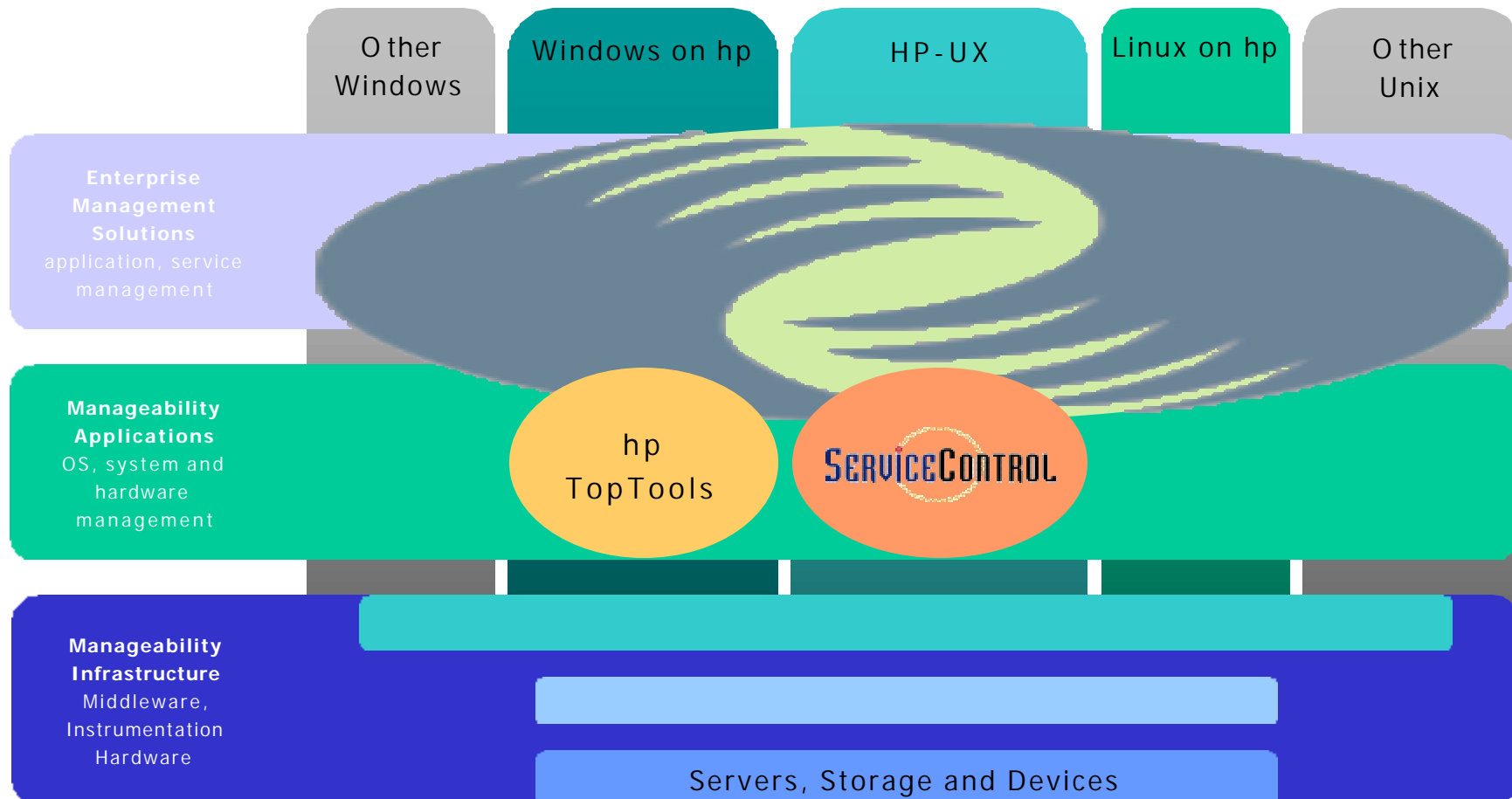
Source for Graph: 24x7 Application Availability, Gartner Group 1999

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hp OpenView and the hp Platform



hp OpenView Targets the Root Cause of Down Time

Reduction/Elimination of:

Operator Errors

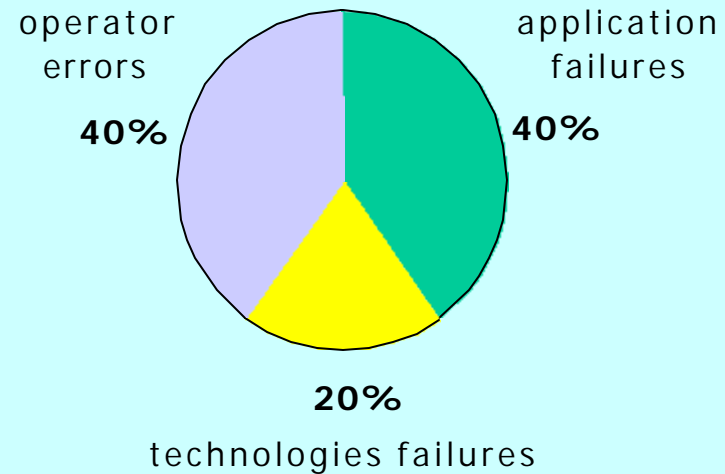
- Standardization of Tools and their Application with hp OpenView operations and hp OpenView navigator.

Technology Failures

- hp OpenView operations receives alarms from EMS Monitors for hardware faults
- hp OpenView operations agents keep services up and running
- OpenView GlancePlus Pak 2000, Performance Agents, and hp OpenView reporter locate bottlenecks to effectively manage performance

Application Failures

- hp OpenView internet services and web transaction observer monitor the quality of service delivery against service targets
- Best-Practice Application Management with hp OpenView smart plug-ins



HP OPENVIEW

Source for Graph: 24x7 Application
Availability, Gartner Group 1999

ServiceControl uses hp OpenView

hp OpenView GlancePlus Pak 2000 is part of the ServiceControl Enterprise and Mission Critical products



hp OpenView GlancePlus Pak 2000 includes monitoring capabilities for PRM groups

Unique kernel instrumentation in the HP-UX operating system provides hp OpenView performance agent with many additional kernel metrics than those available for Sun, AIX, or Windows.

hp OpenView operations can run in an MC/ServiceGuard environment (part of ServiceControl Mission Critical)

hp OpenView operations can receive messages from EMS to manage hardware faults (automatic paging, trouble ticketing, etc).

Understanding hp OpenView and ServiceControl

 SERVICECONTROL	 HP OPENVIEW	what the customer gets
Best-in-Class for HP-UX	HP-UX, Solaris, Windows, and more	Optimal integration of hp OpenView and the HP-UX platform specific ServiceControl because of strong hp internal relationships
Strong value proposition of bundled i-ssential	hp OpenView Building Block Model	Strong investment protection as customers deploy HP-UX knowing that integration with hp OpenView is there when they need it
Tools for optimal delivery of e-services	Tools for measuring and quantifying e-service delivery	A suite of platform specific and enterprise generic tools for measuring and improving the encounter between customers and e-services
Targets Down Time	Targets Down Time	Strong strategic focus on the most pressing problems hp customers experience while deploying hp centric solutions

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moving on ...



- hp OpenView and SuperDome
- hp OpenView and high availability
- growing and enhancing hp environments
- positioning the hp environment

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hp OpenView and SuperDome

- hp OpenView GlancePlus Ships WITH SuperDome as part of it's initial offering with the Mission Critical HP-UX 11i Operating Environment
- hp OpenView Operations/Performance agents support HP-UX 11i on PA-RISC SuperDome Computing Platform
- hp OpenView Operations/Performance agents will support native IA-64 when IA-64 is released

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hp OpenView and SuperDome (continued)



easy

fast

effective

always

there

accountable

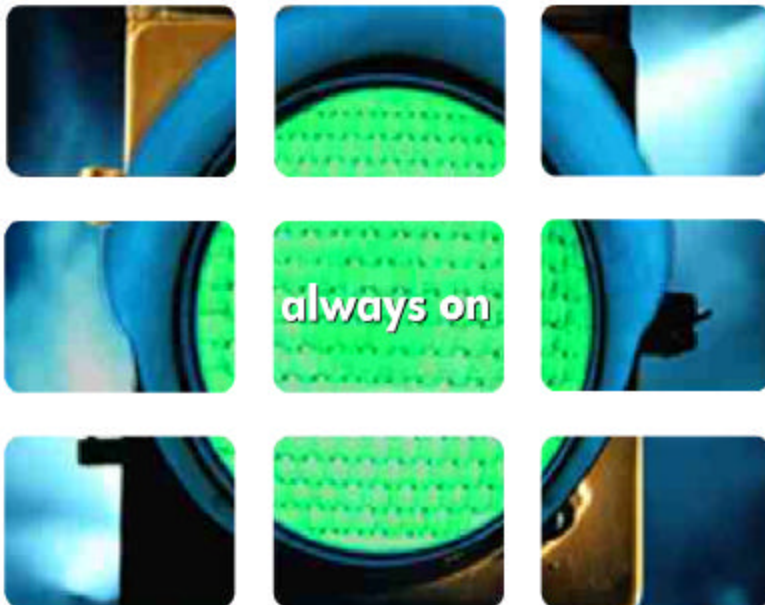
tailored

dependable

- OmniBack II supported on PA-RISC SuperDome Computing Platform
- OmniBack II support for IA-64 offered when IA-64 released
- Other hp OpenView products will be tested and supported over time, however the lab anticipates that most products will run in emulation mode on SuperDome with little or no modification

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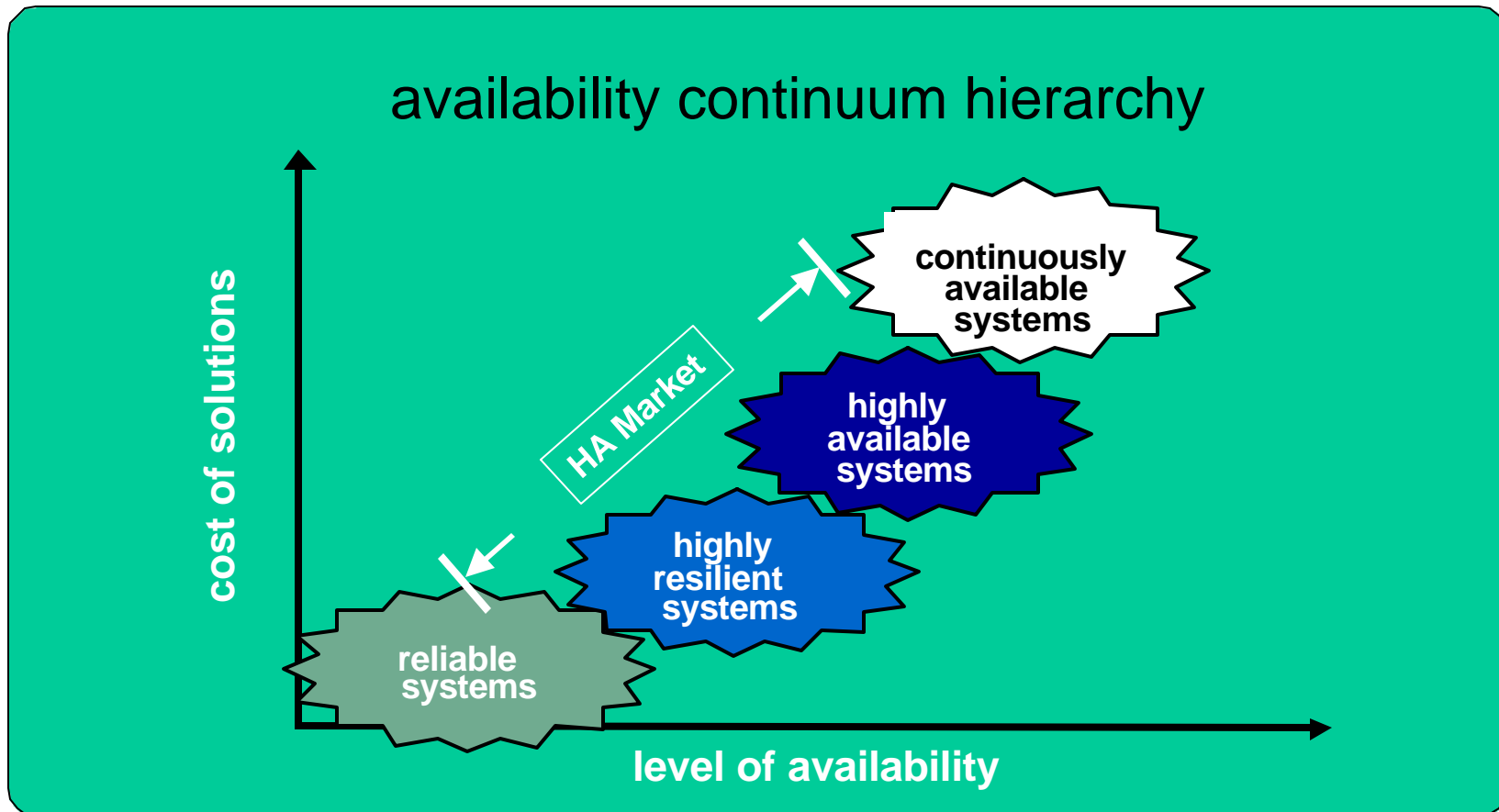


hp OpenView and
high availability

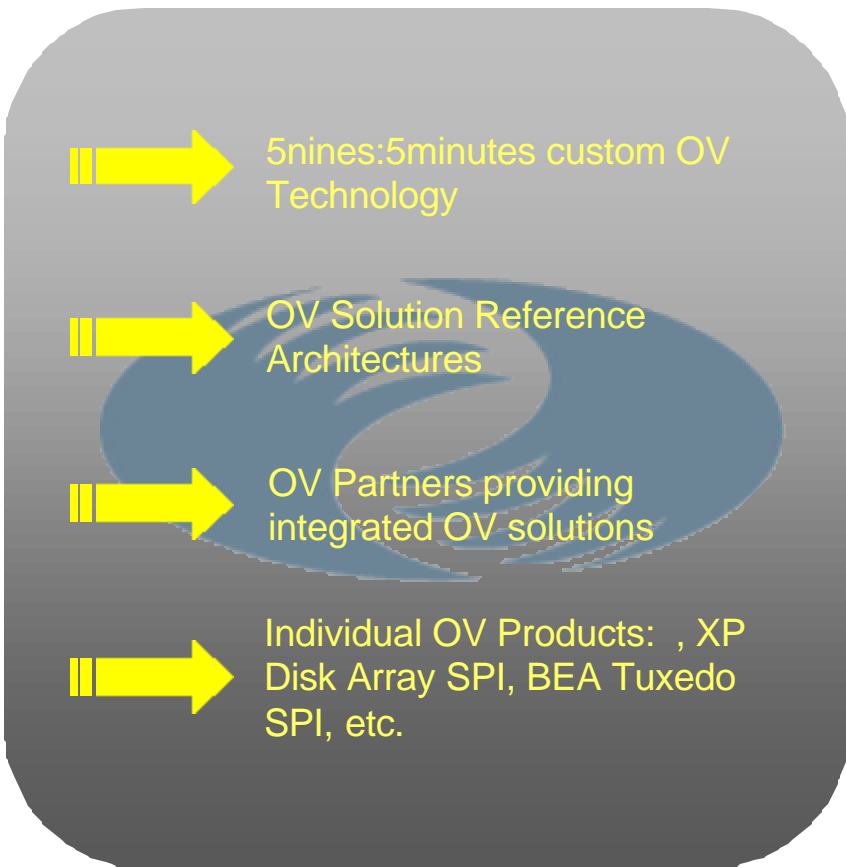
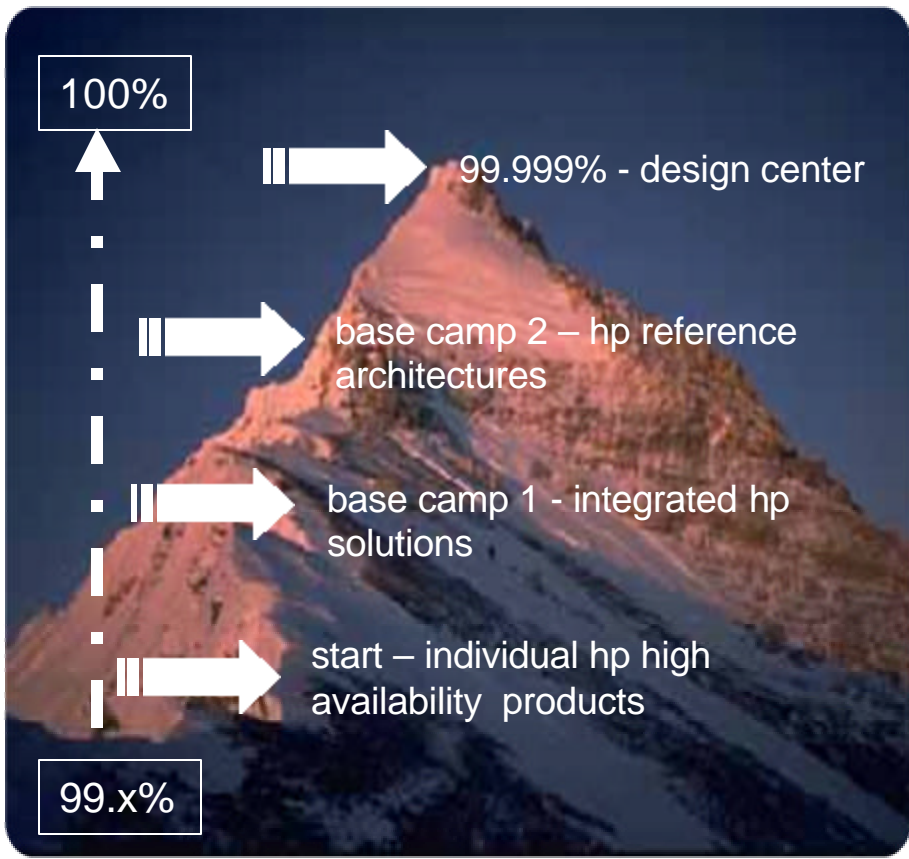
high availability is ...

- easy, fast, and effective
- accountable, tailored, and dependable
- managed and measured
- an ongoing challenge to meet the needs of the future

the Hewlett-Packard ha continuum



hp OpenView and the hp ha continuum

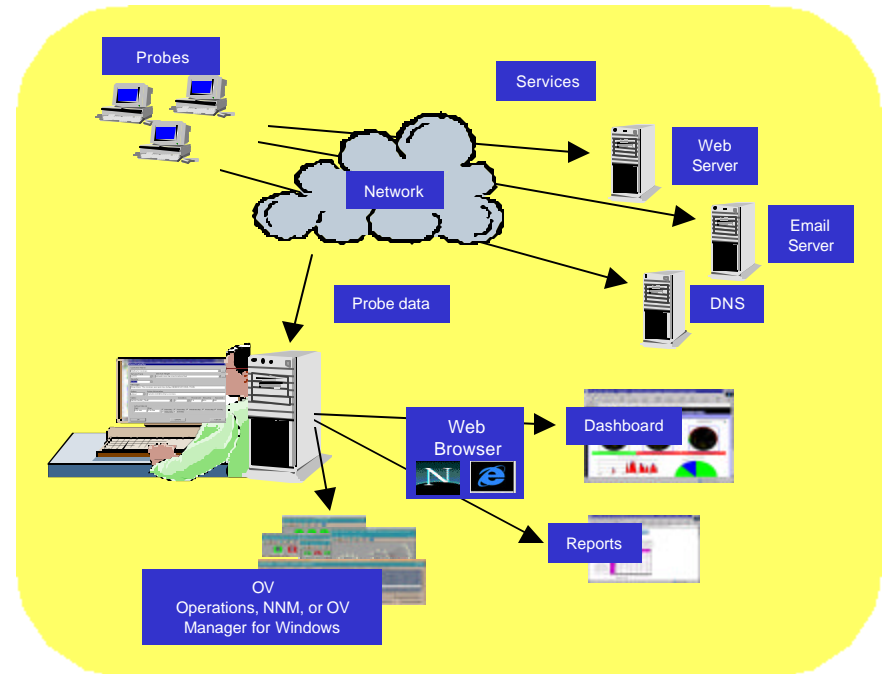
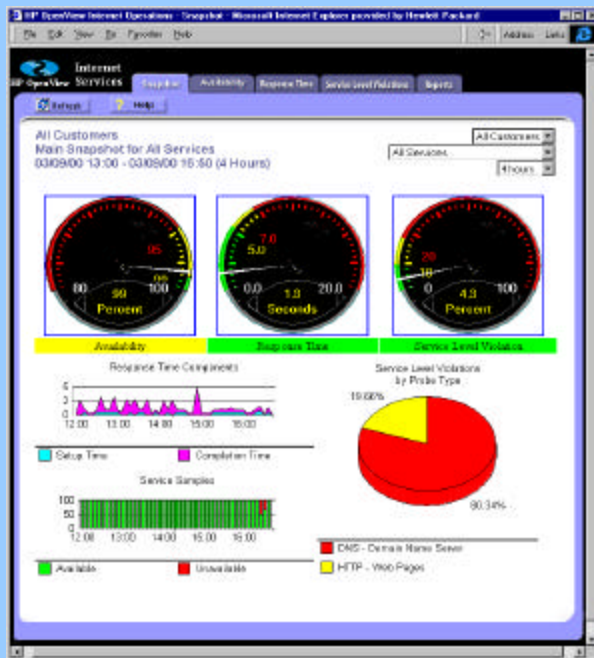


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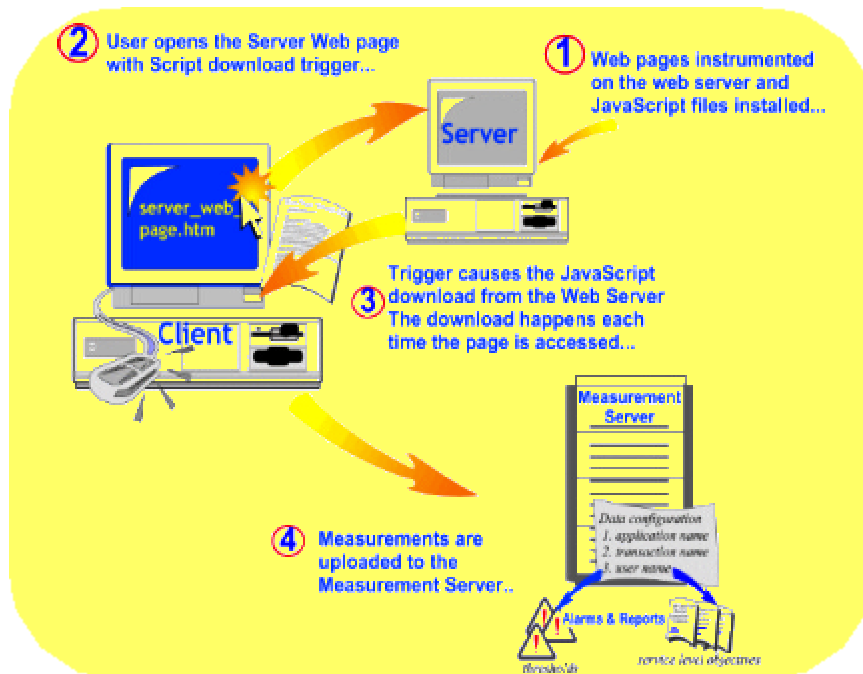
high availability is measured and effective



hp OpenView internet services provides sophisticated "synthetic transaction" generation technology that measures the quality and availability of service delivery

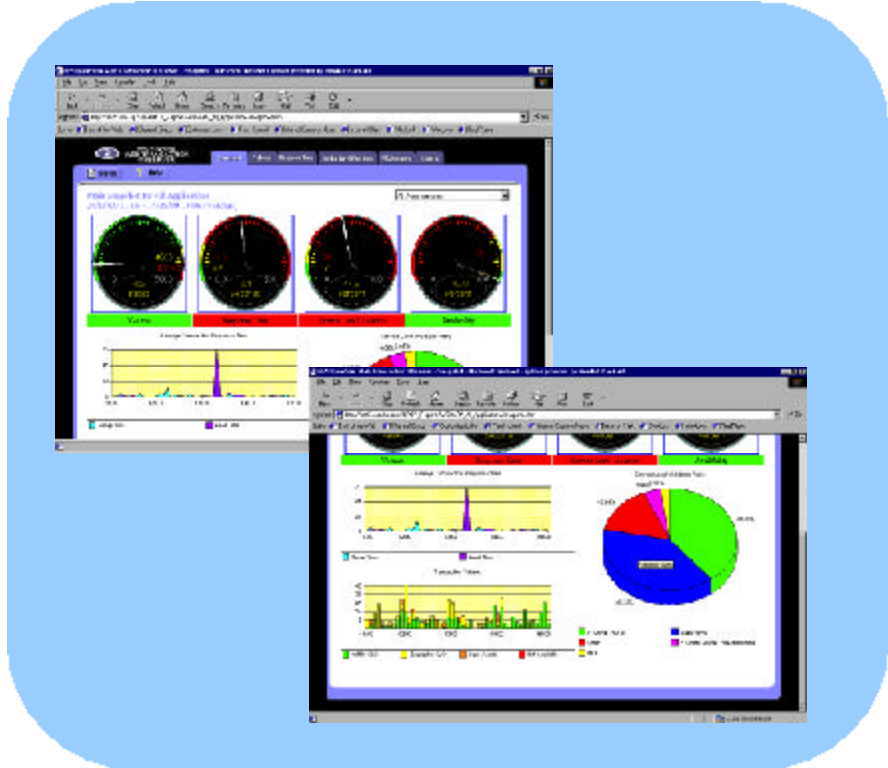
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high availability is
accountable and
dependable

hp OpenView web transaction observer delivers a true "metric of success" for the always-on infrastructure ... the quality of a customers experience with your web site



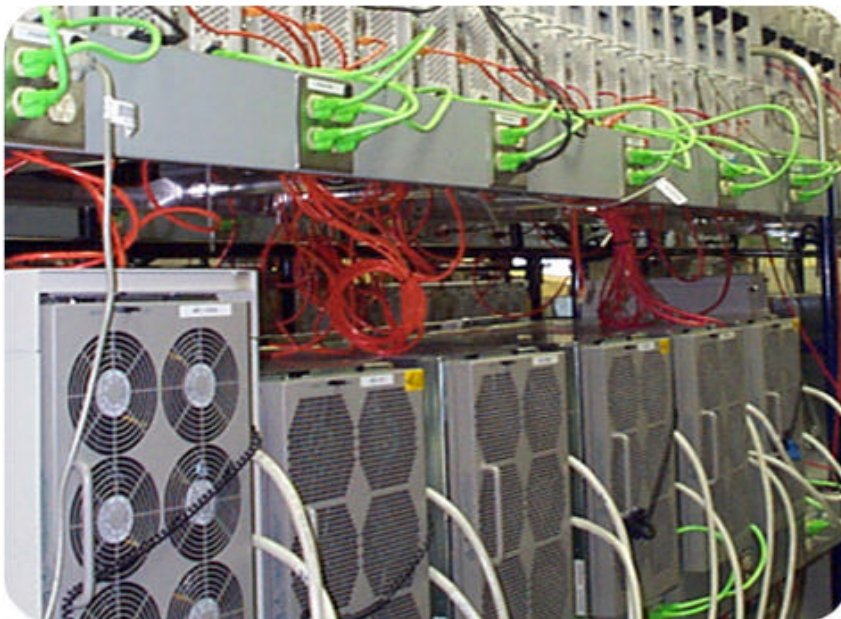
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growing the hp environment

- architecture review
- “entry-point” hp OpenView products
- fast-starting hp OpenView solutions that build credibility with customers
- tying it all together

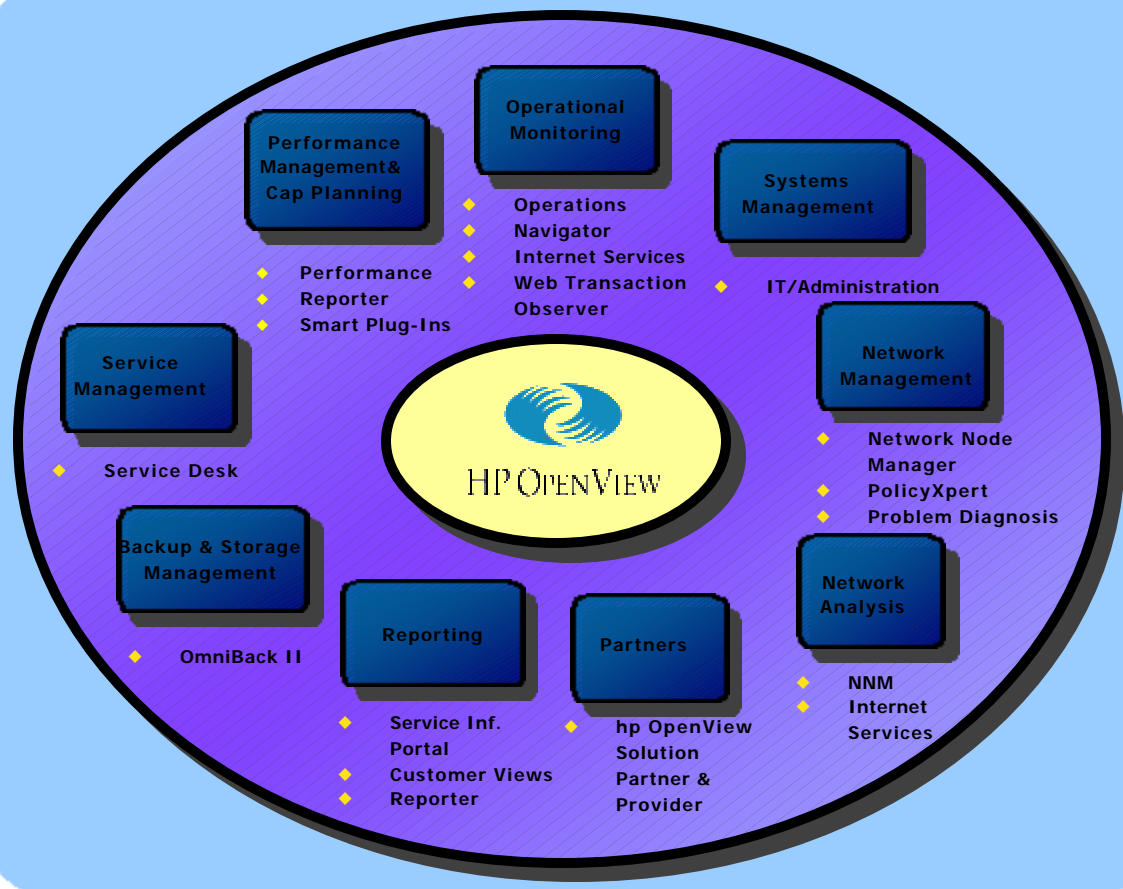


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hp OpenView building blocks



hp OpenView building blocks:

- integrate
- deploy quickly on their own
- are built using common components
- deploy quickly as part of an overall solution

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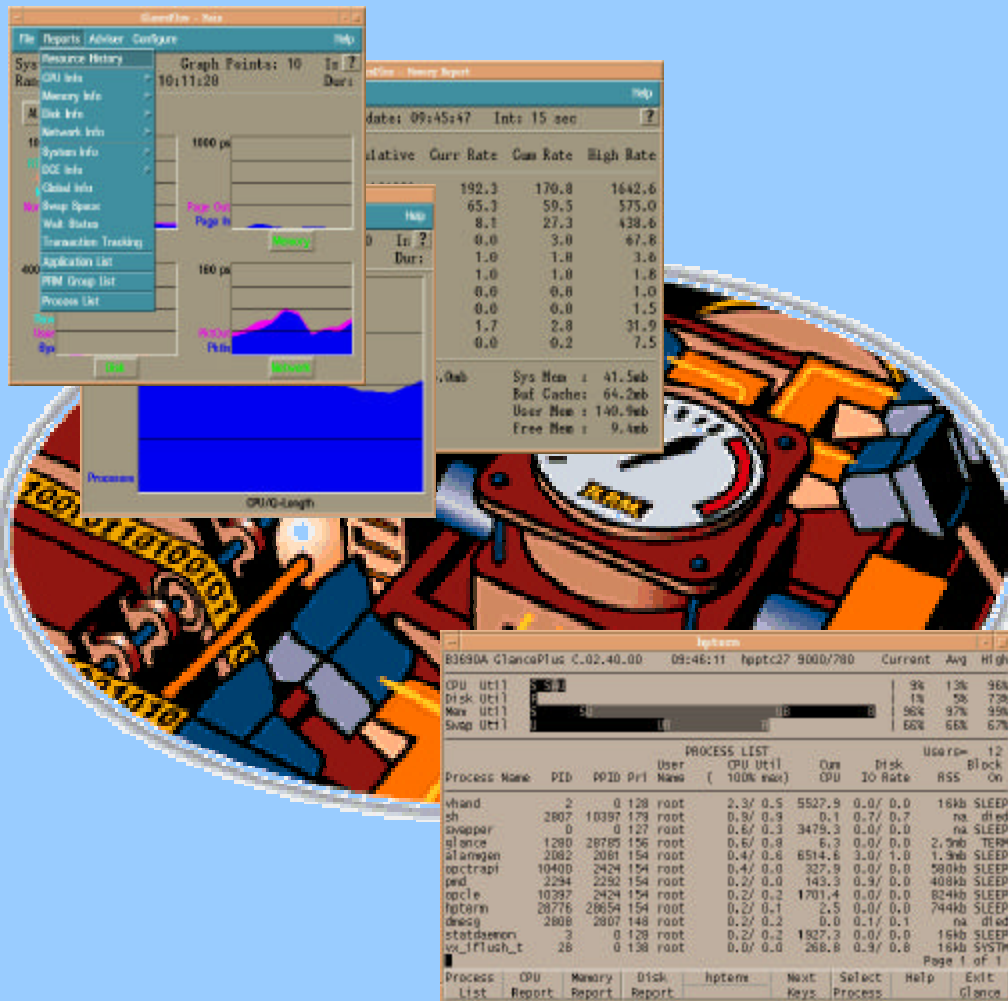
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GlancePlus Pak 2000

hp OpenView GlancePlus
Pak 2000 Contains:

- ITO-SE
- OV performance agent
- Terminal and Motif versions of Glance



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ITO-SE

ITO-SE Features :

- Basic event management templates for the HP-UX 11i Operating Environment
- Will capture events generated by the EMS component of ServiceControl
- A Operations Java GUI look/feel providing for a smooth transition to the full hp OpenView solution

The screenshot displays the HP OpenView ITO-SE interface. The main window shows a configuration tree on the left and a message log on the right. The message log contains the following data:

Severity	UJAON	Date	Time	Node	Application	MsgGrp	Object	Message Text
Normal	----	1/11/00	8:47:03 AM	hpptc2...	FTP	Login	denbesu	FTP login from rosspi1170
Normal	----	1/11/00	9:48:03 AM	hpptc2...	FTP	HPUX	denbesu	denbesu logged off from F
Normal	----	1/11/00	3:27:14 PM	hpptc2...	FTP	Login	denbesu	FTP login from ross5042r
Normal	----	1/11/00	3:30:54 PM	hpptc2...	FTP	HPUX	denbesu	denbesu logged off from F
Critical	----	1/11/00	11:55:22 ..	hpptc2...	/usr/sbin/cr..	CROW	343	Cron command of root with
Critical	----	1/12/00	11:55:29 ..	hpptc2...	/usr/sbin/cr..	CROW	16339	Cron command of root with
Critical	----	1/15/00	11:55:30 ..	hpptc2...	/usr/sbin/cr..	CROW	4711	Cron command of root with
Critical	----	1/15/00	11:55:12 ..	hpptc2...	/usr/sbin/cr..	CROW	20618	Cron command of root with
Normal	----	1/18/00	1:18:25 PM	hpptc2...	FTP	Login	gittssu	FTP login from dhcp2601s
Normal	----	1/18/00	1:18:05 PM	hpptc2...	FTP	HPUX	gittssu	gittssu logged off from FTP
Critical	----	1/18/00	11:55:08 ..	hpptc2...	/usr/sbin/cr..	CROW	24201	Cron command of root with
Normal	-3-3-	1/19/00	10:05:56 ..	hpptc2...	MeasureWare (Performance	alarmgen		CPU Bottleneck probability

A 'Message Properties' dialog box is open, showing details for the selected message:

- Severity: Normal
- Message Text: CPU Bottleneck probability=90%
- Node: hpptc27.rose.hp.com
- Application: MeasureWare
- Message-Group: Performance
- Object: alarmgen
- Message Type: MeasureWare_exception_conditions
- Source: ITO-SE@GlancePak@hour_opcmg_SE from MeasureWare
- Annotations: 0
- Attributes:
- Time Created: 1/19/00 10:05:56 AM

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ITO - SE (Continued)

ITO-SE Limitations :

- Very limited history capabilities
- Flat-file event storage (as opposed to an Oracle database such as the one used by OVO)
- Subset of event management functionality of the "full-blown" OV Operations
- No OV Event Correlation
- No OV Advanced Security
- No User Roles/Responsibilities

The screenshot displays the HP OpenView IT Operations Special Edition interface. The main window shows a list of messages with columns for Severity, UJAON, Date, Time, Node, Application, MsgGrp, Object, and Message Text. A 'Message Properties' dialog box is open, showing details for a specific message.

Severity	UJAON	Date	Time	Node	Application	MsgGrp	Object	Message Text
Normal	----	1/11/00	8:47:03 AM	hpptc2...	FTP	Login	denisesu	FTP login from rosspi11.ro
Normal	----	1/11/00	9:48:03 AM	hpptc2...	FTP	HPUX	denisesu	denisesu logged off from F
Normal	----	1/11/00	3:27:14 PM	hpptc2...	FTP	Login	denisesu	FTP login from ross5042r
Normal	----	1/11/00	3:30:54 PM	hpptc2...	FTP	HPUX	denisesu	denisesu logged off from F
Critical	----	1/11/00	11:55:22 ..	hpptc2...	/usr/sbin/cr..	CROW	343	Cron command of root with
Critical	----	1/12/00	11:55:29 ..	hpptc2...	/usr/sbin/cr..	CROW	16339	Cron command of root with
Critical	----	1/15/00	11:55:30 ..	hpptc2...	/usr/sbin/cr..	CROW	4711	Cron command of root with
Critical	----	1/15/00	11:55:12 ..	hpptc2...	/usr/sbin/cr..	CROW	20618	Cron command of root with
Normal	----	1/18/00	1:18:25 PM	hpptc2...	FTP	Login	gittssu	FTP login from dhcp2601s
Normal	----	1/18/00	1:18:05 PM	hpptc2...	FTP	HPUX	gittssu	gittssu logged off from FTP
Critical	----	1/18/00	11:55:08 ..	hpptc2...	/usr/sbin/cr..	CROW	24201	Cron command of root with
Normal	-X-X-	1/19/00	10:05:56 ..	hpptc2...	MeasureWare (Performance	alarmgen		CPU Bottleneck probability

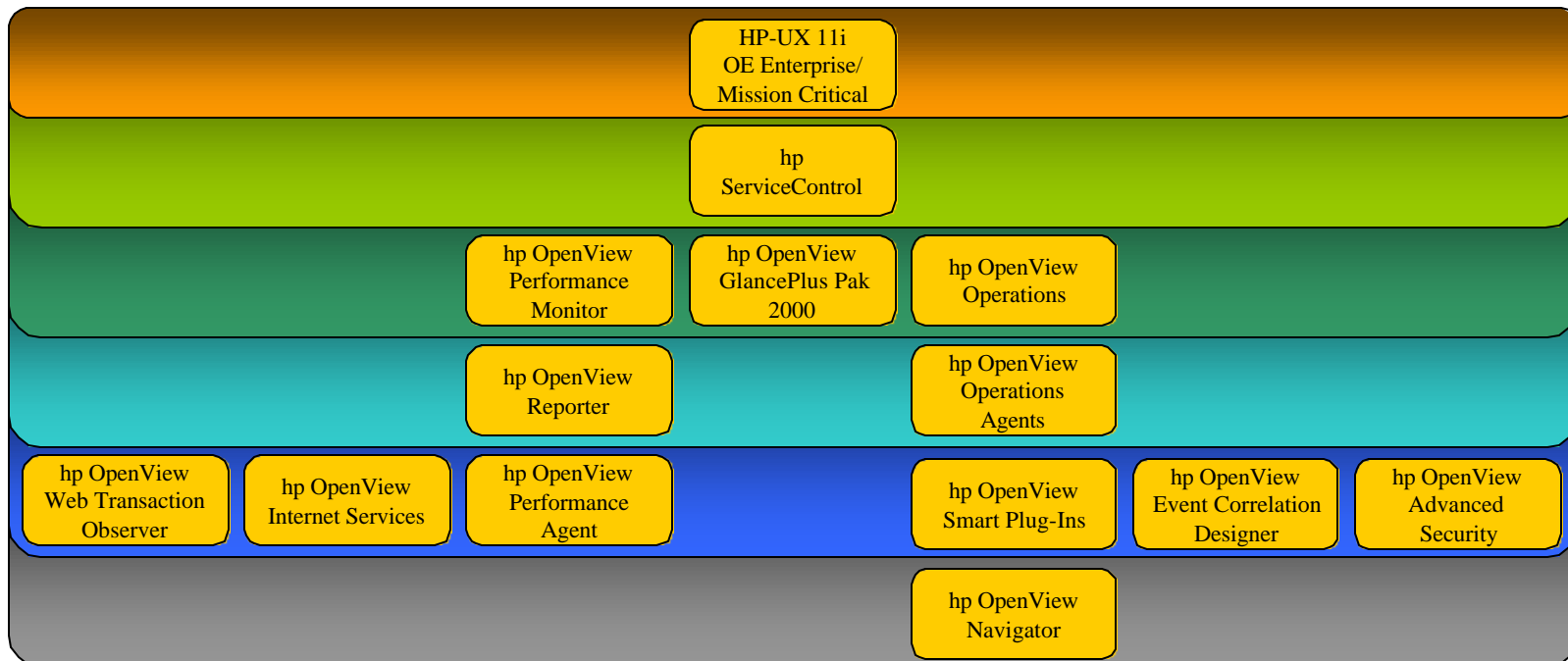
The 'Message Properties' dialog box shows the following details:

- Severity: Normal
- Message Text: CPU Bottleneck probability=90%
- General tab selected
- Message Text: CPU Bottleneck probability=90%
- Original Message: CPU Bottleneck probability=90%
- Actions: [Empty]
- Instructions: [Empty]
- Annotations: [Empty]
- Node: hpptc27.rose.hp.com
- Application: MeasureWare
- Message-Group: Performance
- Object: alarmgen
- Message Type: MeasureWare_exception_conditions
- Source: ITO-SE@GlancePak@hous_opcmq_SE from MeasureWare
- Annotations: 0
- Attributes: [Empty]
- Time Created: 1/19/00 10:05:56 AM

starting from GlancePlus Pak
2000 as part of HP-UX 11i
Enterprise/Mission Critical
Operating Environment ...

note the value-add points:

- OV Reporter will generate web-ready reporting for OVO as well as VPP (and more in coming releases).
- Internet Services/Web Transaction Observer provide components to manage with OVO, NNM, and the OV Navigator.
- Solutions that can function stand-alone: OV Operations, OV Internet Services, and OV Web Transaction Observer.



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- *Fast and Effective* – Look to hp OpenView and its commitment to fast ROI to provide customers with a quick deployment of the hp Operating Environment.
- *Available and Accountable* – Look to hp OpenView to deliver the metrics of success that deliver accountability as well as make the hp Operating Environment more manageable (and thus more available).
- *Easy and Tailored* – Look to hp OpenView to continue to deliver solutions that are building-block based and yet still integrate easily into a complete solution.

the hp environment is ...



i n v e n t

key takeaways ...

hp OpenView

hp OpenView is a strategic contributor in making sure the hp Operating Environment is and remains the most manageable in the industry.

ServiceControl

ServiceControl delivers manageability for the HP-UX 11i Operating Environment. Integration between ServiceControl and hp OpenView provides tremendous investment protection for hp customers.

HP-UX 11i
Operating
Environment

The HP-UX 11i Operating Environment was created with manageability through ServiceControl and hp OpenView as a strategic differentiator for the hp platform.

hp OpenView and
High Availability

hp OpenView plays a significant role at every level of hp's High Availability Continuum with involvement ranging from management of individual HA products to custom 5nines:5minutes technology.

hp OpenView and
SuperDome

hp OpenView is part of the HP-UX 11i Mission Critical Operating Environment offered on the initial release of SuperDome.

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For More Information



SuperDome Computing Platform
<http://www.hp.com/go/superdome>

SERVICECONTROL

ServiceControl Manager
<http://www.hp.com/go/servicecontrol>



HP OPENVIEW

hp OpenView
<http://www.hp.com/go/openview>

HP-UX 11
micro-UX networks

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