



Hewlett Packard
Enterprise

HPE NONSTOP MANAGEABILITY PORTFOLIO

GTUG Herbsttagung – AK System-Management

19. November 2019

FORWARD-LOOKING STATEMENTS

This is a rolling (up to three year) Roadmap and is subject to change without notice.

This document contains forward looking statements regarding future operations, product development, product capabilities and availability dates. This information is subject to substantial uncertainties and is subject to change at any time without prior notification. Statements contained in this document concerning these matters only reflect Hewlett Packard Enterprise's predictions and / or expectations as of the date of this document and actual results and future plans of Hewlett Packard Enterprise may differ significantly as a result of, among other things, changes in product strategy resulting from technological, internal corporate, market and other changes. This is not a commitment to deliver any material, code or functionality and should not be relied upon in making purchasing decisions.



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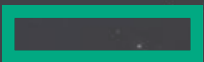
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EFFICIENT MANAGEMENT OF NONSTOP SYSTEMS



- **Make it easy to manage**
- **Minimize training**
- **Integrate into enterprise management frameworks**
- **Support new platform and capabilities**



NONSTOP MANAGEABILITY PRODUCT PORTFOLIO

Serviceability

Products that enable the servicing of NonStop systems

HPE Insight RS
HPE Integrated Lights Out (iLO)
NonStop System Console (NSC)
Onboard Administrator (OA)
OSM Suite of Tools

Enhanced Management

Products that don't require detailed knowledge of NonStop syntax to use

ATM Transaction Analyzer
NonStop Cluster Essentials
NonStop I/O Essentials
NonStop Software Essentials
OVNM (Ops. for NonStop)
Tivoli Adapter plug in
POS Transaction Analyzer
Web ViewPoint Enterprise

Expert Management

Products for experienced NonStop IT organizations

ASAP (Availability, Statistics and Performance)
EFO (Enform Optimizer)
EMS Analyzer
RPM (Real-Time Proc. Monitor)
TCM (Capacity Manager)
TRA (Reload Analyzer)

Performance Analysis

Products to manage system and application performance

Measure
OVNPM (Perf. Agent for NonStop)
Perf. Mgmt. Host Bundle
Perf. Mgmt. Client Bundle
RA (Remote Analyst)

HPE NONSTOP MANAGEABILITY PRODUCT ENHANCEMENTS

FY2019 – Released this year

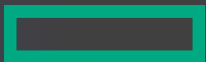
- Measure
 - Add Measure busy counter for checkpoint operations
 - Add 64-bit SQL counter space and support for async communication between SQL applications and MEASCTL
 - Support MEASFH single read buffer
- OSM
 - Upgrade to Java 11
 - Dial-out information for the system recovery
 - Support for single phase UPS
- OVNMM
 - HIC enhancement Java 64bit.
- Web ViewPoint Enterprise
 - Expanded user authorization & control features
 - Active CLIM sockets & openers displayed on the screen
 - Ability to send alert notifications to 3rd party tools via JSON & SYSLOG options
 - Alert monitoring list expanded from 48 to 60
 - Immediate access to 1-hour history
 - Support for Pathway monitoring
 - Ability to create OSS files and folders

HPE NONSTOP MANAGEABILITY PRODUCT PLANS

Future

- EMSA
 - Option to display timestamps in GMT
- NSC
 - Upgrade to Cascade Lake
 - Upgrade to Windows Servers 2019
 - Security hardening
- OVNM
 - Support for directing SNMP v3 traps from NonStop
 - Event Console Desktop Client replacement
 - Role based access control
 - Support for NonStop pass-through authentication
- OVNPM
 - Support for a web-based display agent
 - Continuous/dynamic instance discovery
 - Support for SQL/Regex based instance discovery query
- RPM
 - Support for mode options
 - Color-Internationalize customization options
- TCM
 - Support for new hardware components
- Web ViewPoint Enterprise
 - Display metrics from any device, platform, or application!
 - Write your own metrics collectors & choose to display
 - Export any metric to Remote Analyst
 - Export Alerts & messages to any of over 50 open platform such as ServiceNow, Kibana, Tableau,...

SERVICEABILITY



NONSTOP SYSTEM CONSOLE (NSC)



Converged NonStop systems

- Based on HPE ProLiant Gen10 technology
- Runs Windows Server 2016 OS and a suite NSC specific software
- Available in both a rackmount and desktide configurations
- Two NSCs are required per maintenance LAN
- A pair of NSCs can manage up to 8 converged NonStop X and/or NonStop i systems on the same maintenance LAN

Virtualized NonStop systems

- Runs on Windows Server 2016
- One vNSC* is required per maintenance LAN
- A single vNSC can manage up to 8 Virtualized NonStop systems

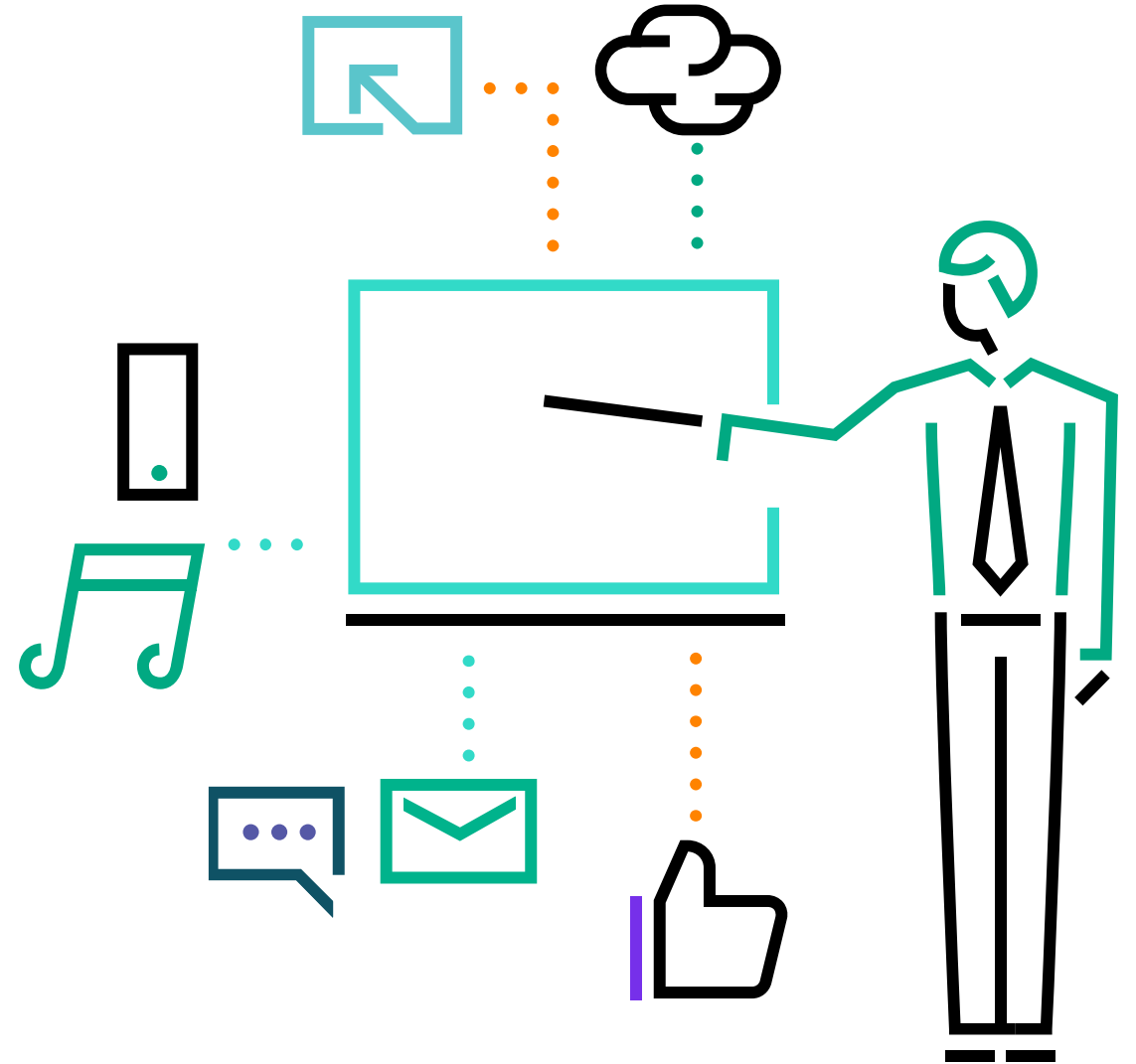
**vNSC is a Virtualized NonStop System Console*

WHAT CAN BE INSTALLED ON THE NSC?

The following software can be installed on NSCs

- Products that come with the NSC installer DVD
 - Latest version is update 35
- Insight Remote Support (Insight RS)
- Software required to install firmware
- Security products (Anti-Virus, firewall, or other products IT departments require for security)
- Security patches

No other non-HPE-supplied software may be loaded

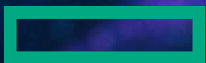


NONSTOP OPEN SYSTEM MANAGEMENT (OSM)

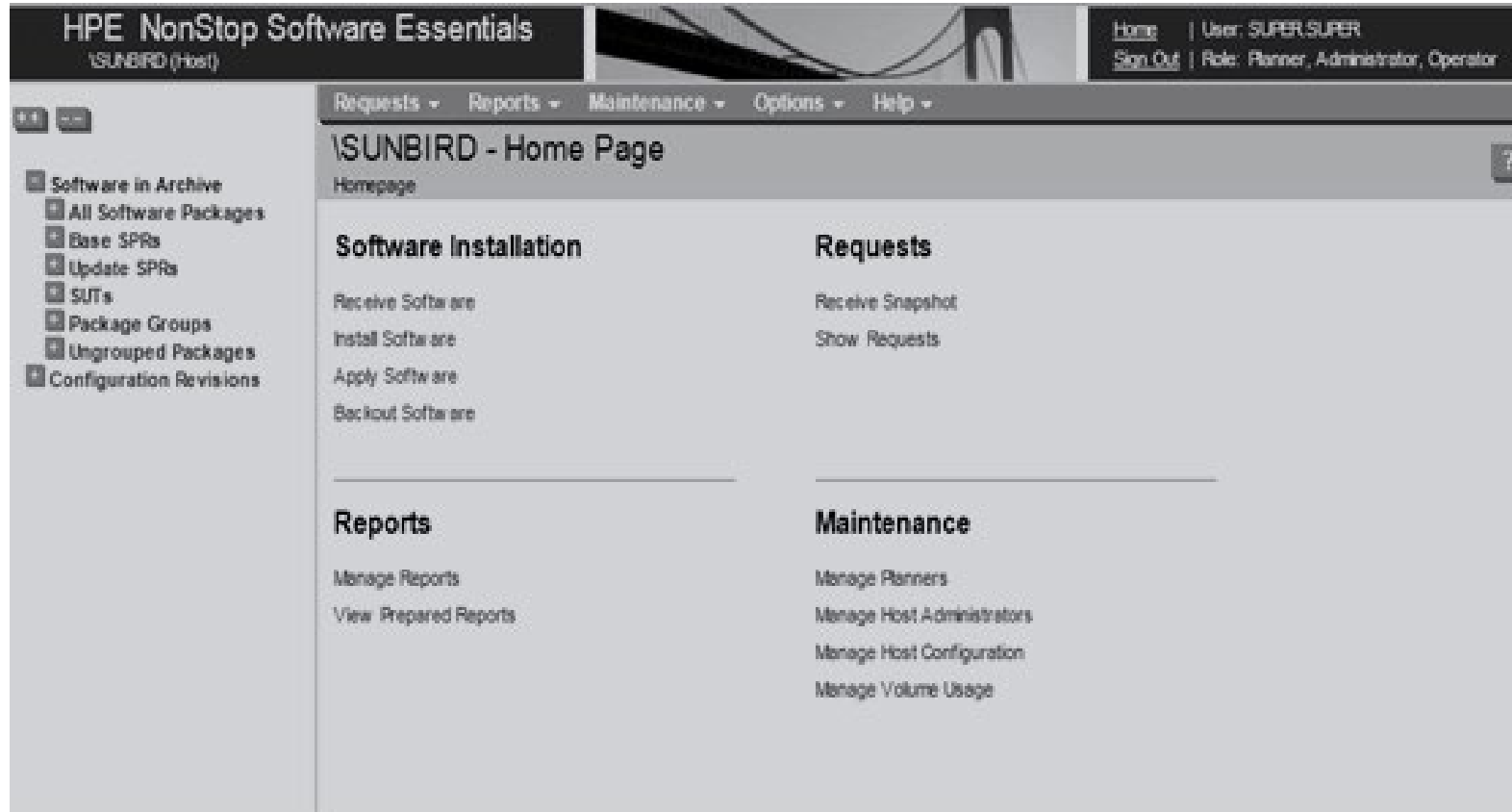


- Real-time system health monitoring application for NonStop systems
- Single pane-of-glass for monitoring and managing hardware on NonStop systems
- Application to perform troubleshooting and diagnosis when there are hardware problems
- Management application to perform service procedures
- Application to look at EMS events in real-time or for troubleshooting a past problem
- Automated alerts for hardware problems and processor halts, reported to customer and HPE support center
- Application for loading a NonStop system, and for installing firmware as required by OS upgrade

ENHANCED MANAGEMENT



NONSTOP SOFTWARE ESSENTIALS



- Replacement of DSM/SCM Planner Interface with better and easier user interfaces
- Supported on NonStop X and NonStop i systems
- Support of HPE, third party, and customer software
- Can be shown to the auditors as proof of no unintended software installation
- All data in transit between invoking NSC and NonStop systems encrypted
- NonStop server component included on the NonStop OS RVU and
- Windows client component included on the companion DVD to the NonStop System Console Installer

OPERATIONS AGENT FOR NONSTOP (OVNM)

The screenshot displays the OVNM Console and ObjectMAP interface. The top window, 'OVNM Console - [\DOTCOM(5.0)]', shows a list of events with columns for Severity, Receive Time, Event Text, Event Number, Process, and Gene. The bottom window, 'ObjectMAP Default.omp [Group View] - ObjectMAP', shows a hierarchical tree structure of managed objects.

OVNM Console - [\DOTCOM(5.0)]

Severity	Receive Time	Event Text	Event Number	Process	Gene
Normal	24 MAY 2008, 18:07:17	\$V3EMN: PROCESS IS ALIVE, APPLICATION = EMON , SYSTEM \DOTCOM	16	\DOTCOM. \$V3EMN	24 18:
Major	24 MAY 2008, 18:04:06	OVNM: Process \DOTCOM(. \$ATMA, Escalation If : Down, Current : Down, Current State = Major, P...	3762	\DOTCOM. \$O1M03	24 18:
Normal	24 MAY 2008, 18:03:17	\$V3EMN: PROCESS IS ALIVE, APPLICATION = EMON , SYSTEM \DOTCOM	16	\DOTCOM. \$V3EMN	24 18:

ObjectMAP Default.omp [Group View] - ObjectMAP

ALL OBJECTS

- Application 1
- CPU
- DISK
- EMS
- EXPAND
- FILESYS
- MQ SERIES
- PATHWAY
- PLUGPLAY
- PROCESS
- SPOOLER
- SST APP
- TAPE
- TCPIP
- TMF

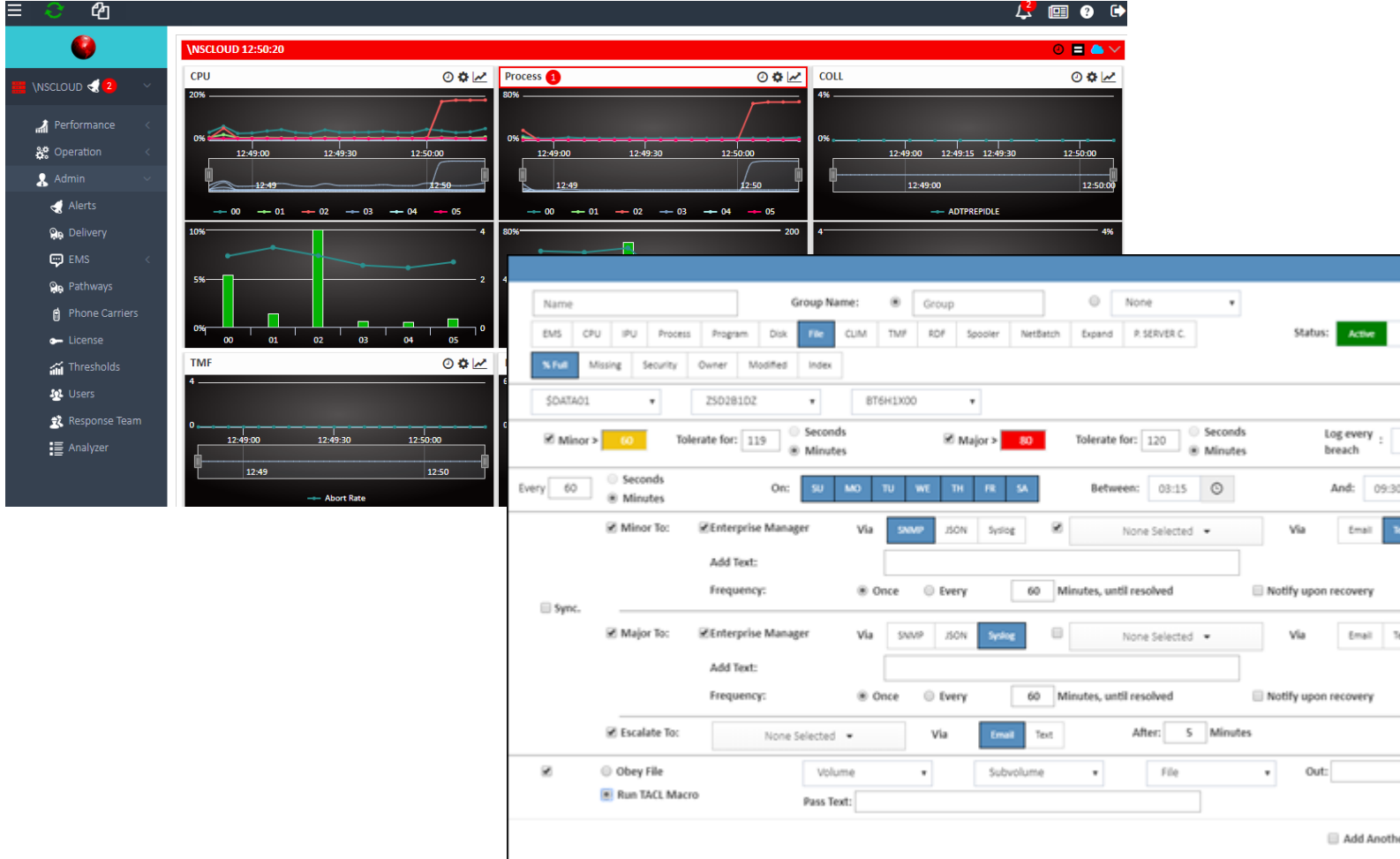
SST APP

- POS - ISSUER
 - \DOTCOM(5.0)
 - FILE
 - FILE NOT EXISTS
 - \$DATA02.OVNM501.PTLFDB
- POS-BIN
 - \DOTCOM(5.0)
 - PROCESS
 - PROCESS IS DOWN
 - \$POSB
- POS-NODE
 - \DOTCOM(5.0)
 - PROCESS
 - PROCESS IS DOWN
 - \$POSN
- ATM-ATM
 - \DOTCOM(5.0)
 - PROCESS
 - PROCESS IS DOWN
 - \$ATMA

Object monitoring and event processing:

- Automatic discovery of NonStop objects
- Detection of infrastructure and application problems
- Customized threshold settings
- E-mail notifications, automated recovery actions and event forwarding
- User-defined service maps of managed objects
- Support of Base24, Telco (HLR, INS) and MQ-Series
- Support of homogenous NonStop environments as well as cross-platform enterprise environments
- Integration with MicroFocus OMi, BMC Perf. Manager (Patrol), and IBM Tivoli

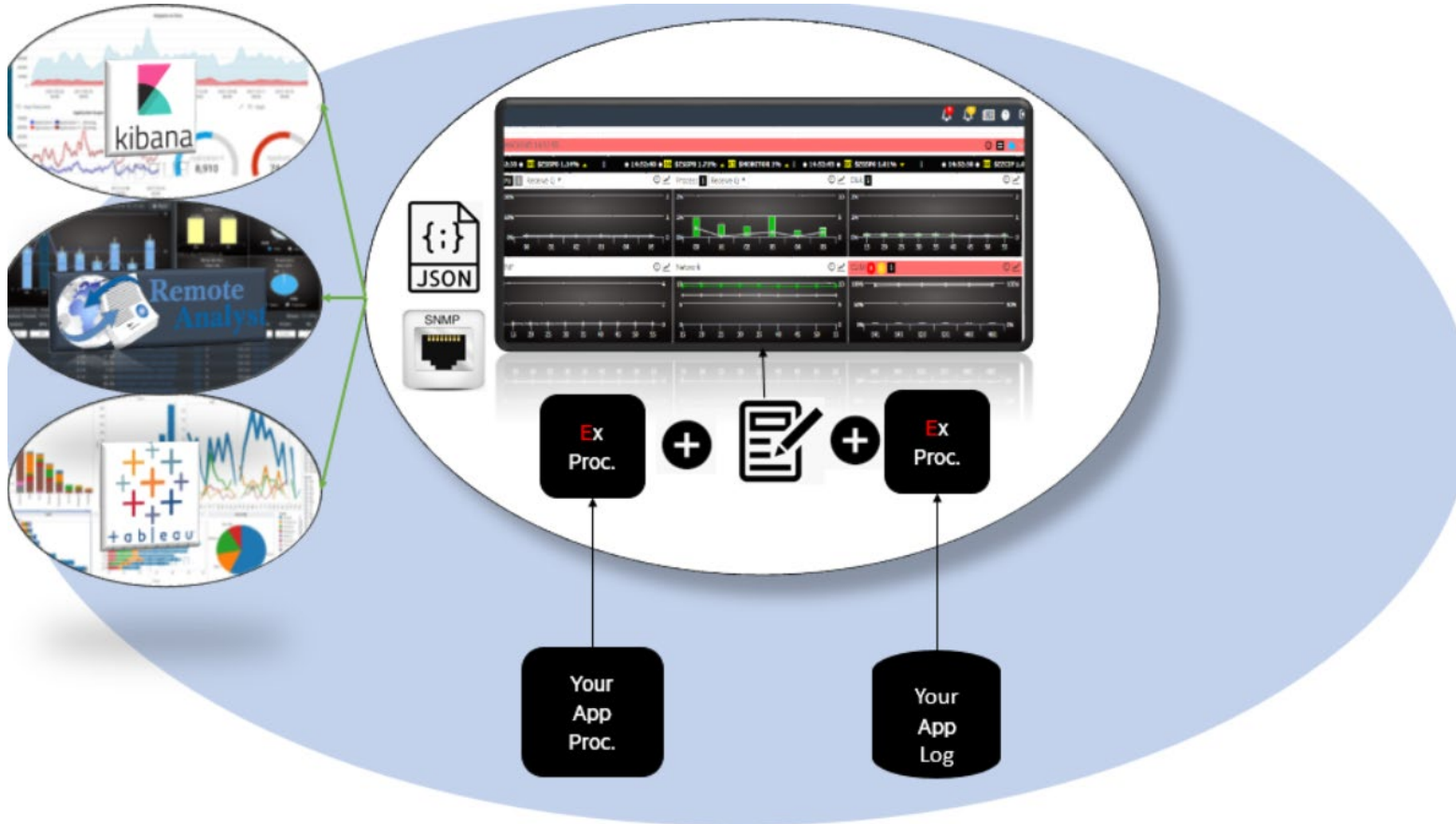
WEB VIEWPOINT ENTERPRISE



- Redesigned & flexible Dash
- Live & Trend
- One click to details
- Added new CLIM metrics
- Direct link to Remote Analyst
- Controlled access
- Users select own “view”
- Access for automated operation

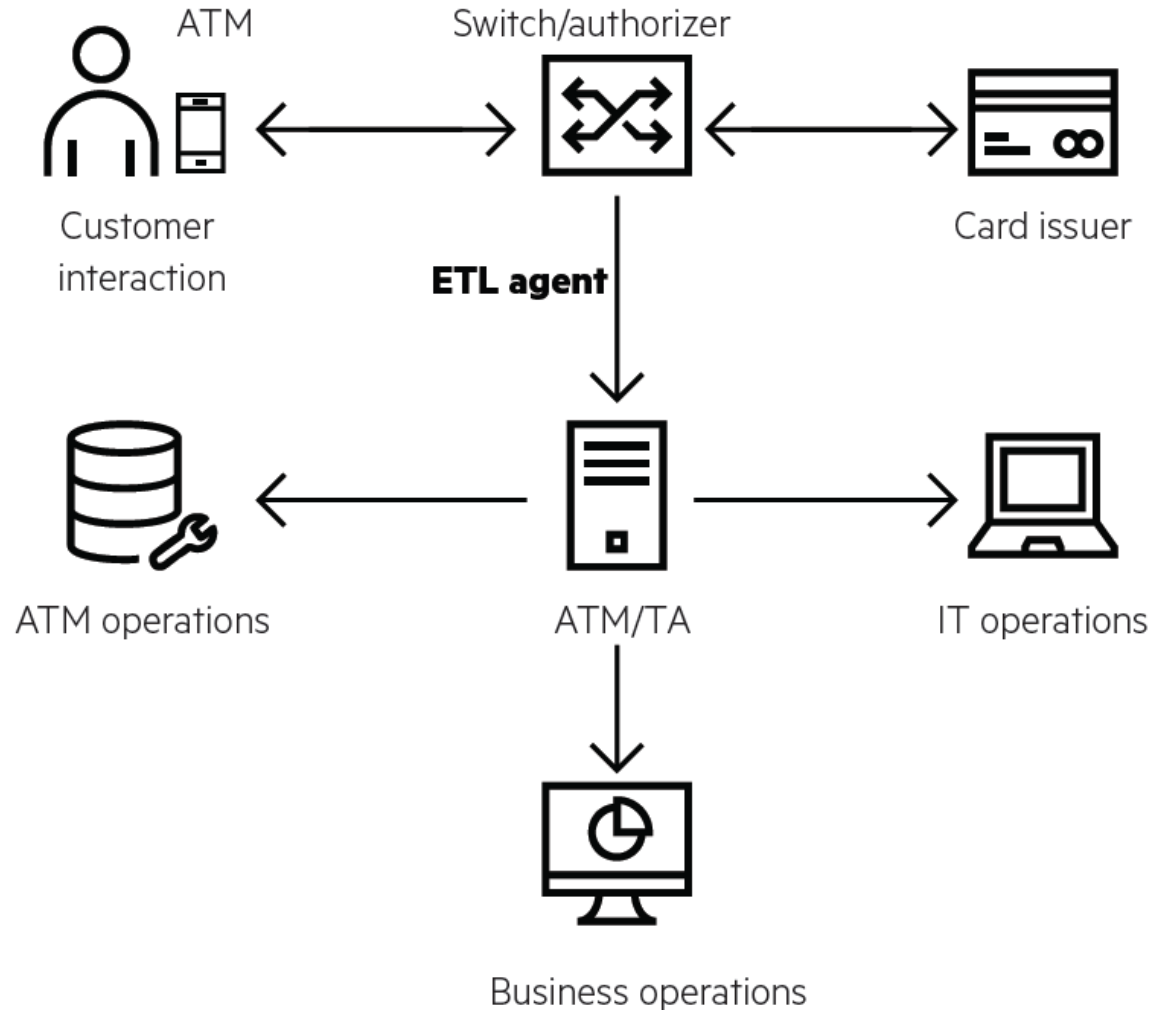
WEB VIEWPOINT ENTERPRISE - XVIEW

- ✓ Open Architecture
- ✓ Open Source
- ✓ Bidirectional
- ✓ Off platform Analytics



- Display metrics from any App on NonStop, or off platform (e.g. Linux , Windows)
- Write your own collectors or pick one up from Git
- Export any metric to Remote Analyst, Kibana, Tableau, etc.
- One-Click access from live to full analytics off platform
- Set Alerts on any metric, with automated notification & recovery
- Forward Alerts to other open platforms like ServiceNow, Splunk, SolarWinds, Moog, etc.

ATM/POS TRANSACTION ANALYZERS



- Real time Operation Analytics of Transactions
- Multiple Financial Channels – ATM, POS, Internet, Mobile
- Support for multiple Financial Switches (BASE24 – Classic & EPS, Connex, Postilion, etc.)
- Monitoring and proactive analysis business transactions
- Data Visualization and Reporting
- PCI compliant and certified

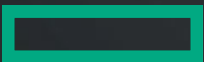
DATAEDGE: NEXT GEN ANALYTICS PRODUCT BUILT ON CLOUD NATIVE TECHNOLOGIES

Highlights

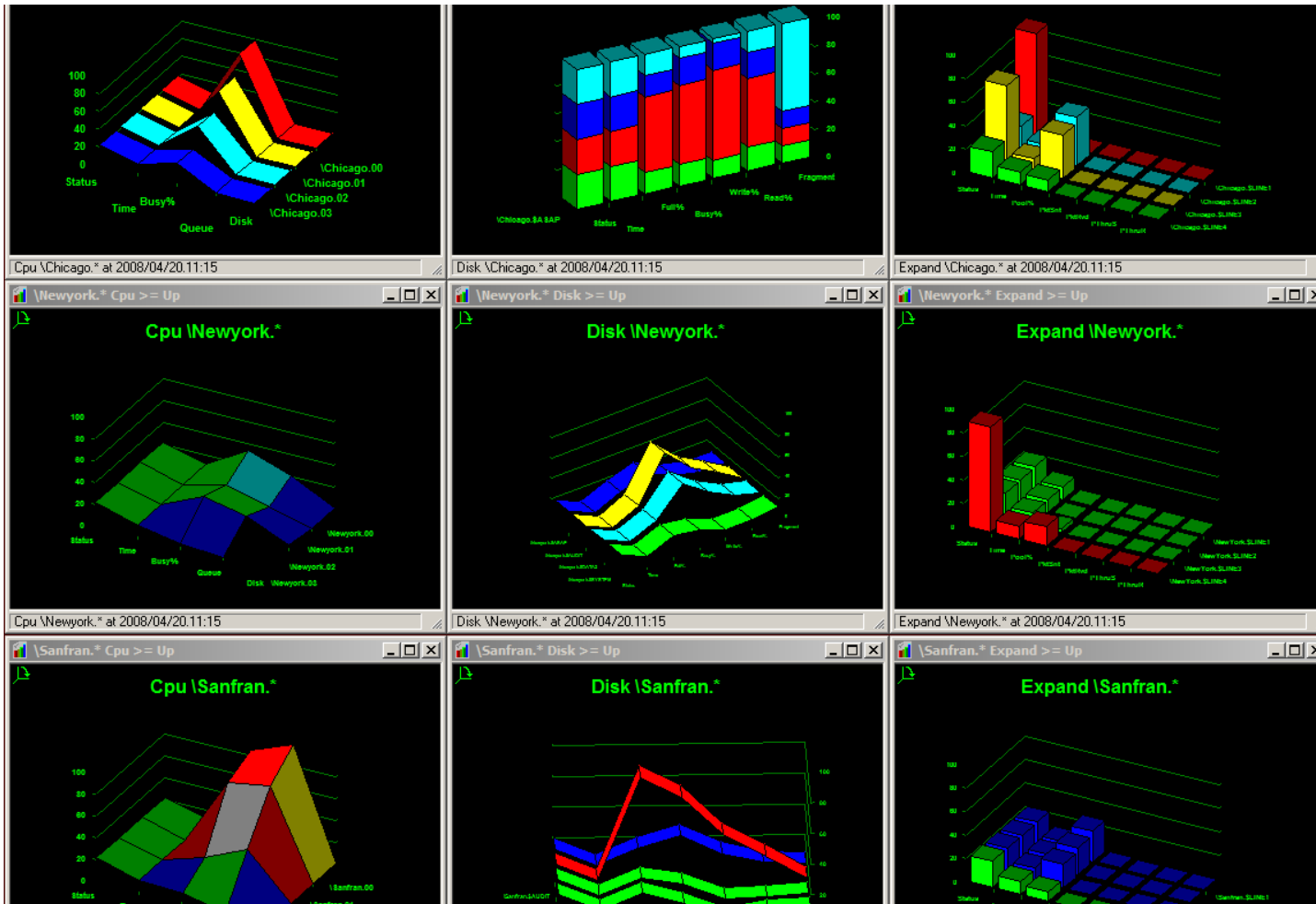
- Self Learning – AI powered engine to learn from real time data streams and automate detection/alerting on anomalies based on reference or normal behavior
- Platform Independence (built entirely in Java, can run on any platform and any ANSI-SQL compliant database)
- Support for Kafka Data Pipeline for Production, Consumption and storage
- Support for statistics calculations at massive volumes, high velocity and variety. System scales horizontally as per needs
- Support for ingestion of disparate data streams
- Real Time Complex Event Processing at massive volumes
- Responsive User Interface with focus on mobility and different UI form factors
- In built ElasticSearch based NoSQL store and Search Engine
- Plugins for BigData stores like Hadoop, IBM Watson, Google BigQuery, Amazon RedShift, etc.



EXPERT MANAGEMENT



ASAP (AVAILABILITY, STATISTICS, AND PERFORMANCE)



Monitoring of thousands of objects in real-time including

- System objects (CPUs, memory, disks, files, and processes)
- Subsystem objects (TMF, RDF, tape...)
- Network objects (TCP/IP, subnets, routes, ports, communication lines, Expand lines, X.25, services, and terminals)
- Applications (virtually any type of abstract application domain)

Wide range of visual and programmatic interfaces

- EMS, Conversational interface, Fat and thin client interfaces, Provider/Consumer APIs
- E-mail and phone notifications with color-coded HTML reports
- Customizable GUIs with user-defined Dashboards

Goals-and-actions to repair or restart system and application components

RPM (REAL-TIME PROCESS MONITOR)

Process	Cpu,Pin	Busy%	Name	RPM T0877(01MAR10) ET= 5.0	Top	Pri	User
\SANFRAN	0,177	71.17	\$Y567	\$DATA.DATABASE.DRIVER	1	200	255,255
11:30:20	0,1021	14.24	\$Y568	\$DATA.DATABASE.QUERY	2	201	255,255
	0,256	5.12	\$T569	\$DATA.DATABASE.LISTREC	3	205	255,255
	0,257	.10	\$TST1	\$DATA.DATABASE.QUERY	4	220	255,255
	0,15	.08	\$NCP	\$SYSTEM.SYS03.NCPOBJ	5	199	255,255
\SANFRAN	1,182	11.32	\$Z121	\$DATA1.ANALYSIS.TOOL	1	168	255,255
11:30:20	1,47	5.31	\$Y3AL	\$DATA1.ANALYSIS.QUERY	2	168	66,1
	1,14	.23	\$NCP	\$SYSTEM.SYS03.NCPOBJ	3	199	255,255
	1,0	.16	\$MON	\$SYSTEM.SYS03.OSIMAGE	4	201	255,255
	1,87	.13	\$ZOOS	\$SYSTEM.SYSTEM.RPM	5	160	255,255
\SANFRAN	2,271	1.08	\$HIT	\$SYSTEM.SYS03.TSYSDP2	1	220	255,255
11:30:20	2,178	.31	\$Z147	\$SYSTEM.SYSTEM.TEDIT	2	160	255,255
	2,0	.04	\$MON	\$SYSTEM.SYS03.OSIMAGE	3	201	255,255
	2,303	.02	\$TT54	\$SYSTEM.SAPP.DRV	4	80	255,255
	2,275	.01	\$TT62	\$SYSTEM.SAPP.DRV	5	80	255,255
\SANFRAN	3,324	3.37	\$QAZ08	\$DATA1.DATABASE.QADRV1T	1	168	255,34
11:30:20	3,263	.28	\$HIT	\$SYSTEM.SYS03.TSYSDP2	2	220	255,255
	3,323	.18	\$QAZ07	\$ASAP.ASAPXQA.QADRV1T	3	168	255,34
	3,322	.12	\$QAZ06	\$ASAP.ASAPXQA.QADRV1T	4	168	255,34
	3,0	.08	\$MON	\$SYSTEM.SYS03.OSIMAGE	5	201	255,255

- Ultra fast, real-time, discovery and display of busiest CPUs, IPU's, processes across multiple nodes
- Fast easy setup and very simple to use
- Ultra-fast startup and display in under 1 second
- Support of many device types, including TTY, VT100, ANSI, T6530, disk and process
- User-defined thresholds to provide color-encoded displays



TCM (THE CAPACITY MANAGER)

TCM H02

Planning Timeline

Sample Date: 23Aug01		First Plan Scenario from Consumption Model?	
Time Increment: 6 Months		<input checked="" type="radio"/> Yes <input type="radio"/> No	
Default Growth Rate: 5%			
Planning Dates:	Actual Data	Plan Data	Future Data Scenarios:
	23Aug01	Feb02	Aug02 Feb03 Aug03 Feb04 Aug04 Feb05
# CPUs:	2	1	1 1 1 1 1 1
CPU Type:	NSR-W	NSE-AB(4-CORE)	NSE-AB(4-CORE) NSE-AB(4-CORE) NSE-AB(4-CORE) NSE-AB(4-CORE) NSE-AB(4-CORE)
SW Release:	G06	J06	J06 J06 J06 J06 J06 J06
Avg On-line CPU Util:	54.35%	1.44%	1.51% 1.58% 1.66% 1.74% 1.82% 1.91%
# Disks:	2	1	1 1 1 1 1 1
Disk Model:	4160	DH072BB978	DH072BB978 DH072BB978 DH072BB978 DH072BB978 DH072BB978 DH072BB978
Disk partitions:	1	NA	NA NA NA NA NA NA
Config:	Aud	Aud	Aud Aud Aud Aud Aud Aud
TMF_Audit_Trails:	1	1	2 2 2 2 2 2
Disk Write Cache:	ENABLED	Disabled	Disabled Disabled Disabled Disabled Disabled Disabled
Avg On-line Disk Util:	0.25%	9.73%	10.27% 10.84% 11.44% 12.09% 12.77% 13.50%
Total On-line TPS:	1.978	1.978	2.077 2.181 2.290 2.405 2.525 2.651
Avg On-line Resp Time:	1.710	0.097	0.098 0.099 0.100 0.101 0.102 0.103
Avg Batch Resp Time:	0h8m15s	0h0m34s	0h0m36s 0h0m39s 0h0m41s 0h0m44s 0h0m47s 0h0m50s

Txn Name	Rate	Date:	23Aug01	Feb02	Aug02	Feb03	Aug03	Feb04	Aug04	Feb05
Withdrawal	5 %	TPS	1.385	1.385	1.454	1.527	1.603	1.683	1.768	1.856
		Avg R/T	1.736	0.094	0.095	0.095	0.095	0.096	0.096	0.097
Deposit	5 %	TPS	0.593	0.593	0.623	0.654	0.687	0.721	0.757	0.795
		Avg R/T	1.649	0.103	0.105	0.107	0.109	0.112	0.114	0.117
CustUpdt	5 %	# Txns	3000	3000	3150	3308	3473	3647	3829	4020
		Avg R/T	0h8m15s	0h0m34s	0h0m36s	0h0m39s	0h0m41s	0h0m44s	0h0m47s	0h0m50s

TCM H02

Consumption Model

Sample File:	TCM SWVA	CPUs:	Number	2	Constraint	Plan
Sample Date:	23Aug01	Processor Type	NSR-W		NSE-AB(4-CORE)	NSE-AB(4-CORE)
		SW Release	G06		J06	J06
		Avg On-line Util	54.35%			1.44%
		Disks:	Number	2		1
		Disk Model	4160		DH072BB978	DH072BB978
		Config	Aud			Aud
		TMF Audit Trails	1		1	1
		Disk Write Cache	ENABLED		Disabled	Disabled
		Avg On-line Util	0.25%			9.33%
		Disk Partitions	1		NA	NA
		Avg On-line Resp Time:	1.710			0.090
		Avg Batch Resp Time:	0h8m			0h0m

Txn Name	Txns Per Sec			Txns per Task		CPU Seconds		Disk Seconds		Avg Resp Time
	Actual	Plan	Max	Actual	Plan	Actual	Plan	Actual	Plan	
Avg On-line	1.978	1.978	144	1	1	0.523	0.007	0.535	0.006	1.710
Avg Batch	6.065	83.204		3000	3000	0.058	0.001	0.017	0.003	0h0m15s
Fixed	-----	per sec	-----			0.052	0.001	0.028	0.005	
Withdrawal	1.385	1.385	101	1	1	0.519	0.007	0.467	0.074	1.736
Deposit	0.593	0.593	43.192	1	1	0.534	0.007	0.692	0.114	1.649
CustUpdt	6.065	83.204		3000	3000	0.058	0.001	0.017	0.003	0h0m15s

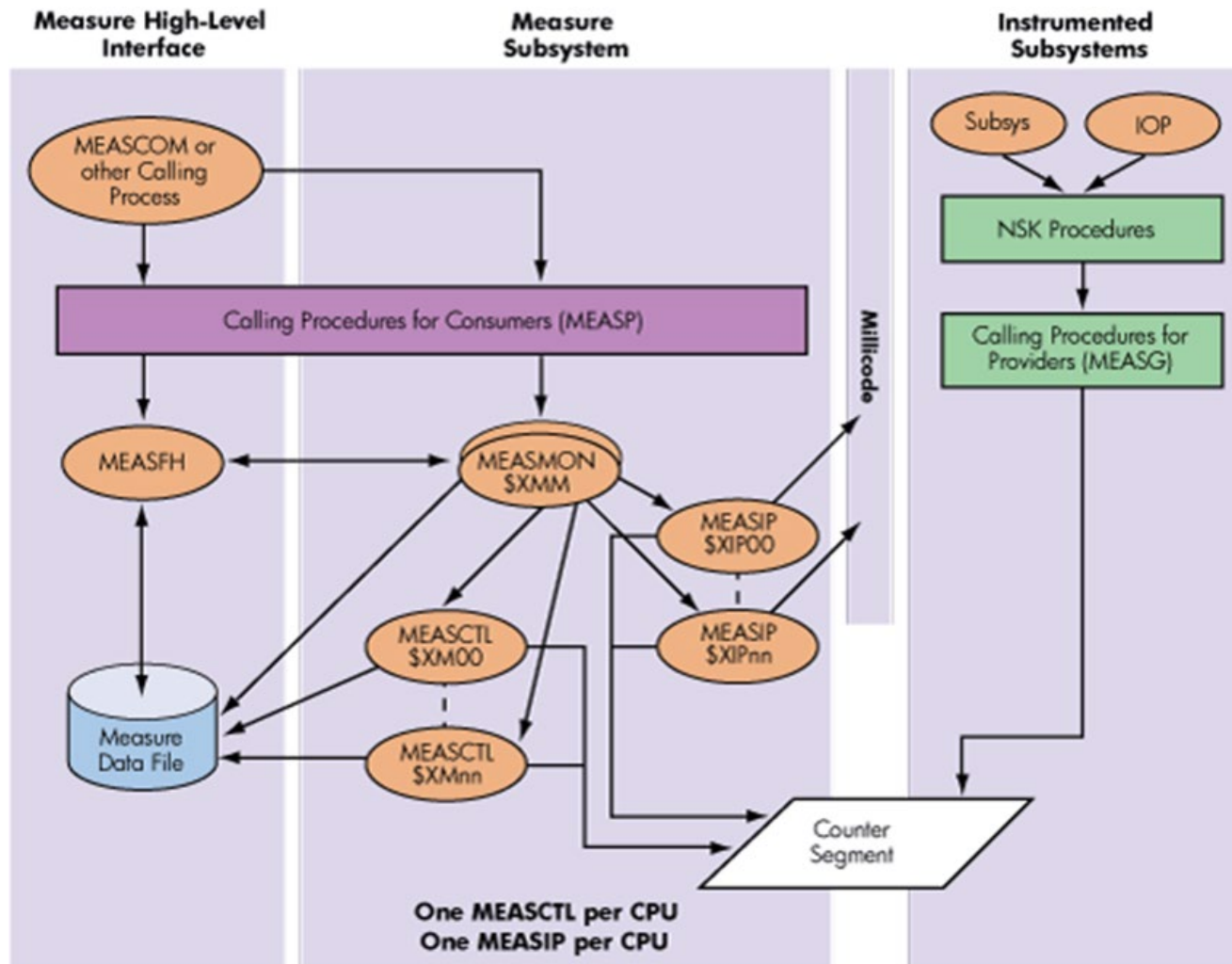
- A modeling tool which utilizes Measure data for "what-if" analysis
- Allows the user to estimate response times and predict hardware required to meet various user defined scenarios
- Made up of two components:
 - The host component collects Measure data from a network of nodes and aggregates it into a file which is downloaded to a workstation
 - Workstation component does the workload apportionment and performance modeling



PERFORMANCE ANALYSIS

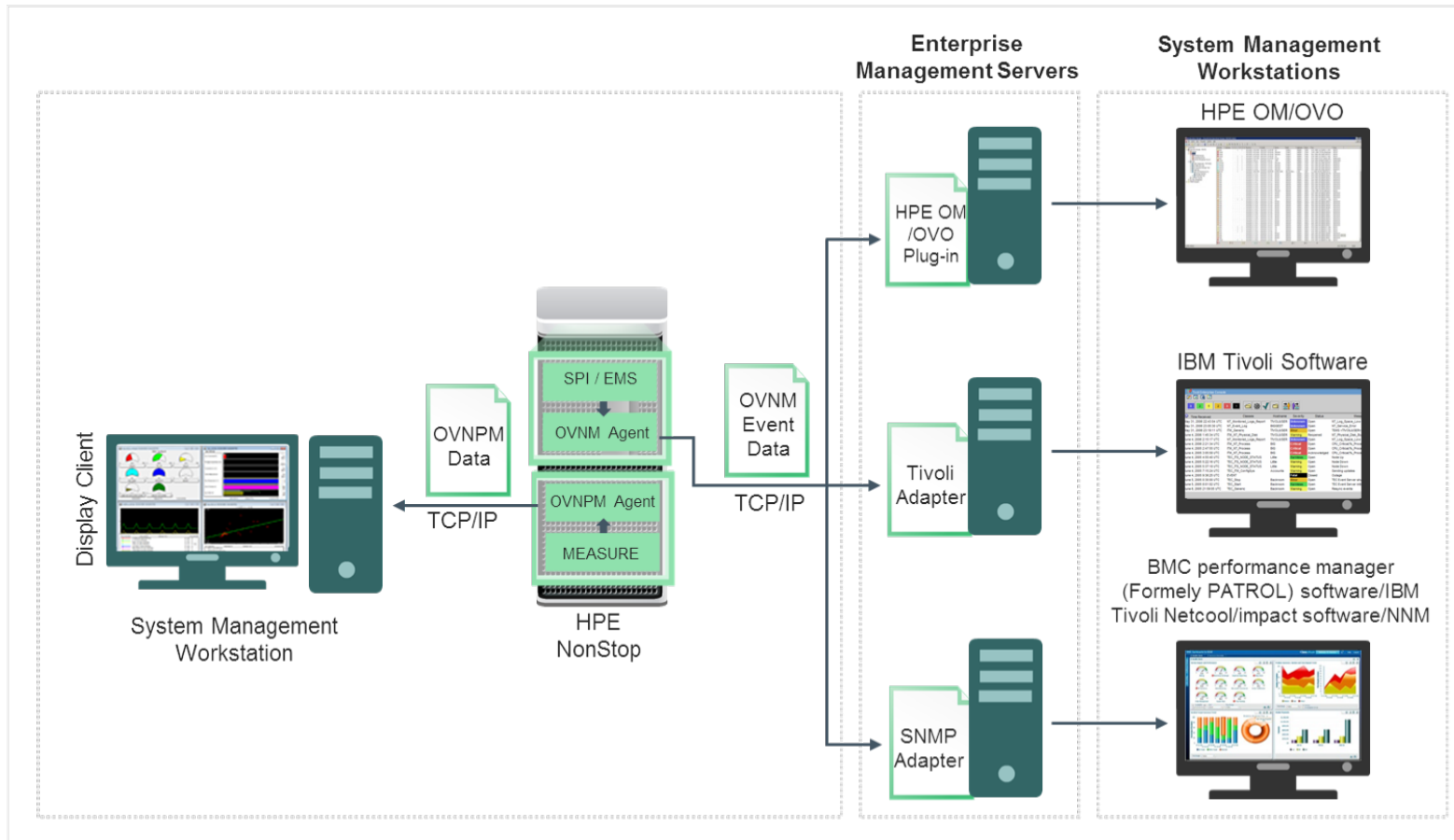


MEASURE



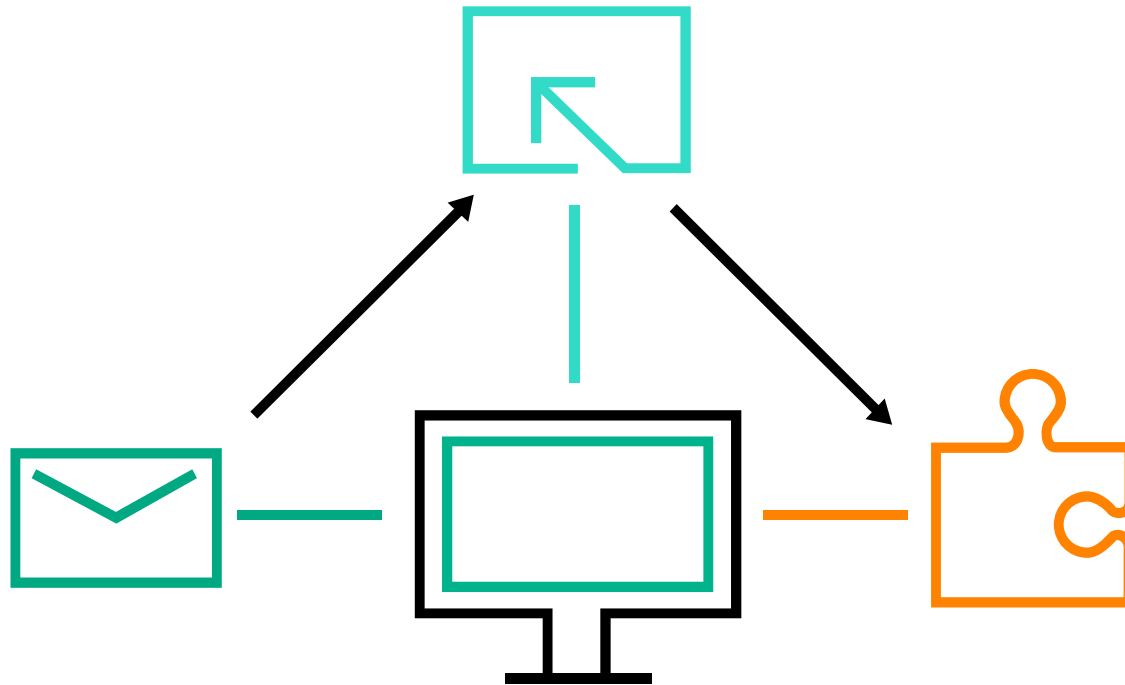
- Collects performance statistics about system resources
- Lets you gather data from system components, network components, and your own business applications
- You can use the data to balance and tune your system, detect bottlenecks, balance workloads, and do capacity planning
- Provides command line and programmatic interfaces
- Multiple users can run Measure sessions at the same time, and each user can configure and take measurements independently

PERFORMANCE AGENT FOR NONSTOP (OVNPM)



- Real-time performance monitoring of systems, applications, and services
- Visual graphs and drill downs
- Performance alerts
- Historical trend analysis and capacity planning
- Web-based and Windows-based data analysis
- Support of Base24, Telco (HLR, INS) and MQSeries

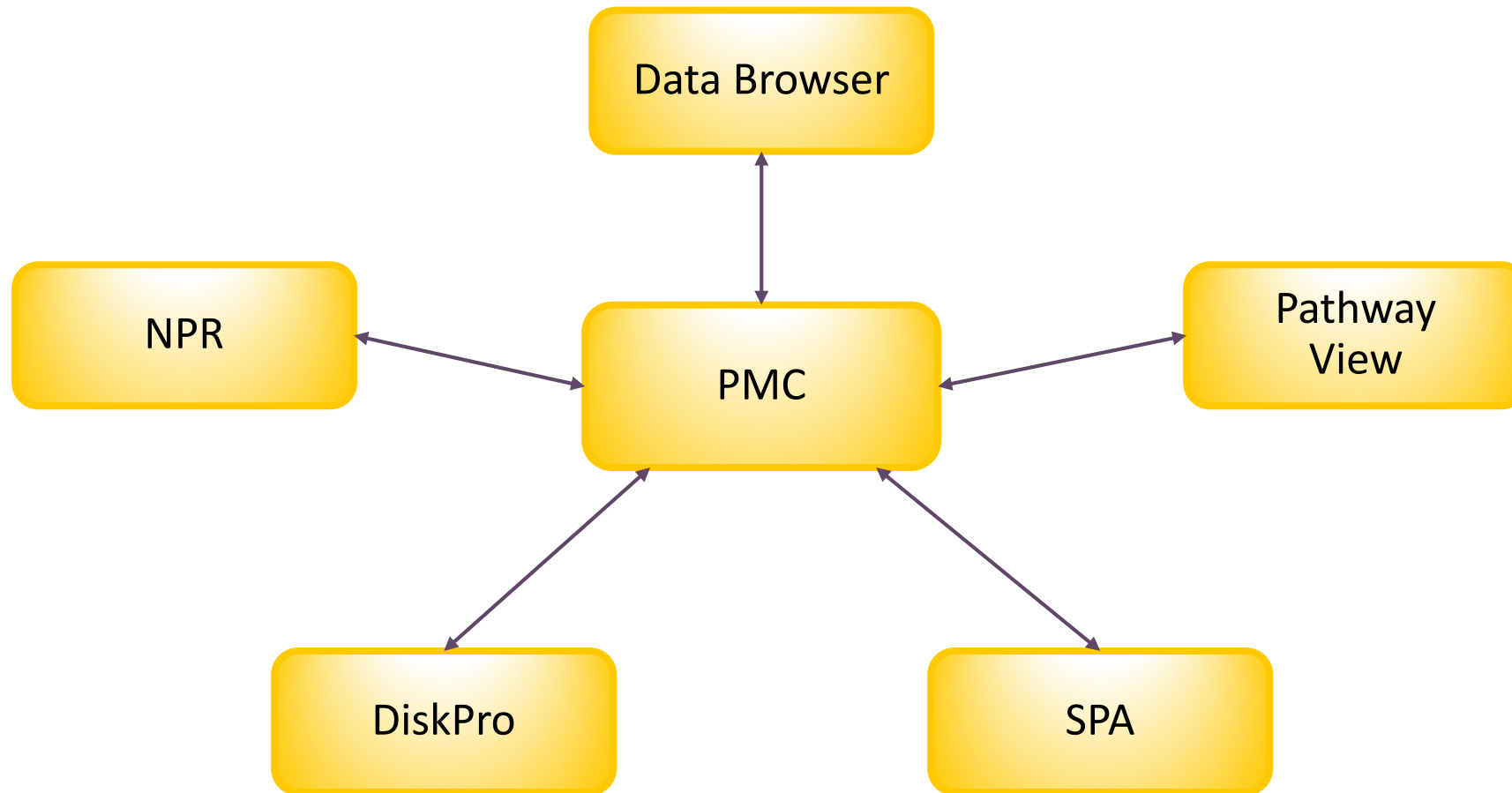
PERFORMANCE MANAGEMENT HOST BUNDLE



- Measure, performance statistics collector
- GPA (Guardian Performance Analyzer), a server-tuning tool
- TPDC (Performance Data Collector), powerful software for collecting and storing performance data
- ViewSys, a real-time system resource monitoring tool



PERFORMANCE MANAGEMENT CLIENT BUNDLE



PERFORMANCE MANAGEMENT CLIENT BUNDLE

Performance Management Console (PMC)

- Collects and manages NonStop server performance metrics
- Provides an easy-to-use graphical interface
- Once the data is loaded, you can use one or more client applications such as Data Browser, DiskPro, NPR, SPA or Pathway View to analyze the collected data



PERFORMANCE MANAGEMENT CLIENT BUNDLE

Data Browser

- Provides a graphical interface which ties all related system entities and metrics
- Gives the detailed analysis of the CPU BUSY for each of the CPU's
- Users can just click through metrics for any of the supported entities
- Shortens analysis time by helping to browse and query Measure data



PERFORMANCE MANAGEMENT CLIENT BUNDLE

Disk Prospector (DiskPro)

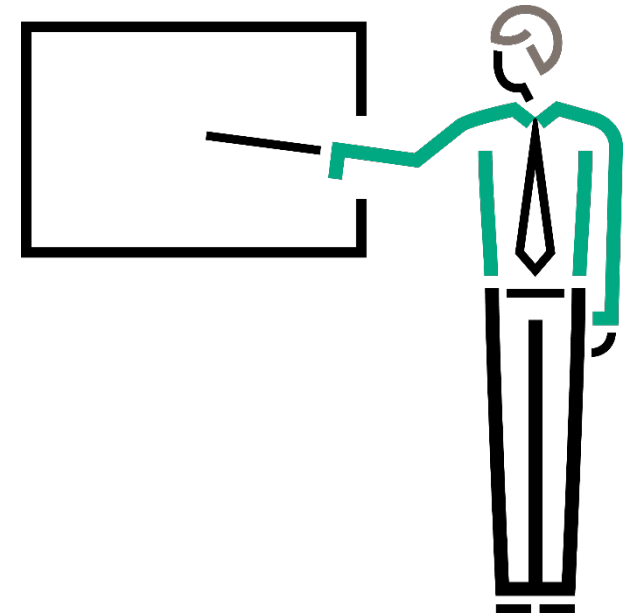
- DiskPro automates the time-consuming task of analyzing disk and file usage by working with the other performance bundle components
- Improves productivity and reduces the cost of ownership by providing graphical analysis and reporting of NonStop system disk volumes and files
- Key features:
 - File analysis
 - What-if analysis
 - Graphing, reporting, and export functions
 - Export data to Microsoft Excel for further analysis or integration into presentations and reports



PERFORMANCE MANAGEMENT CLIENT BUNDLE

NonStop Performance Reporter (NPR)

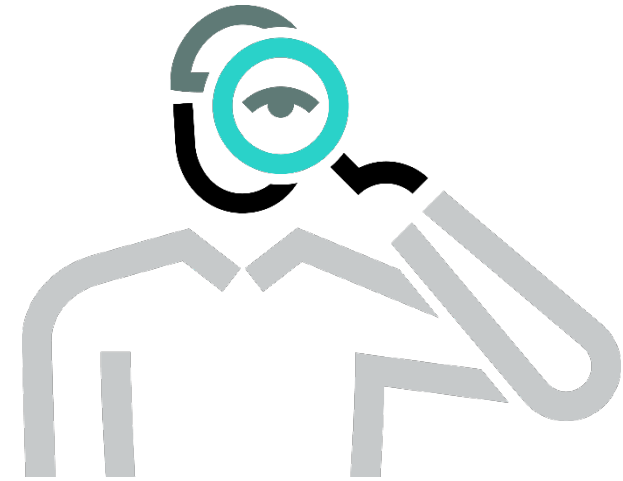
- Helps quickly and easily identify current or potential system problems
- User can select any one of 38 reports and 48 charts to get the information they need to assess the performance of their systems
- The data is presented in friendly formats that can be easily emailed or integrated into other management reports
- Key Features:
 - Selectable reports and graphs
 - Graphical representation of system entities (e.g., CPU, disk, process, and memory) and their performance characteristics
 - Automated organization and presentation of performance data
 - Easy selection, filtering, and archiving of performance data



PERFORMANCE MANAGEMENT CLIENT BUNDLE

System Performance Analyzer (SPA)

- Analyzes your system metrics and grades different components of your system relative to how a properly configured system should behave
- Provides a “report card,” along with a general assessment of the health of the system
- Provides links to more detailed analysis, including the factors that contribute to the score shown on the report card
- Recommend specific actions that should be taken to improve the system performance like reassigning disks to different processors and increasing cache size for different components
- Predicts how your system would have behaved, if the recommended changes are applied



PERFORMANCE MANAGEMENT CLIENT BUNDLE

Pathway View

- Collects both general system metrics and internal Pathway metrics
- Compares, processes, and analyzes these metrics to provide Pathway environment performance
- Allows you to monitor and record detailed Pathway transaction metrics for any user-specified Pathway environment for specific hours of the day at specific intervals and over a given period of days



RA (REMOTE ANALYST)



- Off platform Analytics
- Private (inhouse) or Public Cloud
- Secured
- Exception detection & reporting
- Automated analytics generation & distribution
- Best for NonStop techies, Best for newbies
- System / Network / Pathway / Storage / Applications
- Batch jobs analysis

RESOURCES

ADDITIONAL NONSTOP INFORMATION



NonStop Manuals online

<http://hpe.com/info/nonstop-docs>

This landing page has a direct link to NonStop documentation collection on the HPE Web. You must cut and paste into your browser to access.

Note: The links on this slide must be typed or copied into your browser. PowerPoint won't open them.



NonStop Education online

<http://h10076.www1.hpe.com/us/en/training/portfolio/nonstop.html>

This landing page has information on NonStop education offered by HPE including schedules, course requests and additional information.

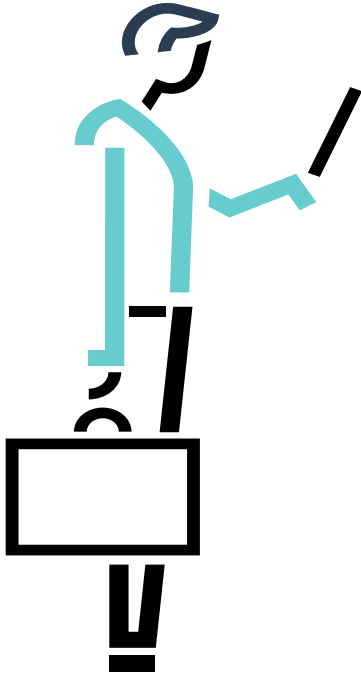
THANK YOU



BACKUP SLIDES



INSIGHT REMOTE SUPPORT (INSIGHT RS)



- A remote monitoring solution
- Enables event diagnosis and automatic, and secure submission of hardware event notifications
- Replaces Insight Remote Support Advanced (IRSA) and isn't a plug-in to HPE SIM like IRSA
- Can be installed on a Microsoft Windows ProLiant server, VMware, Citrix, etc.
- Supports up to 3,500 devices including HPE servers, storage, and network devices

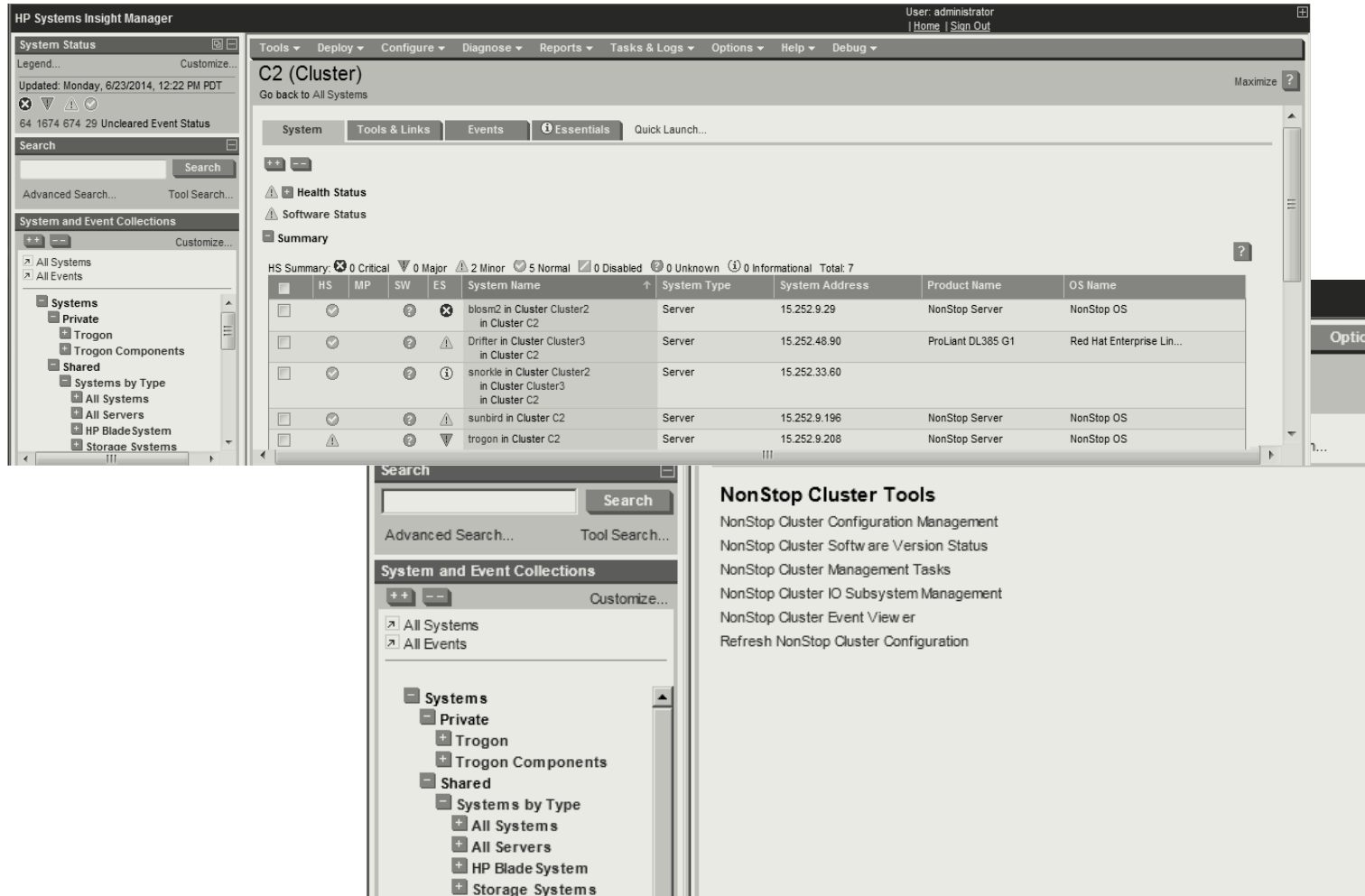


OSM COMPONENTS

Component	Delivery platform	Functionality
OSM Service Connection (T0682)	HPE Integrity NonStop system	Up-system health monitoring and troubleshooting
OSM Event Viewer (T0682)	HPE Integrity NonStop system	EMS event viewing
OSM Low-Level Link (T0633)	NonStop System Console	System load and down-system troubleshooting
OSM Console Tools (T0634)	NonStop System Console	Maintenance LAN DHCP DNS Wizard, OSM Certificate Tool, Down System CLIM Firmware Management Tool, etc.

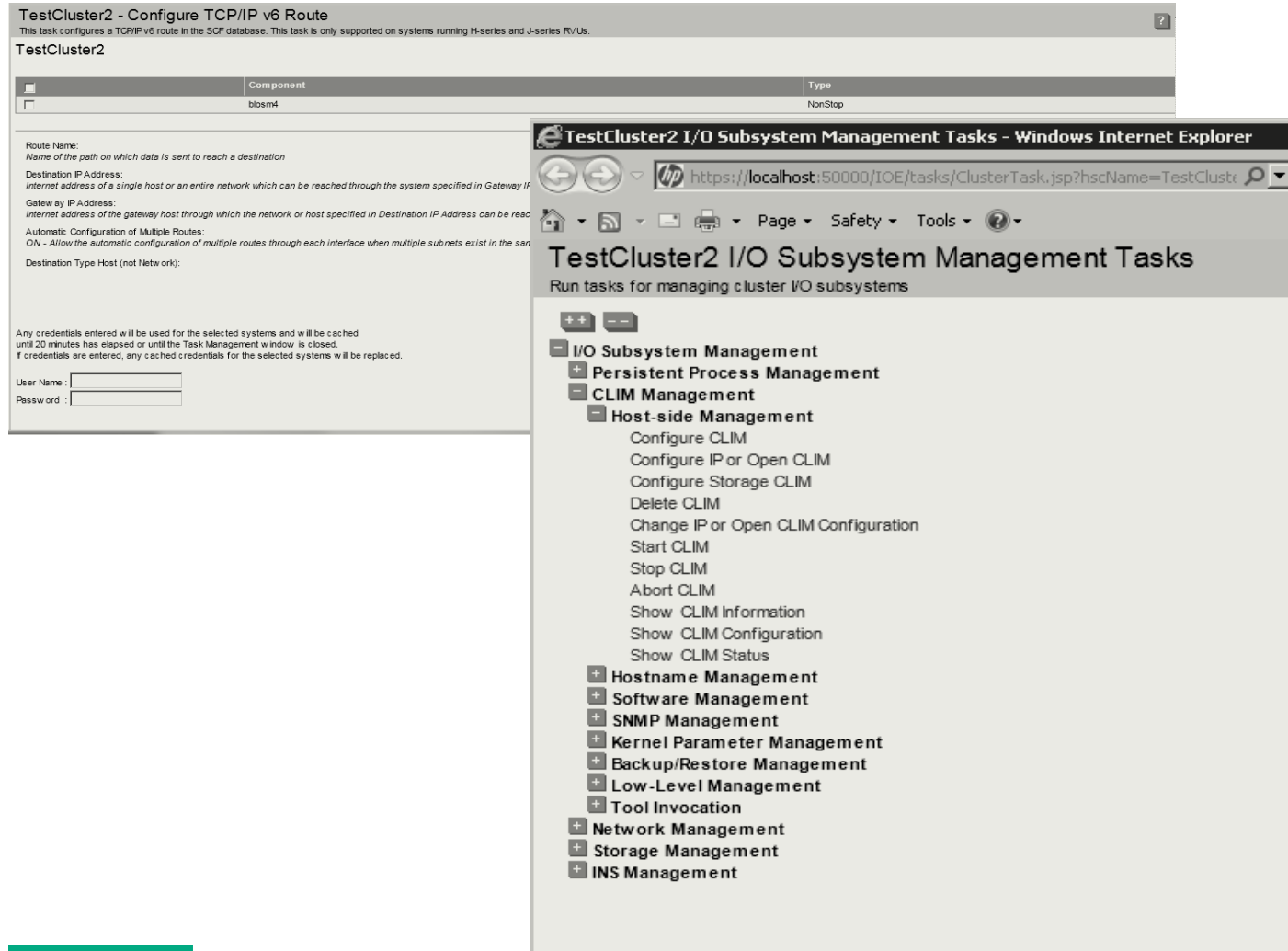


NONSTOP CLUSTER ESSENTIALS



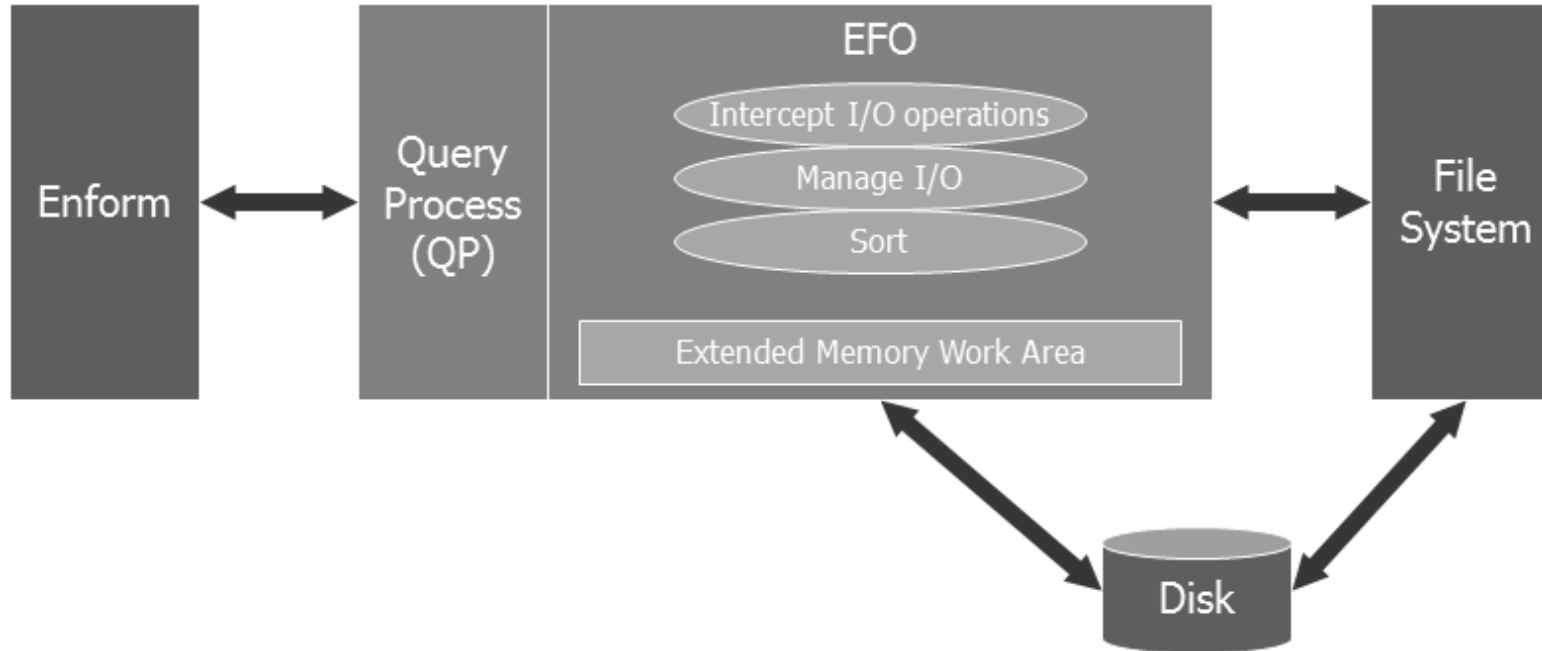
- Provides single pane of glass for all cluster management tasks across NonStop and Linux
- Clusters consisting of any combination of NonStop and Linux systems (between 2-100)
- Integrated health monitoring with state propagation across systems
- Integrated event and alert monitoring
- Integrated provisioning to load and start all components in desired sequence
- Virtualized configuration and control, without knowing command syntax
- Software consistency check across systems
- All the communication between CMS and managed systems secure and all data encrypted

NONSTOP I/O ESSENTIALS



- Ability to perform CIP (Cluster I/O Protocols) management tasks without knowing the command syntax - through a Web browser
- Support for NonStop X and NonStop i systems running J- and H-series NonStop
- Ability to perform CIP management tasks on multiple CLIMs, disks, and tapes in parallel
- Pre-defined management tasks shipped out-of-box
- Integration with NonStop Cluster Essentials to enable CIP management across NonStop clusters
- All the communication between CMS and managed systems secure and all data encrypted

EFO (ENFORM OPTIMIZER)



- Library to improve Enform query performance
- Processes queries up to 300% faster
- Reduces I/O
- Reduces external sorts
- Transparent to queries; no query changes required to use EFO
- Non-privileged code; EFO is a library attached to the Enform Query Process (QP)
- Works for all Enform operations: LIST, FIND, compiled queries, programmatic interface, etc.

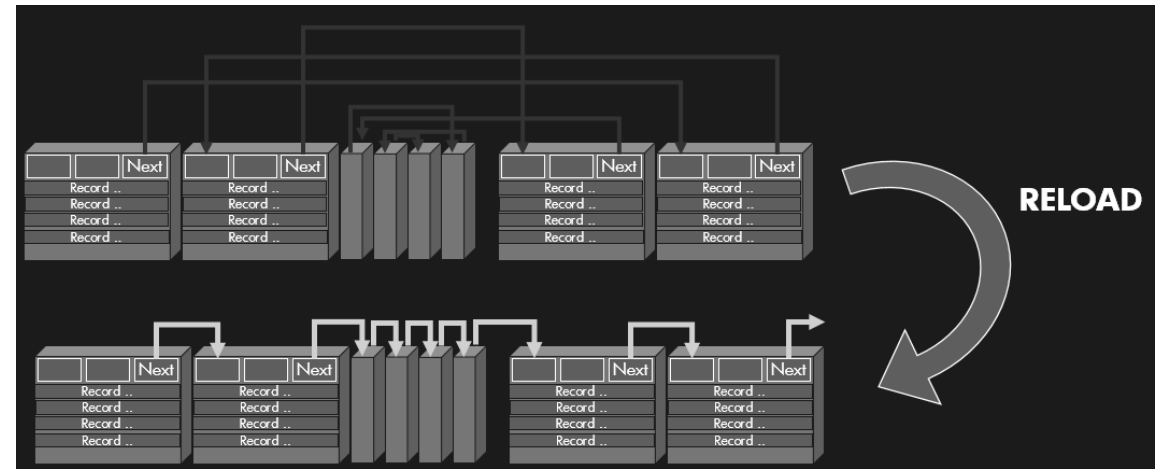
EMSA (EMS ANALYZER)



- Allows rapid searching of EMS logs for specific events based on subsystem, process ID, device name, text, etc.
- Command line/interactive tool
- Quick start-up, easy to use
- Accessible from a TACL prompt on any system
- User can specify different levels of detail
- Output can be sent to screen, Enscribe DB, or CSV file

TRA (THE RELOAD ANALYZER)

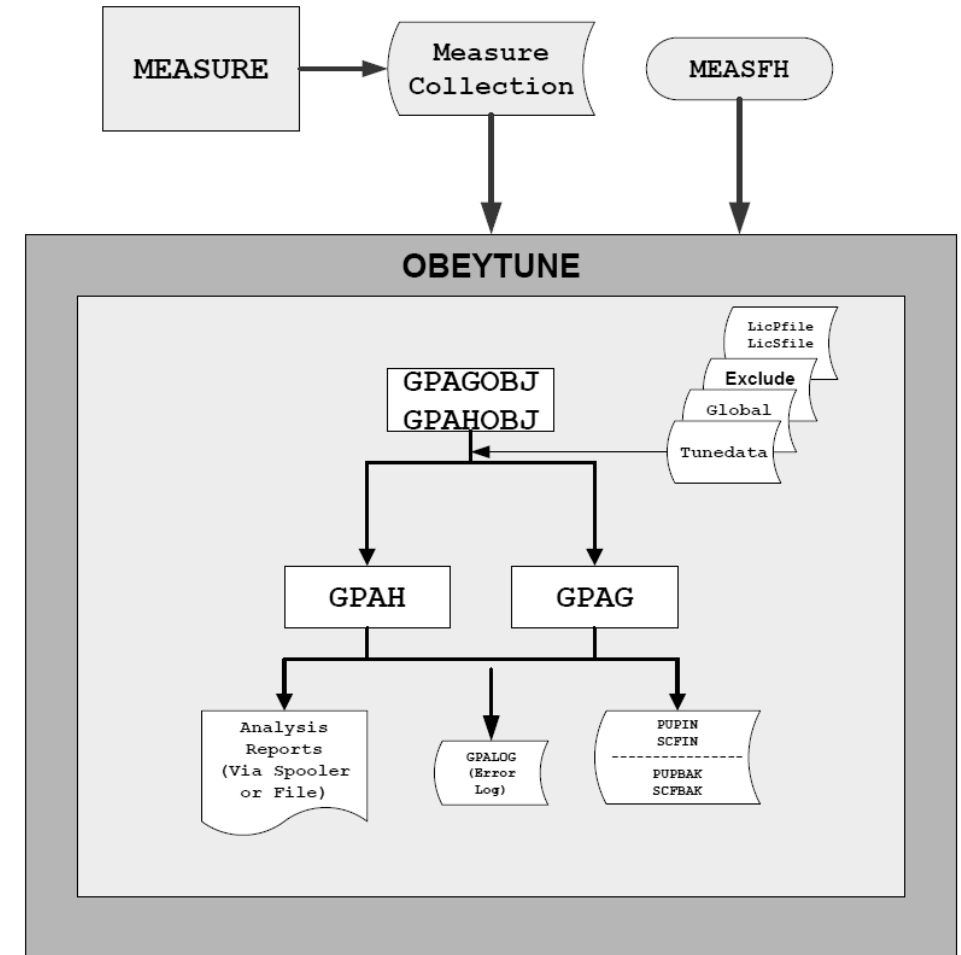
- Database management tool to determine when to reload files, tables, indexes or partitions
 - Data-block chaining and fragmentation analysis
 - Vertical analysis of index blocks and horizontal analysis of data blocks
 - Generation of FUP RELOAD commands, if user-specified fragmentation objective is not met
 - Enscribe, SQL/MP and SQL/MX support
 - Support of 32 Kb block sizes
 - Ability to work with single file or a batch list of files
- Can improve application performance and disk space utilization by determining when files and tables must be reorganized



PERFORMANCE MANAGEMENT CLIENT BUNDLE

GPA (Guardian performance analyzer)

- Analyzes performance data, makes recommendations, and helps implement those recommendations to balance server resources
- Key features:
 - Rapid analysis of performance data
 - Comprehensive performance reports
 - Performance analysis commentaries
 - Recommendations for server tuning
 - Prediction of impact of recommendations
 - Generation of command files for recommended changes



PERFORMANCE MANAGEMENT CLIENT BUNDLE

TPDC (Performance Data Collector)

- Gathers data from the NonStop operating system, the file system, and Measure
- Organizes and stores the Measure data in a single file that is used for generating reports
- Key features:
 - Collection of all key performance data
 - Integration with the client software bundle (Windows)
 - Low system overhead



PERFORMANCE MANAGEMENT CLIENT BUNDLE

VIEWSYS

- An interactive online monitoring for local or remote systems
- Allows you to view system resource usage on a running system
- Resources monitored include: CPU usage, page fault, disk I/O, and link control blocks (LCBs)

