

CA NetMaster to Mobile and Beyond a bold new frontier

Craig Guess
CA Technologies

August 12th 2013
13296



Agenda

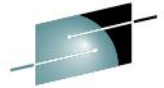
- CA Performance Alerts and Charts
 - Technology driven our Sydney team
 - Wendy Wong – Senior Software Architect
- CA Chorus™ Infrastructure Management for Networks and Systems

CA Performance Alerts and Charts

Things we never thought w/could be improved upon



Made easier by mobile device



SHARE
Technology • Connections • Results



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in Boston

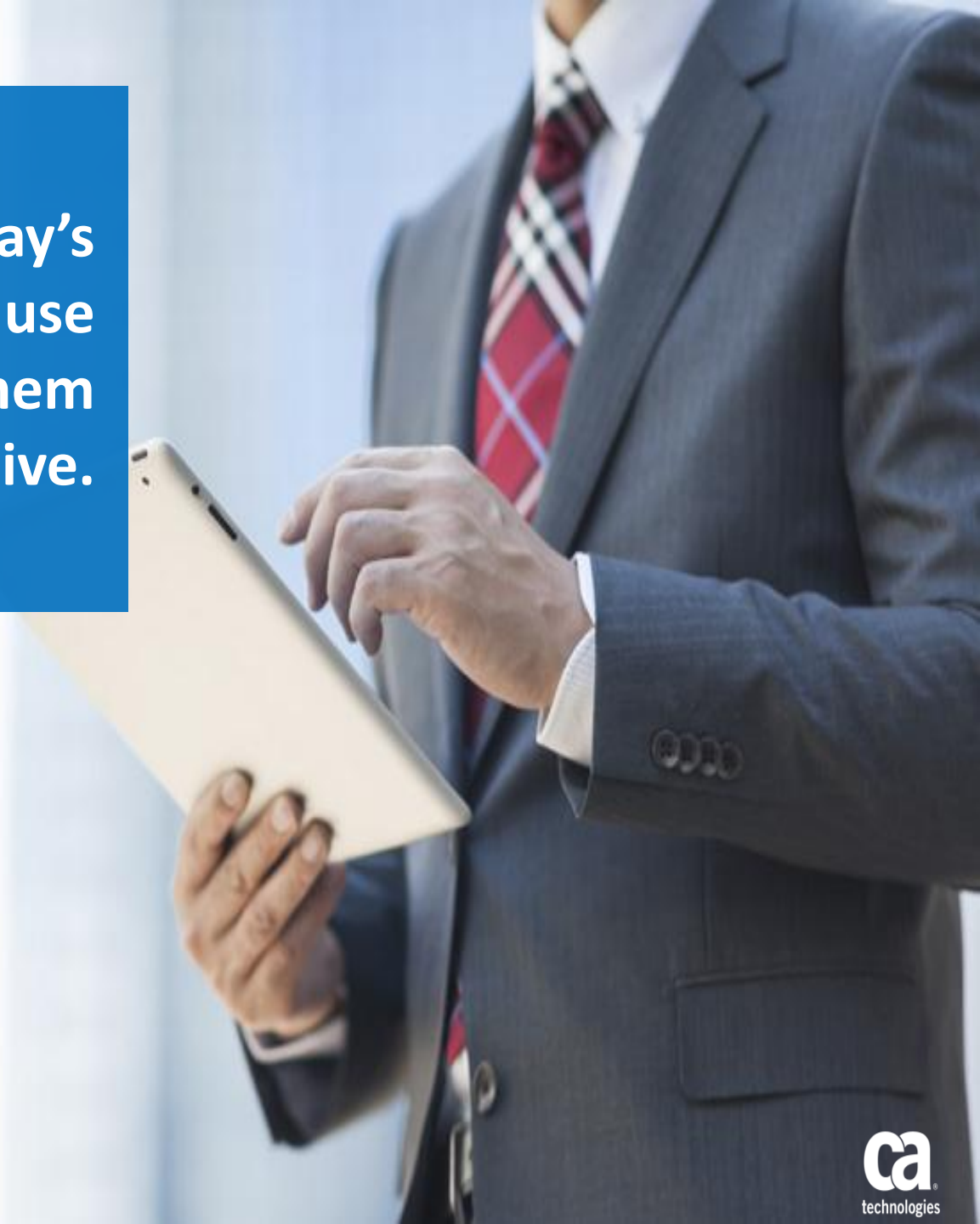


**What a difference
8 years make.**

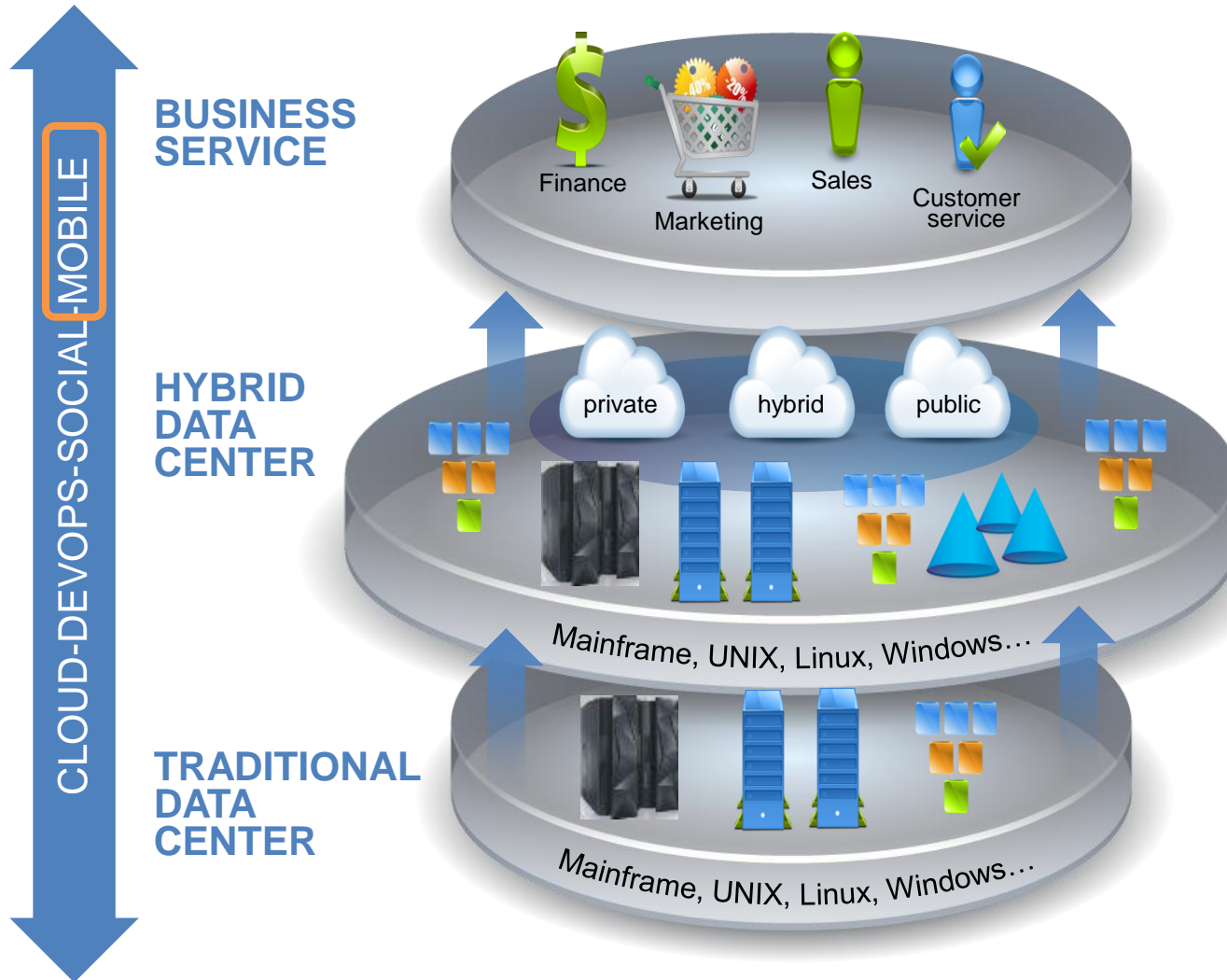
St Peter's Square
2005 vs. 2013

2013

Given a chance, today's mobile employees will use whichever tools help them be most productive.



Are you familiar with this situation?



“ CIOs need to prepare their organizations to operate on different planes, in a variety of analog, virtual, and mobile universes; they should be creating strategies to support a diversification of business models into all of those areas. In a worked, they should be seeking to multiversify.”

Michael Hickens
Wall Street Journal

Delivery Patterns

Pros

1. Mobile Browser

- Faster time to market
- Does not require special software on mobile device

2. Native App

- Likely better usability
- Using “smarts” reduces work on server side and reduces network load

Cons

1. Mobile Browser

- Not all created equal
- More data through the pipe

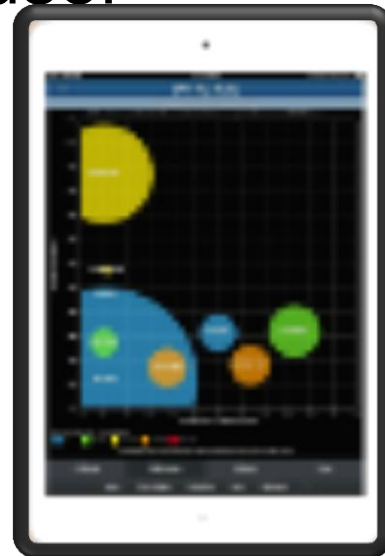
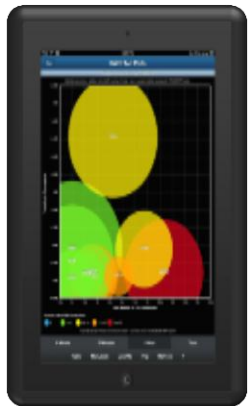
2. Native App

- Longer time to market
 - Takes longer to develop functionality

Performance Mobile believes...

... that being truly mobile doesn't mean being tied to one device.

Our solution works anywhere the user needs to be.

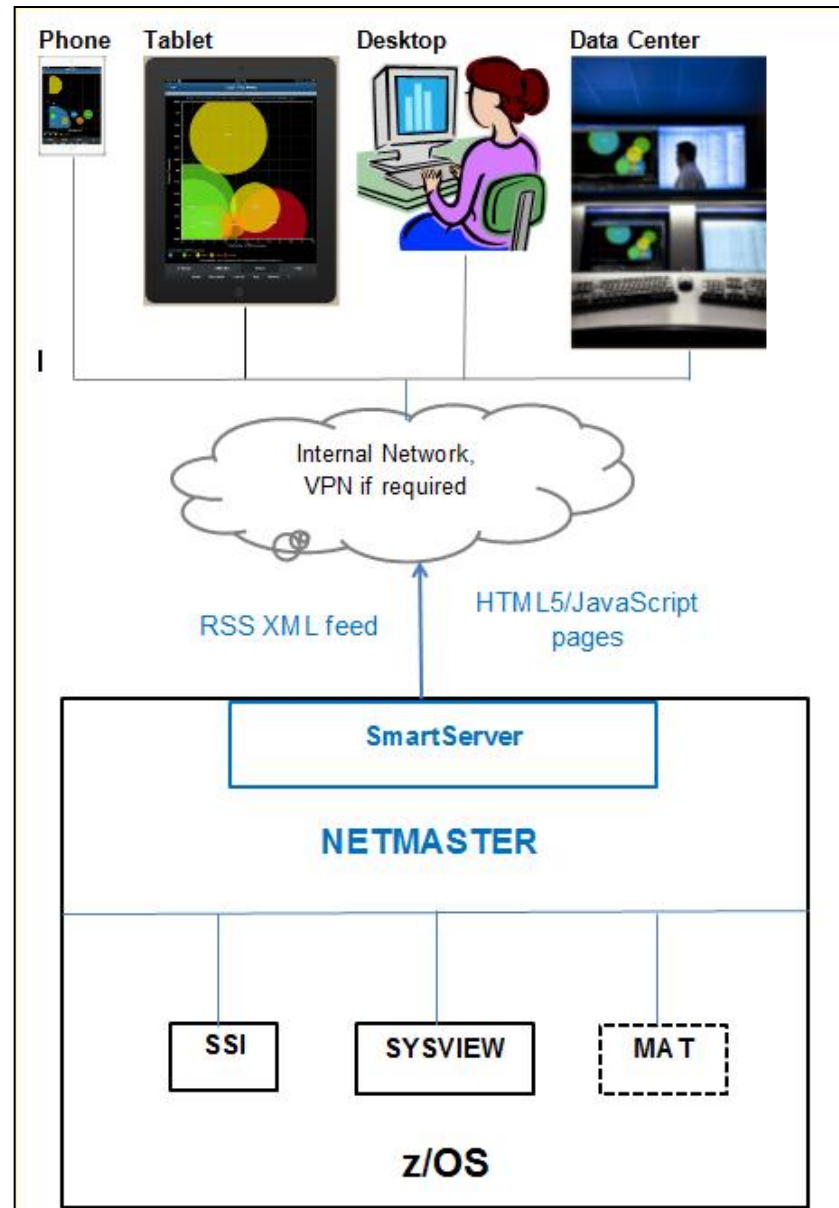


Architecture:

Support most popular devices

Exploit existing technology

Broaden scope to future products



Performance Mobile shows...

...that mainframe products can have both a new look and functionality

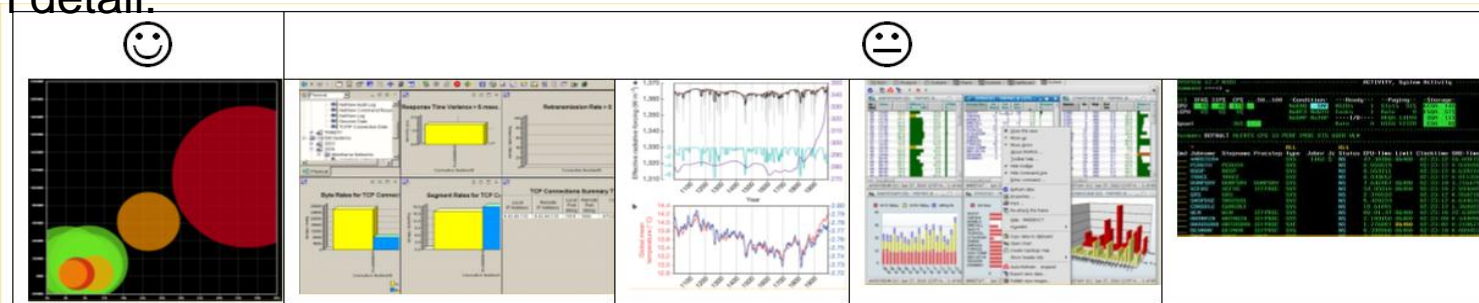


- At the mainframe back end, real-time network flow analysis data is collected using our patented ***data buffering and decoupling invention***.
- At the UI front end, this same data is displayed using our ***systems management cognitive map invention*** (patent pending)

Performance Mobile transforms...

... the mainframe EUE with innovative visualization

Customers complained that they get landed with 'too much too soon' when using their mainframe systems management products. They asked us to isolate and highlight just the most significant things first. This means they don't drown in detail.



Visualization is more than pretty pictures. Successful visualization can reduce the time it takes to understand the underlying data, to find relationships, and to get the information searched.

...

Innovative ideas, compelling strategies, and good coherent plans often come about when information is viewed as a new way.

Visualization Overview
M. Ghanbari, IEEE 2007

Performance Mobile delivers...

... new ways to engage with traditional mainframe systems management data:

1. Alerts delivered by RSS feeds

(alert data comes from NetMaster and others)



2. Network Performance Charts

delivered by a mobile web application

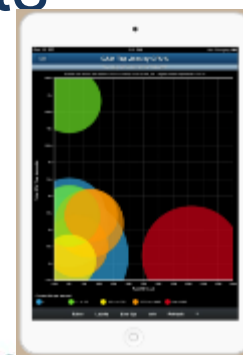
(real-time network flow analysis data and historical network growth data come from NetMaster)



3. System and Application Performance Charts

delivered by a mobile web application

(real-time z/OS, CICS, MQ and other data comes from SYSVIEW, application performance and tuning data comes from MAT)



RSS Alert Feed

What it does

Mainframe server produces lists of **mainframe management alerts** in RSS 'news feed' format.

- These mainframe alerts look and behave just like any other RSS news feed.
- Feed data is formatted and presented by the individual user's choice of RSS client.
- RSS clients exist on many platforms.



What it looks like

This depends entirely on the choice of client! (e.g. this shows the iPad xFeed app)



Network and Performance Charts

What it does

Mainframe server retrieves mainframe network performance data from NetMaster, then generates graphical mobile web pages to display it.

- Real-time IP network flow analysis data helps problem diagnosis, and shows network usage patterns of critical mainframe applications and servers.
- Historical high level TCP/IP network traffic growth data helps operational reviews and capacity planning.

What it looks like



Performance Charts Systems

What it does

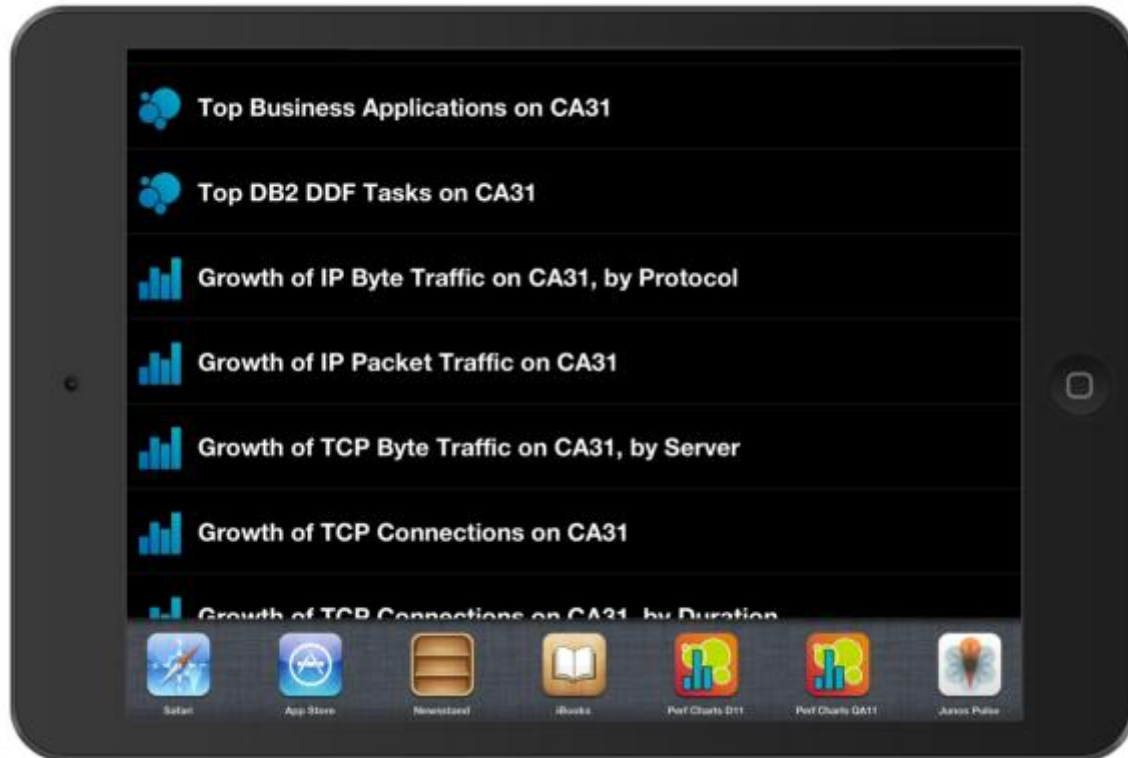
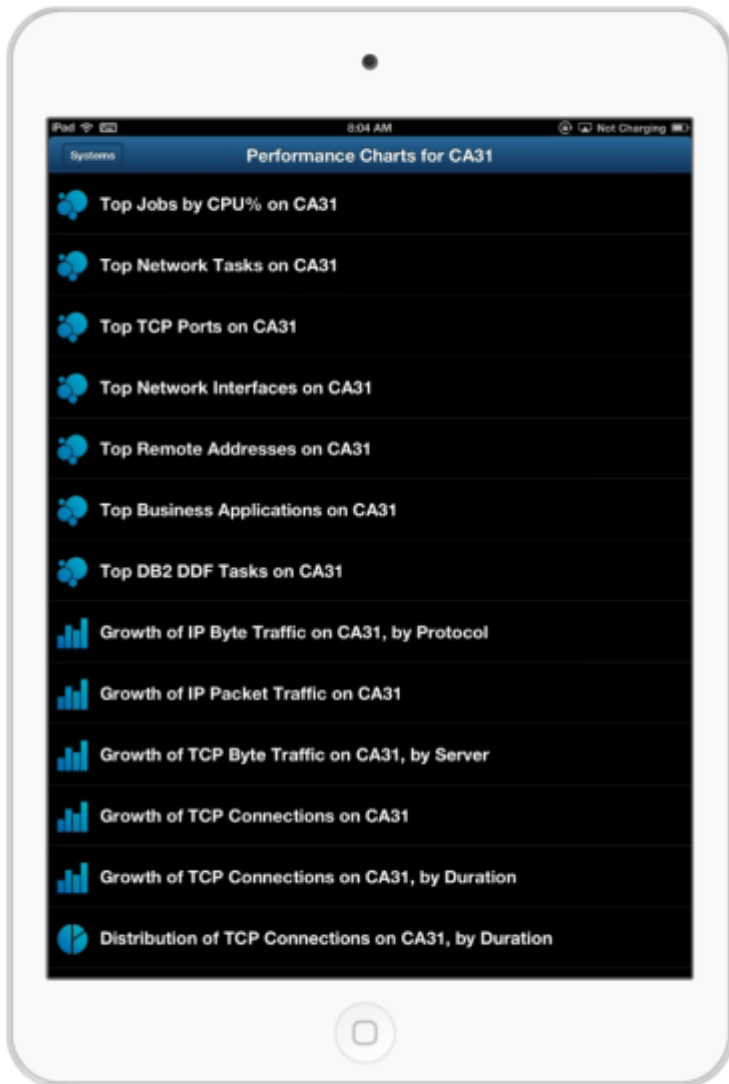
Mainframe server retrieves performance data from SYSVIEW then generates graphical mobile web pages to display it.

- SYSVIEW reaches deep into the operating system to measure every aspect of system, user and resource activity.

What it looks like



Mobility in the workplace



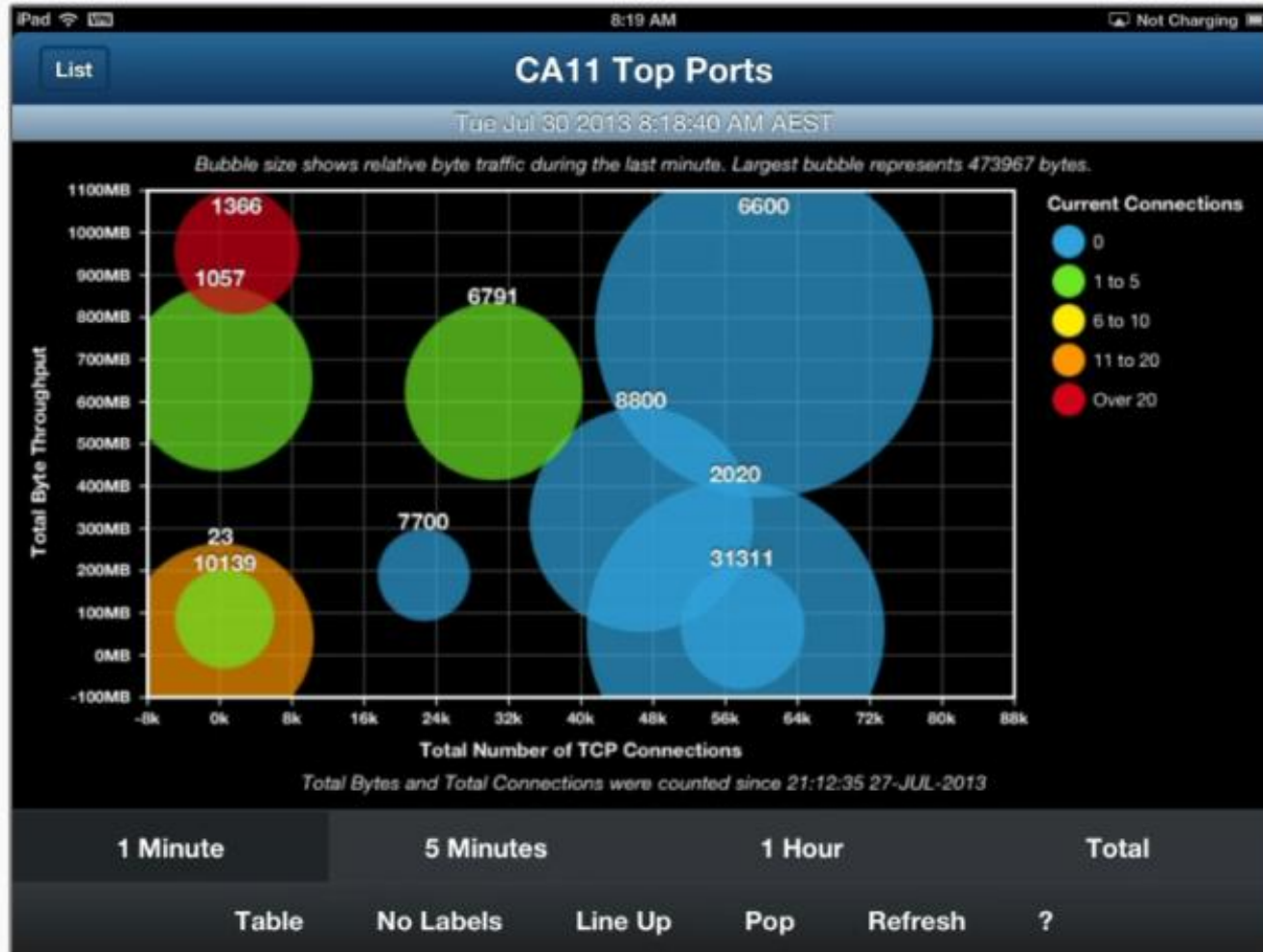
Multisystem Support

Normal NetMaster Connections

- INMC
- Link & SYNC



Bubble Charts



Background Data

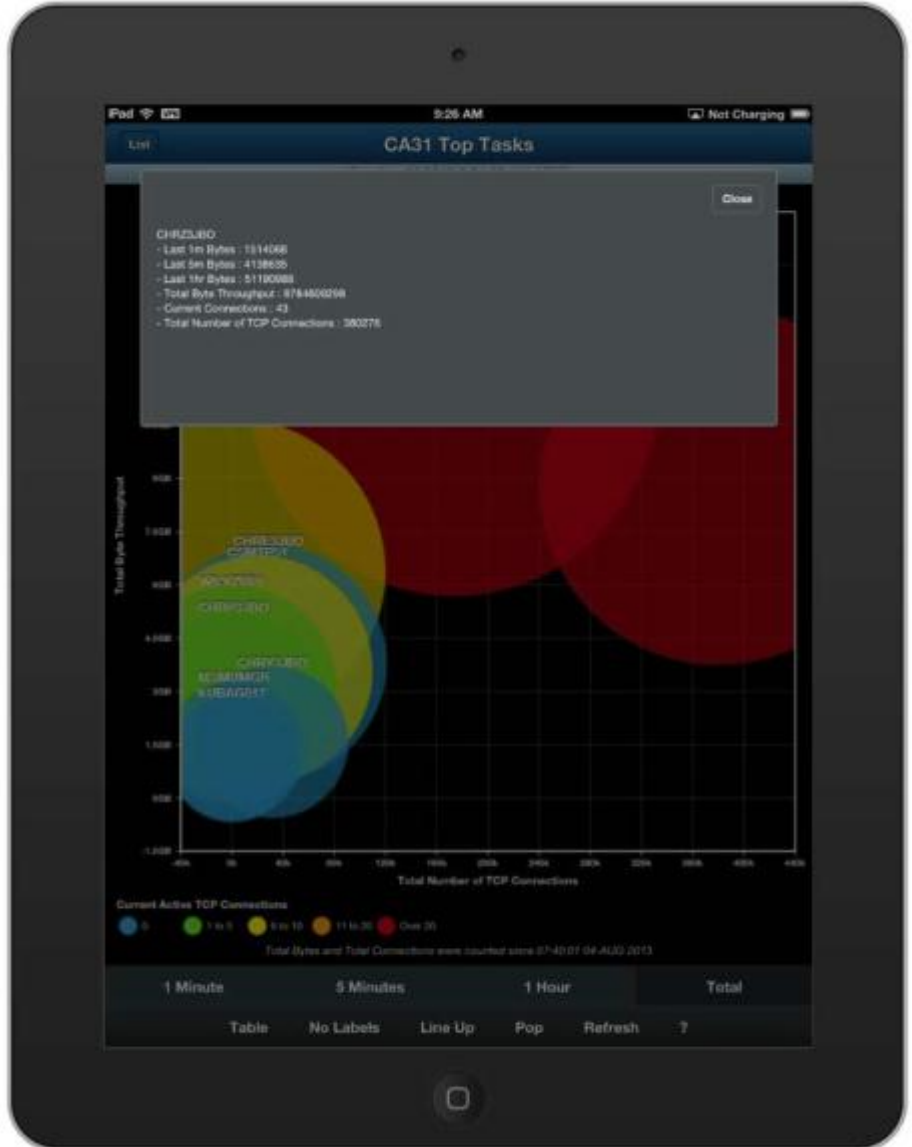


Table Data

iPad 8:20 AM Not Charging

List CA11 Top Ports

Tue Jul 30 2013 8:18:40 AM AEST

Port	Connections		Bytes			
	Current	Total	Last Minute	Last 5 Mins	Last Hour	Total
6600	0	60260	473967	1824103	23167840	773338068
2020	0	57110	368710	2215258	25619897	59370462
8800	0	46679	208690	867262	11141957	320850989
23	17	88	143473	704218	5416515	44004523
1057	1	1	142398	759348	14260396	655353473
6791	4	30322	131172	1096314	13464630	624451421
1366	31	1875	65178	497346	9506190	955779333
31311	0	57900	63768	362312	4213012	65732668
10139	3	529	40876	227222	2668388	85952634
7700	0	22581	35405	341075	4386509	190109281

1 Minute 5 Minutes 1 Hour Total

Chart Refresh ?

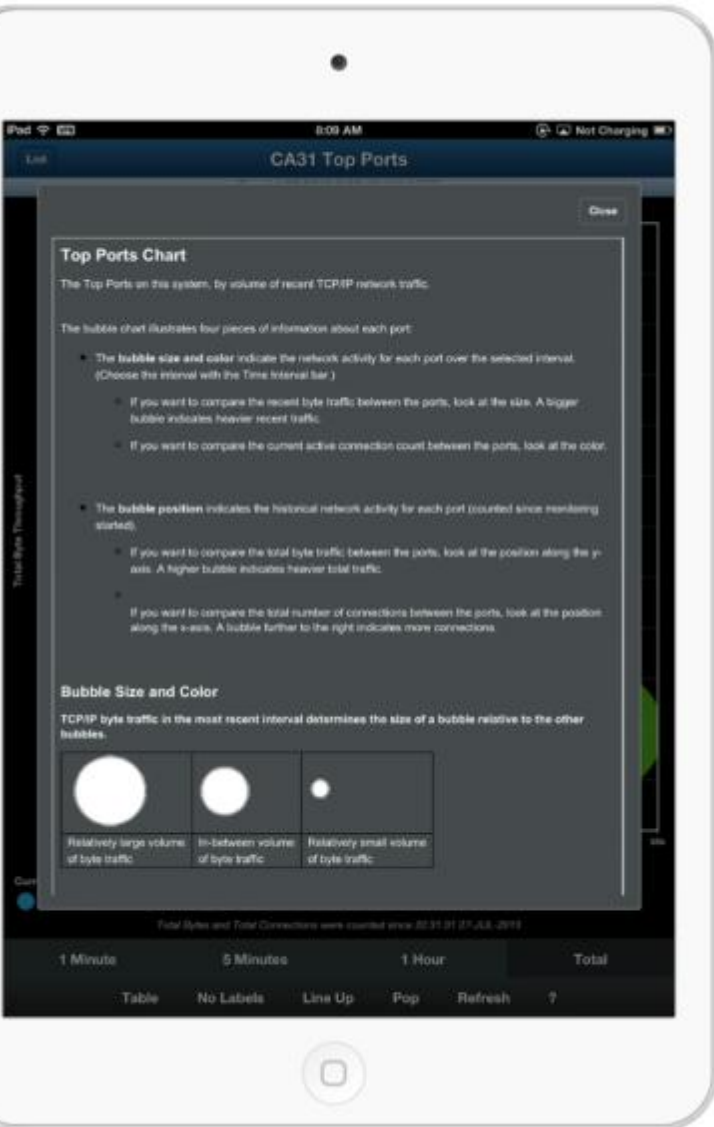
Performance Charts in a modern desktop browser



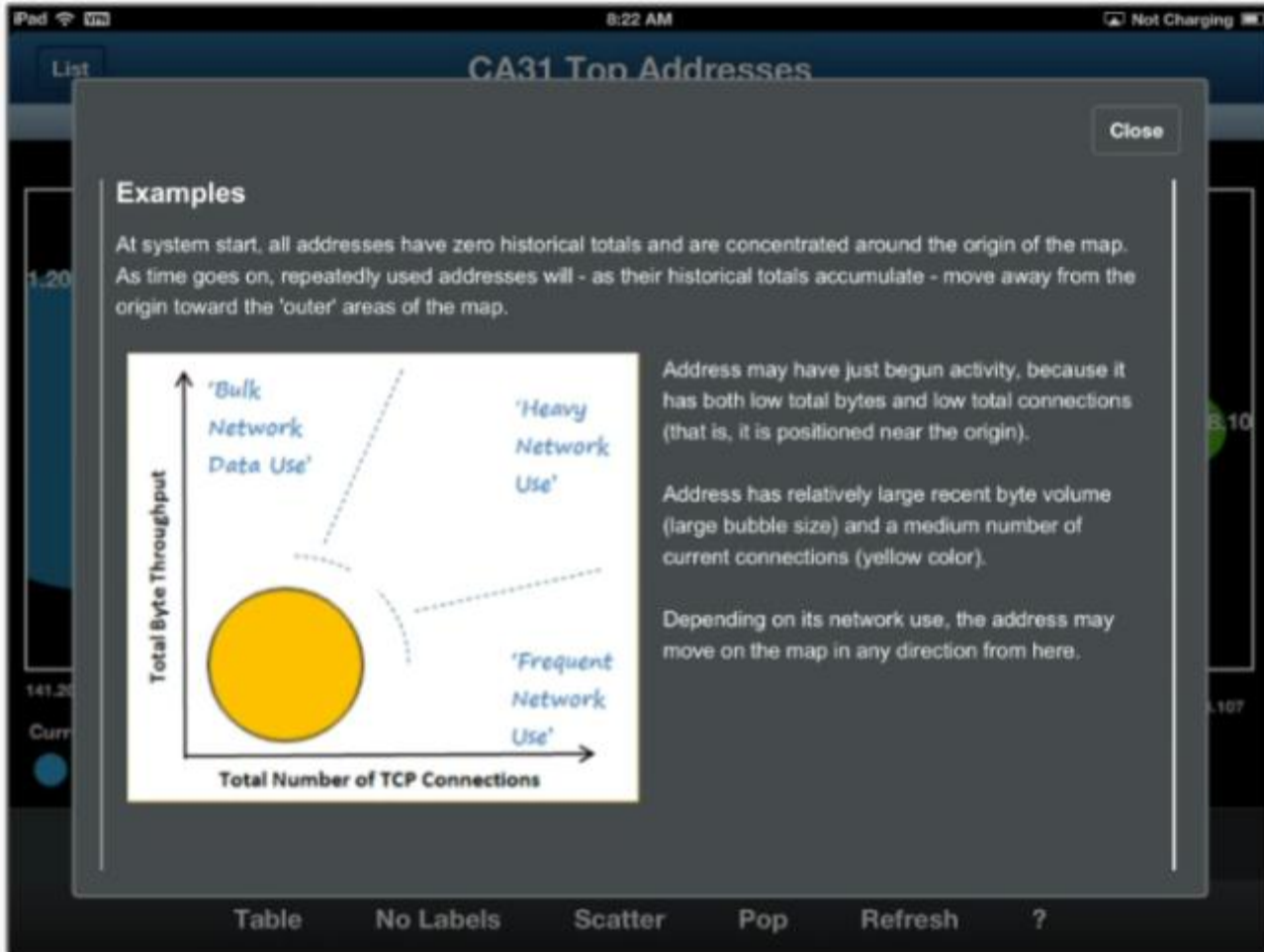
5:14:29 PM 7/12/2013



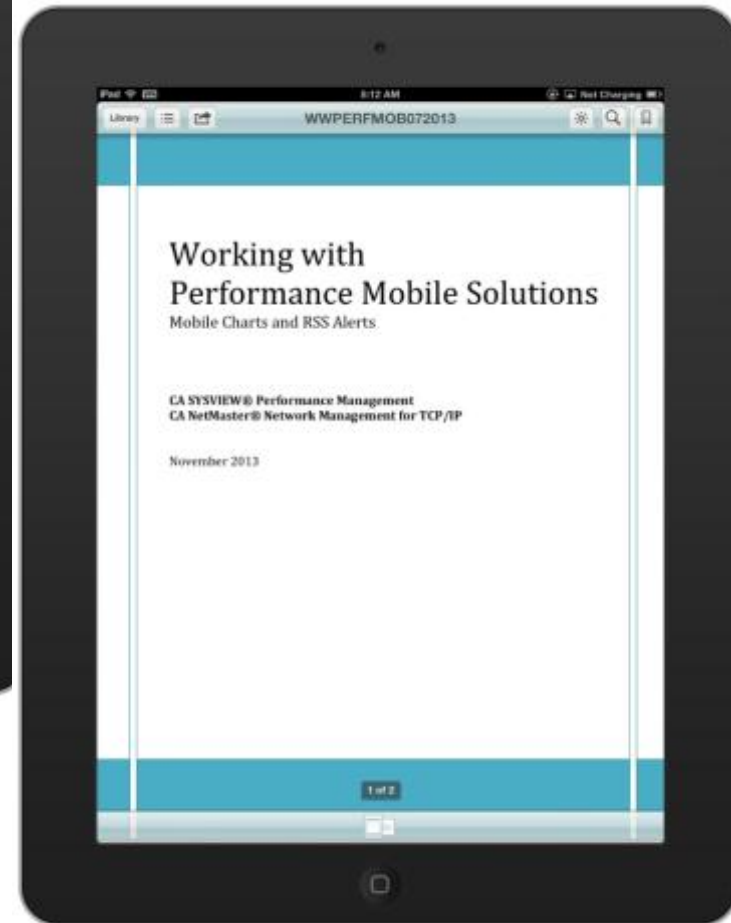
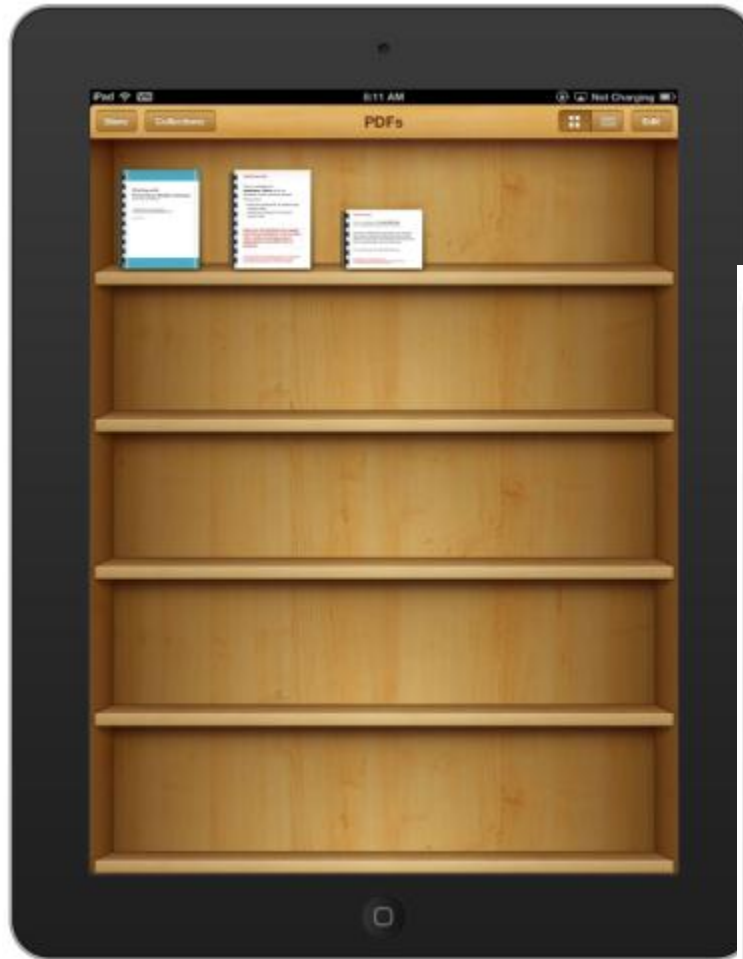
Extensive Help facilities

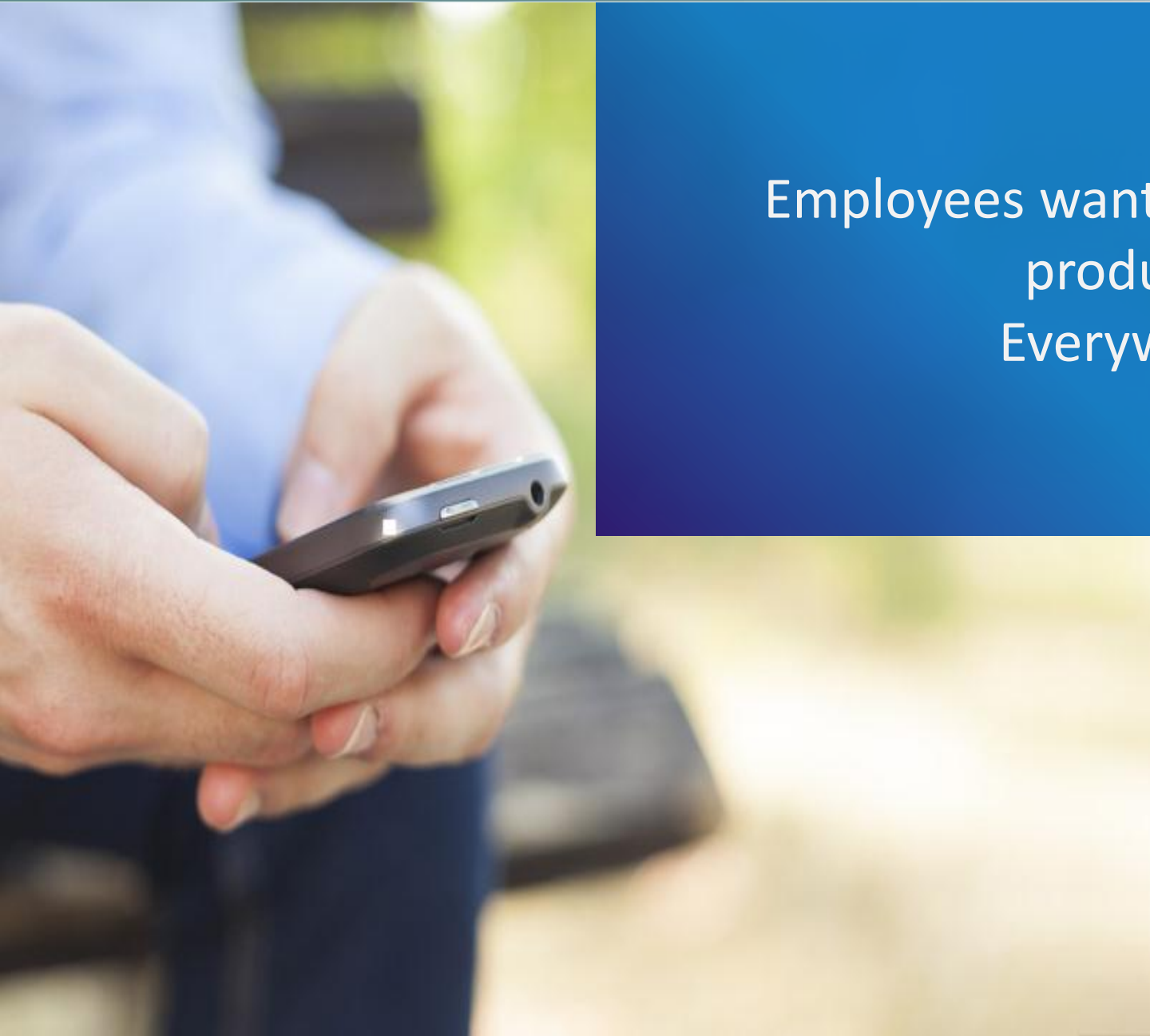


Extensive Help - Examples



iPad Bookshelf





Employees want to be
productive.
Everywhere.

Complete your sessions evaluation online at SHARE.org/BostonEval



CA Chorus™ Infrastructure Management for Networks and Systems



CA Chorus Architecture

CA Chorus Platform



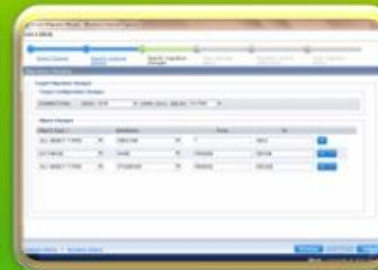
Graphical Diagnostics



Integrated Workspace



Knowledge Management



Process Automation

Common platform components

DB2 Database
Mgmt Discipline



Security Mgmt
Discipline



Storage Mgmt
Discipline



Infrastructure
Mgmt Discipline



Future
Disciplines

**DB2
Products**

**Security
Products**

**Storage
Products**

**Infrastructure
Products**

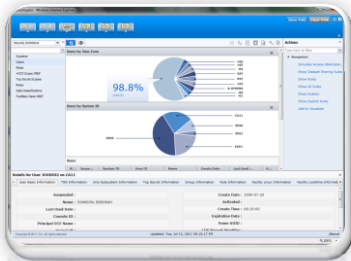
**Other
Products**

CA Chorus™ an overview...



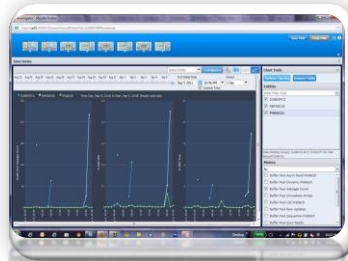
Integrated Workspace

- Singular interaction model
- Fast Learning Curve



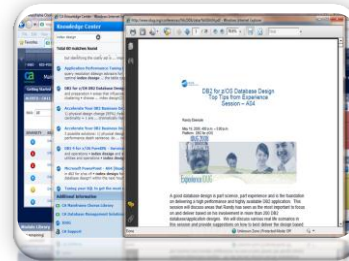
Role-Based Navigation

- Matches Job Functions
- Leverage resources across platforms



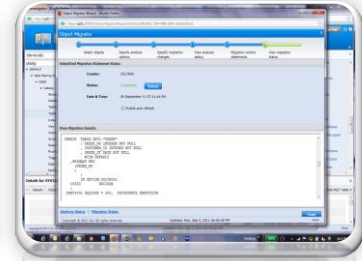
Graphical Diagnostics

- Data in human readable formats
- Solve problems faster



Knowledge Management

- Community knowledge and expertise at users fingertips
- Increases the whole team's efficiency



Process Automation

- Wizard-like process tools
- Reduces possibility of errors

CA Chorus™ Infrastructure Management for Networks and Systems



Enterprise Health Monitoring → a policy driven consolidated view of many resources using color to depict status of those resources that are grouped via the policy.

System Resource Topology → Delivers enhanced graphics to identify relationships and status information.

Interactive Problem and Diagnostic Tools → capabilities combining normally disparate data into a cohesive diagnostic path, combined with status information and visual cues.

New System, Network , and Personalized Alert modules → delivers interactive and actionable alert capabilities.

Consolidated Performance Reporting → filtering, new graphs, and the ability to export data to external sources.

Investigator Quick-link Web Navigation → new, dynamic, and actionable from resource level displays.

enterprise health monitoring

Dashboards

- Simplifies problem identification, diagnosis, and resolution
- Improves productivity when navigating multiple systems
- Shareable – save as public so everyone can see
- New modules available for customization and personalization

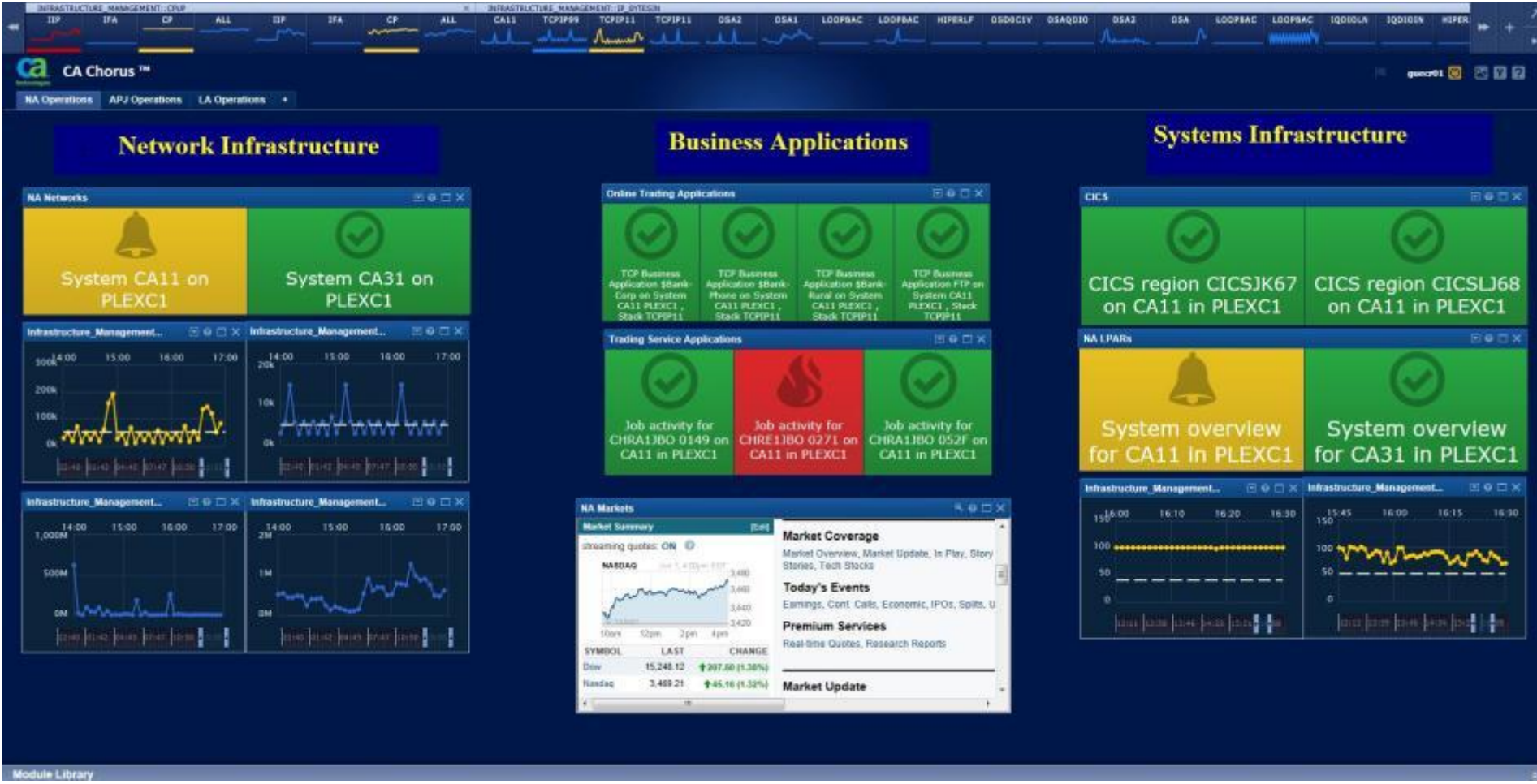
Traffic lights

- **Policy driven** - consolidated views of many resources using color to depict status of those resources that are grouped via the policy.
- **Business views** – introduction of a new way to monitor the health of the mainframe IT infrastructure.
- **Custom built** – multiple types of resources
- **Shareable** – Build once use many times

Metric Panels

- New network, systems information
- Customizable User set thresholds, identify anomalies that can increase costs .

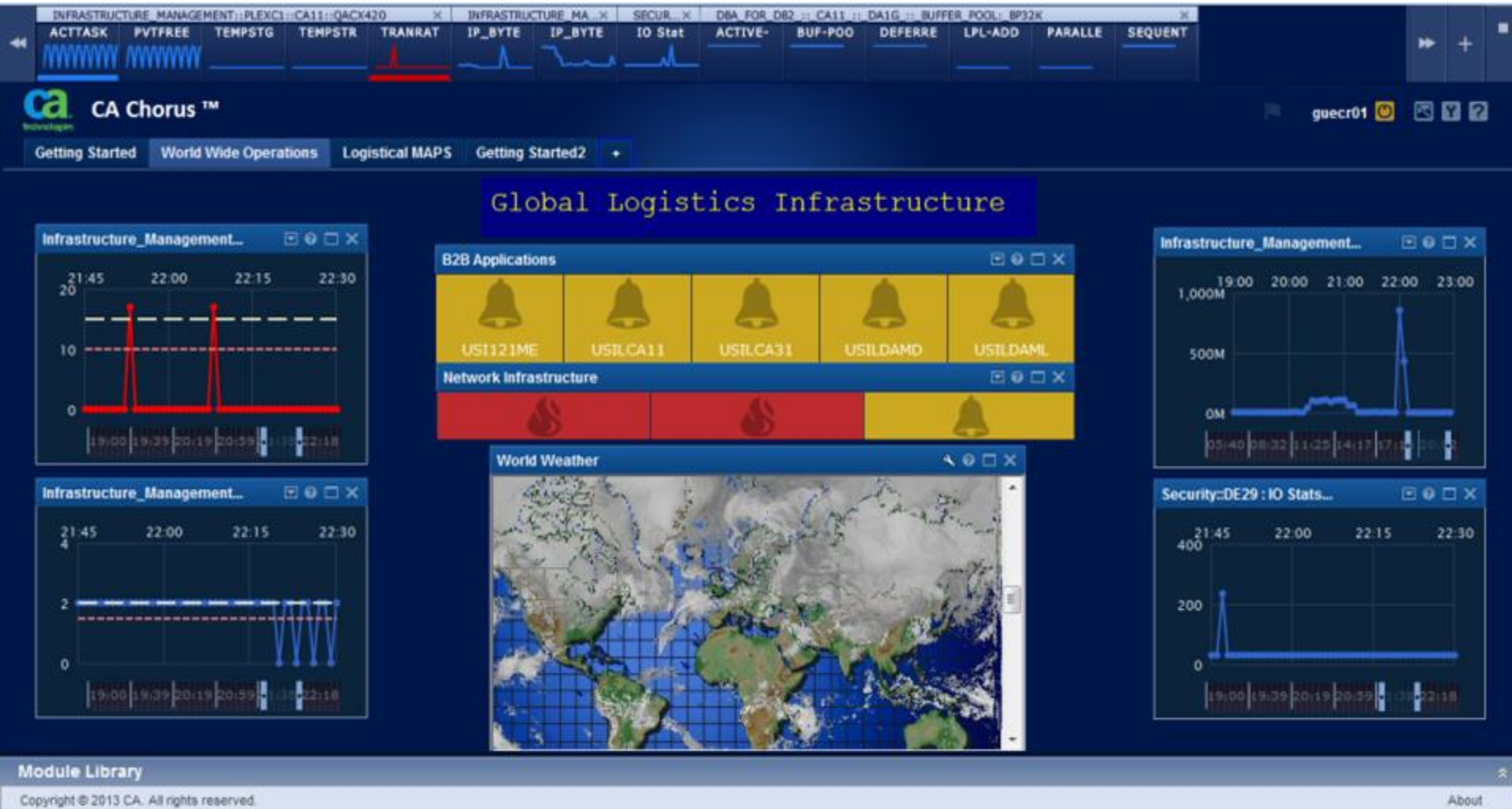
Enterprise Health Monitoring – Dashboards



Complete your sessions evaluation online at SHARE.org/BostonEval



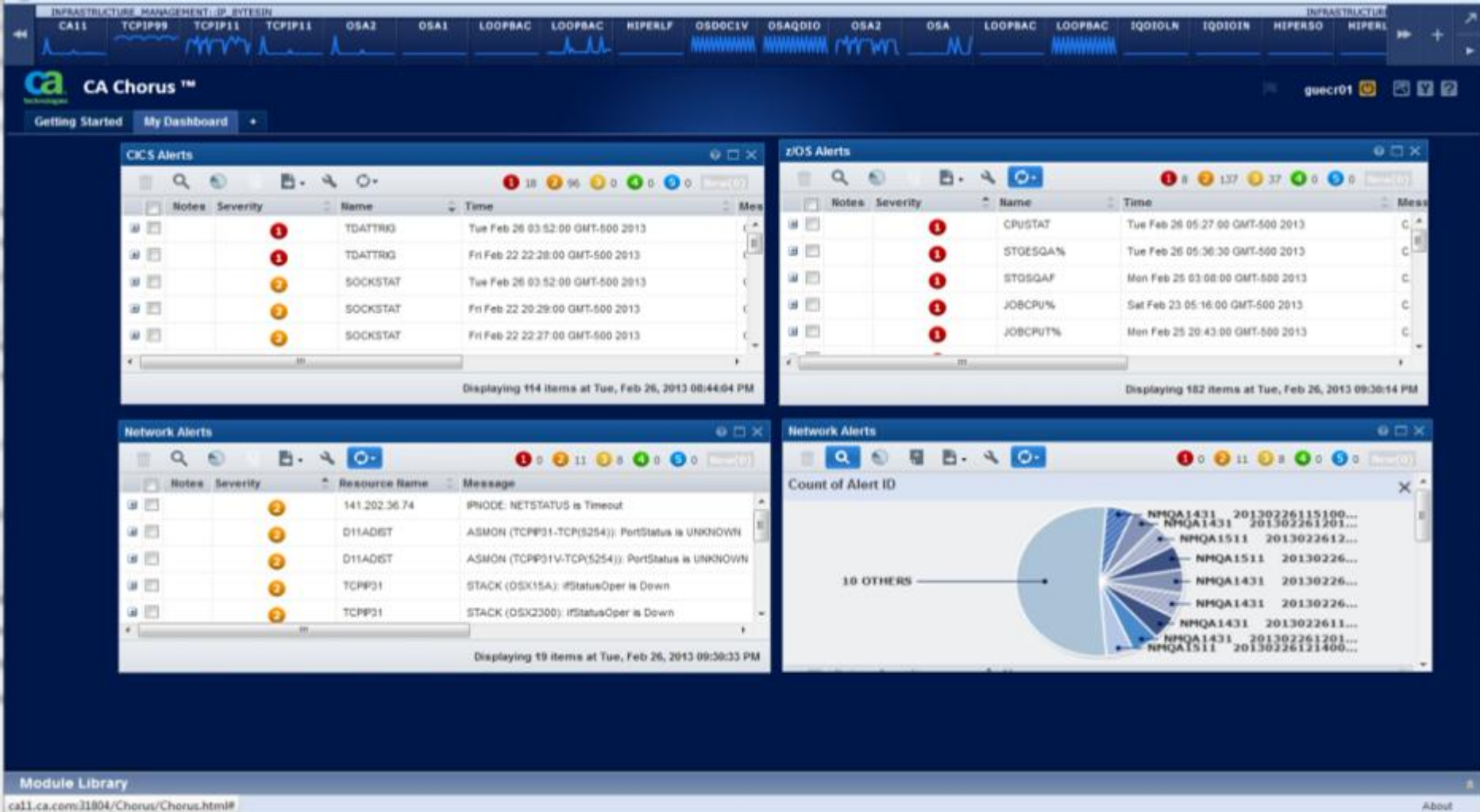
Enterprise Health Monitoring – Dashboards



Complete your sessions evaluation online at SHARE.org/BostonEval



Targeted Alerts – what’s important to you?



The screenshot displays the CA Chorus™ monitoring interface. At the top, there are several status bars for different system components like CA11, TCP/IP, OSA, LOOPBACK, HIPERLF, OS/390, and I/O. Below these are four main alert panels:

- CICS Alerts:** A table showing alerts for TDAATTRG and SOCKSTAT with severity levels (1, 2, 3) and timestamps.
- z/OS Alerts:** A table showing alerts for CPUSTAT, STOGSQAN, STOGSQAF, and JOBCPU% with severity levels and timestamps.
- Network Alerts:** A table showing alerts for IPNODE, ASMON, and STACK with severity levels and messages.
- Network Alerts (Pie Chart):** A pie chart titled 'Count of Alert ID' showing the distribution of alert IDs, with a category for '10 OTHERS'.

At the bottom, there is a 'Module Library' section with the URL 'ca11.ca.com:31804/Chorus/Chorus.html#'. The bottom right corner of the interface has an 'About' button.

interactive problem and diagnostic tools



Investigator Module

- Primary starting point for investigating and diagnosing problems
- Designed to service network, system, and DB2 resource activities
- Simplified access to all information from external infrastructure engines
- Ability to save detailed analysis paths for use or training less experienced personal
- Intuitive investigator tree – lists system and network objects by categories
 - Across enterprise – Subsystems, networks, DB2, SYSPLEX,
 - Network performance
- Secure actionable Commands – visualization, operational

Time Series Integration

- Historical analysis.

Topology visualization

Interactive Problem and Diagnostic Tools



Save Path Clear Path

WebCenter Menu

Expand All | Collapse All

- Infrastructure Management
- Enter a search keyword
- Network
 - IP Activity
 - TCP Ports
 - TCP Tasks
 - TCP Connections
 - Business Applications
 - Remote Networks
 - Remote Addresses
 - UDP Ports
- Infrastructure
 - IP Stacks
 - Network Interfaces
 - VIPA Interfaces
 - DB2 Distributed Data Facility
 - Enterprise Extender
- Response Time
 - Network RTT

- Diagnostics
- IP Diagnostics
 - IP Summary
 - IP Nodes
 - SNA Nodes
 - Telnet Connections
 - IP Connections
 - IP Stacks
 - VIPAs
 - CSM
 - Cisco Channel Cards
 - OSA Cards
 - Enterprise Extender
 - Address Spaces
 - Line Printers (LPD)
 - SmartTrace
- File Transfer Diagnost
- Monitoring
- Alerts
- Resources
- IP Resources
- IP Nodes
- FT Resources
- Performance Center
- History
- ReportCenter
- SYSVIEW
- Utilities

Application Summary

Packet and Byte Rates for Applications

Application Name: \$Bank-Retail

Packets/Second for \$Bank-Retail

Bytes/Second for \$Bank-Retail

Application Throughput (over last whole four minutes on date 12-AUG-2013 at time 01:15)

Application Name	Connections		Packets/Second			Bytes/Second				
	Active	%	In	%	Out	%	In	%	Out	%
\$Bank-Retail	43	23%	40.44	41%	61.88	51%	2652	13%	51214	62%
\$Bank-Rural	28	15%	9.77	10%	13.58	11%	1015	5%	15414	19%
CH-Atlas	32	17%	16.52	17%	18.53	15%	2762	14%	12345	15%
\$Bank-Web	25	14%	14.34	15%	13.35	11%	8802	44%	1220	1%
CH-Leon	18	10%	3.163	3%	2.457	2%	1608	8%	213	<1%
CH-Eva	18	10%	3.163	3%	2.457	2%	1608	8%	213	<1%
SMTPMAIL	0	0%	1.647	2%	1.977	2%	492.8	2%	549.3	<1%
\$Bank-Loans	3	2%	0.33	<1%	0.75	<1%	20.16	<1%	677	<1%
\$Bank-Phone	8	4%	2.953	3%	2	2%	404.9	2%	175.6	<1%
\$Bank-ATM	0	0%	3.013	3%	2.143	2%	359.6	2%	196.1	<1%
\$Bank-Legal	1	1%	1.31	1%	1.41	1%	376.4	2%	148.4	<1%

Details for TCP Connection from [141.2...]

Traffic 1 Min Traffic 5 Min Job Activ

Bytes in, 1 minute ago

Bytes out, 1 minute ago

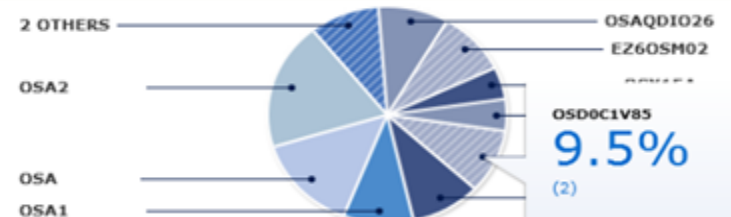
Bytes in, 2 minutes ago

Bytes out, 2 minutes ago

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Open Systems Adapter(OSA) displays

Infrastructure Management > Sysplexes > PLEXC1 > Open Systems Adapter (OSA)



Status	Notes	System	Stack	CHPID value	OSA Name	Device Type	CHPID Type	Interface sp...	Bytes
<input type="checkbox"/>		CA31	TCPP31	12	EZ6OSM01	OSA Ethernet	OSM	1000	
<input type="checkbox"/>		CA31	TCPP31V	12	EZ6OSM01	OSA Ethernet	OSM	1000	
<input type="checkbox"/>		CA31	TCPP31	13	EZ6OSM02	OSA Ethernet	OSM	1000	
<input type="checkbox"/>		CA11	TCPP11V	01	OSA	OSA Ethernet	OSD	1000	
<input type="checkbox"/>		CA31	TCPP31V	01	OSA	OSA Ethernet	OSD	1000	
<input type="checkbox"/>		CA11	TCPP99	00	OSA	OSA Ethernet	OSD	1000	
<input type="checkbox"/>		CA11	TCPP11	00	OSA1	OSA Ethernet	OSD	1000	
<input type="checkbox"/>		CA31	TCPP31	00	OSA1	OSA Ethernet	OSD	1000	
<input type="checkbox"/>		CA11	TCPP11	02	OSA2	OSA Ethernet	OSD	1000	
<input type="checkbox"/>		CA11	TCPP11V	02	OSA2	OSA Ethernet	OSD	1000	

Selected 1 item | Clear

Displaying 21 items at Mon, Dec 17, 2012 07:23:07 PM

Details for OSA Interface OSA2 Stack TCPIP11 on System CA11 PLEXC1

Investigator – seamless integration systems and network



Investigator - Mozilla Firefox
 ca11.9304/Chorus/chorusR2.html?id=123456789&locale=en

Save Path Clear Path

Infrastructure Management << Infrastructure Management > ... > PLEXC1 > CA11 > CICS >

Enter a search keyword

DB2 Performance
 Active Configuration
 Sysplexes
 PLEXC1
 Workload Manager Systems C
 Open Systems Adapter (OSA)
 Sysplex Distributor Targets
 CA11
 CICS
 CICS Regions
 CICS Exception Alerts
 Policies
 Statistics
 DB2
 IMS
 Network
 WebSphere MQ
 z/OS
 CA31
 Systems Summary

CICS Regions

Status	Notes	Sysplex	System	Jobname	ExecStage	Status	RowStat
<input type="checkbox"/>		PLEXC1	CA11	DIDECICS	EXECUTING	NOSTART	NONE
<input type="checkbox"/>		PLEXC1	CA11	DLV1C410	EXECUTING	NOSTART	NONE
<input type="checkbox"/>		PLEXC1	CA11	DLV1C420	EXECUTING	NOSTART	NONE
<input type="checkbox"/>		PLEXC1	CA11	GQACICS4	INACTIVE	NONE	NONE
<input type="checkbox"/>		PLEXC1	CA11	QACQ410	EXECUTING	ACTIVE	NORMAL
<input type="checkbox"/>		PLEXC1	CA11	QACQ420	EXECUTING	ACTIVE	NORMAL
<input checked="" type="checkbox"/>		PLEXC1	CA11	QACX410	EXECUTING	ACTIVE	NORMAL
<input type="checkbox"/>		PLEXC1	CA11	QACX420	EXECUTING	ACTIVE	NORMAL
<input type="checkbox"/>		PLEXC1	CA11	QACX510	INITIAL-2	NONE	NONE
<input type="checkbox"/>		PLEXC1	CA11	SYSVC670	INACTIVE	NONE	NONE
<input type="checkbox"/>		PLEXC1	CA11	SYSVC680	INACTIVE	NONE	NONE
<input type="checkbox"/>		PLEXC1	CA11	P\$OMC41T	EXECUTING	NOSTART	NONE

Selected 1 item Clear

Displaying many items at Mon, Dec 17, 2012 07:10:12 PM

Details for CICS region QACX410 on CA11 in PLEXC1

Degradation on Sys Interval Degradation Alerts Active Tasks Hourly Activity Transactions on Sys Interval Transactions Connections Sockets TCP Activity TCP Connections Perfo

Status	Notes	Sysplex	System	Jobname	Resource	Average	Pct%	Total	Metric
--------	-------	---------	--------	---------	----------	---------	------	-------	--------

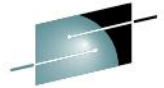
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Actions

- Add Entry to Time Series
- Add to Topology Viewer
- Show degradation analysis on sys
- Show degradation analysis
- Show exception alerts
- Show active tasks
- Show activity in hourly intervals
- Show activity in 5 minute intervals
- Show transaction summary on sys
- Show transaction summary
- Show connections status
- Show socket listener services
- Show TCP activity
- Show TCP connections
- Show threshold policies
- Show state policies



Interactive Problem and Diagnostic Tools



SHARE

Welcome: GUESS, CRAIG S

Home | Log Out | Full Window | Help

WebCenter Menu

Expand All | Collapse All

- Diagnostics
- Monitoring
- Performance Center
 - IP Growth Tracker
 - Subsystem Traffic Summary
 - EE Traffic Summary
 - Enterprise Extender
 - Performance Data Manager
- IP Stacks
- Business Applications
- Telnet Applications
- FTP Users
- Network
 - Home Addresses
 - Stack Network Interfaces
 - Ports
 - IP Nodes
 - OSA Cards
 - Cisco Channel Cards
 - VIPA
 - Address Spaces
 - CSM
- History
- SYSVIEW
- Utilities

Subsystem Traffic Summary

System Name: CA11

Execute

Subsystem Traffic Summary Results

Subsystem Charts

Subsystem Summary for CA11

Subsystem	Value	Percentage
DB2	1192k	<1%
CICS	0	0%
IMS	0	0%
MQ	0	0%
Other	676M	>99%

DB2 Address Spaces

Address Space	Value	Percentage
D918DIST	1192k	>99%
D80GDIST	312	<1%

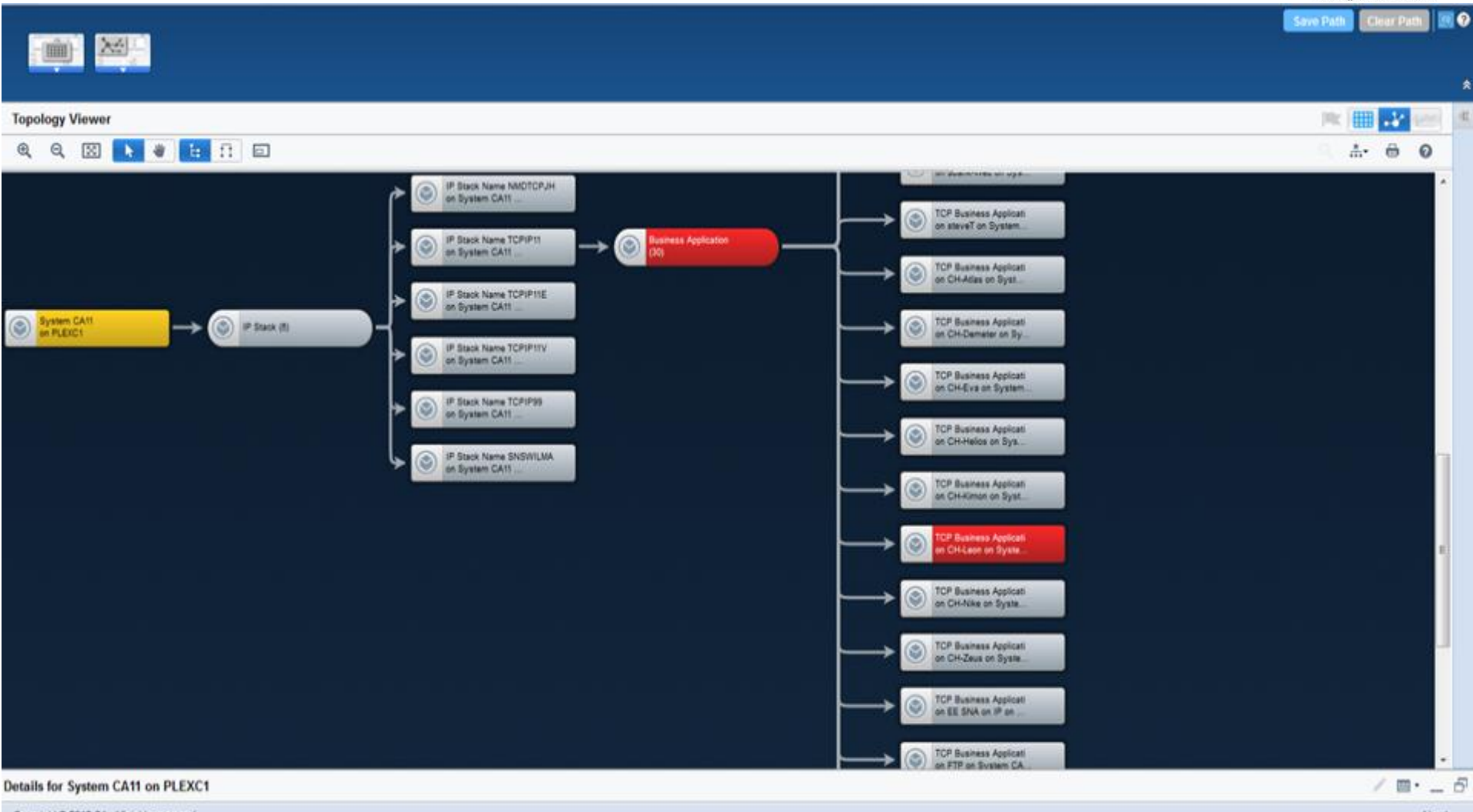
Back to Top

Details for DB2 subsystem

Notes	Agent ID

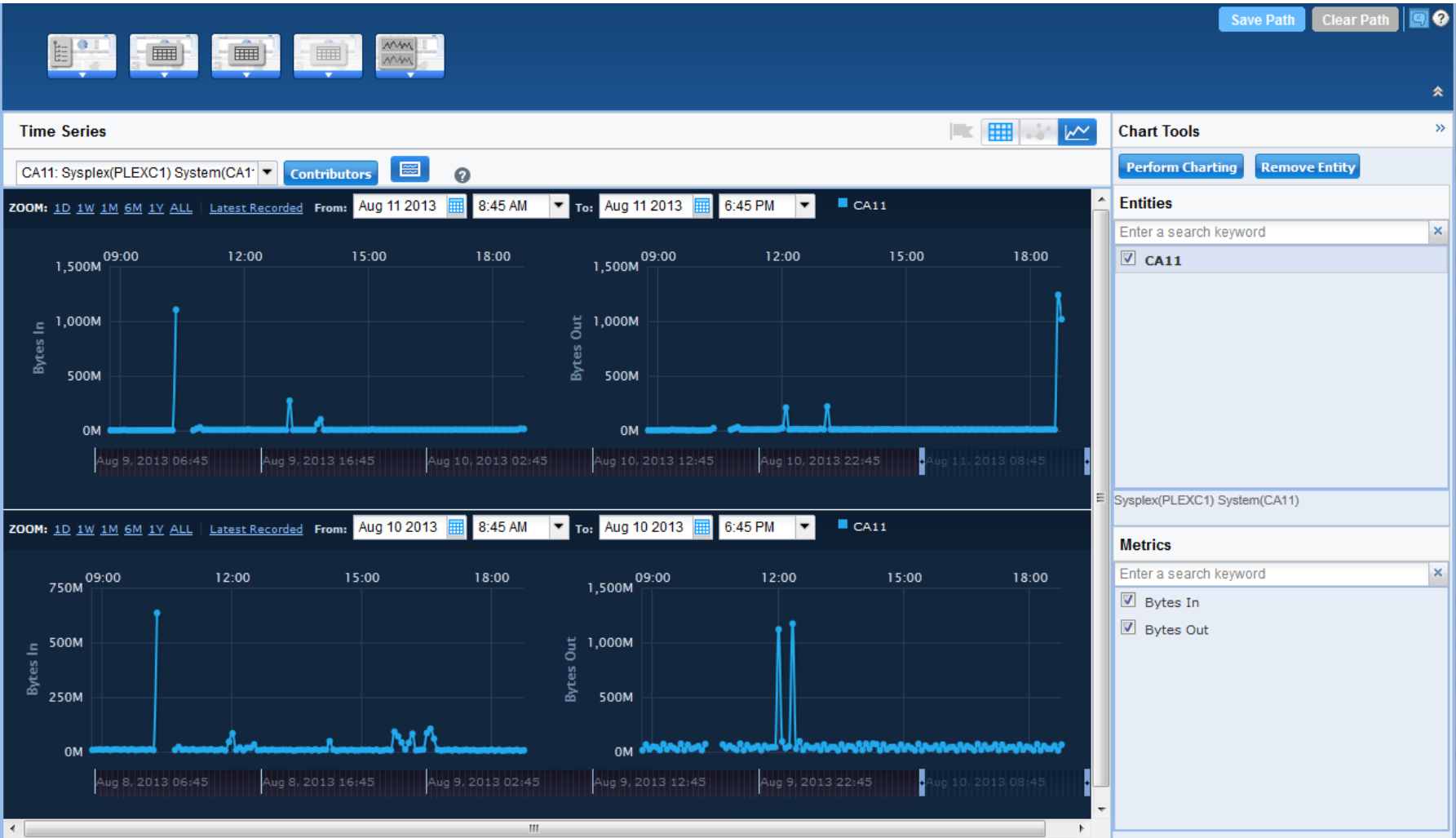
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Topology



Time Series Facility

Real Time and Historical



consolidated performance reporting and quick-link web navigation



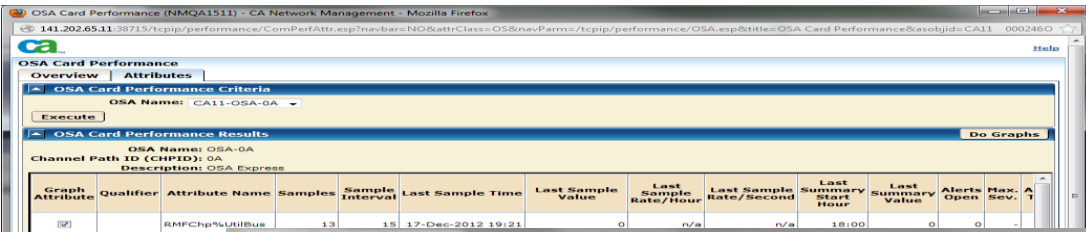
Consolidated Performance Reporting

- Filtering, new graphs, and the ability to export data to external sources
- Export data from visible tabular-columns to CSV file structures
- Generate Reports

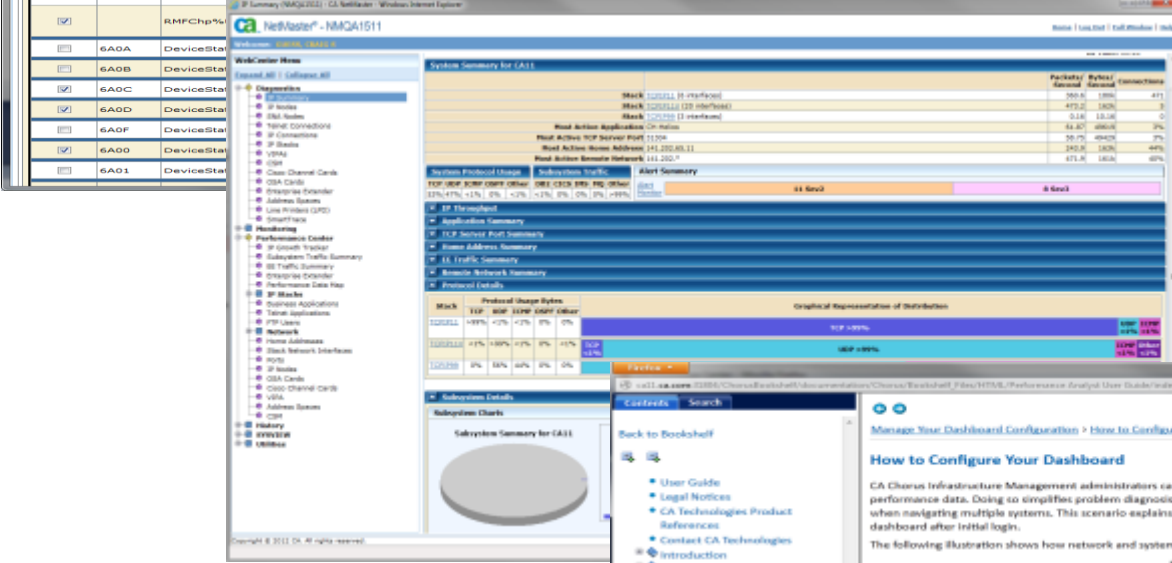
Investigator QuickLink Web Navigation

- New, dynamic, and actionable from resource level displays.
- Create your own QuickLinks module to manage various tasks or house data
- Web Application Module – add your own web application to dashboards.. Ex. Weather, News, etc

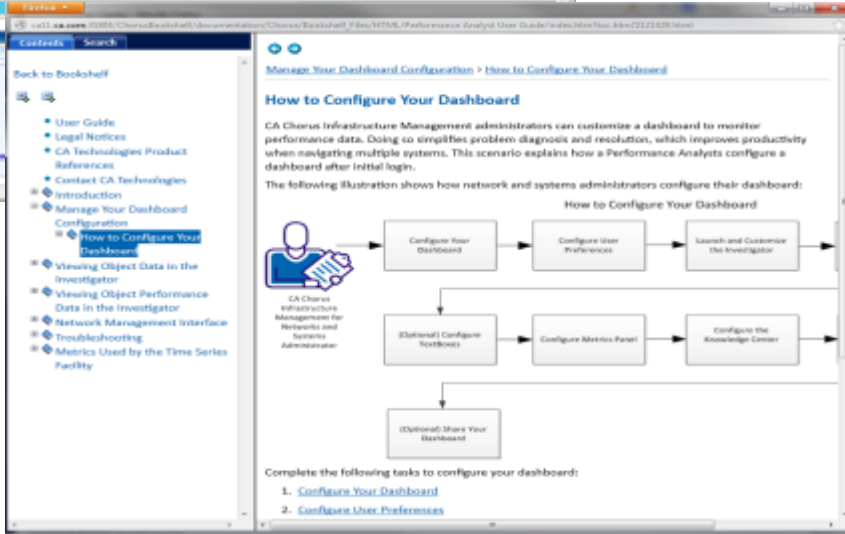
integration – extending the power



Deep analysis



Knowledge



Questions?

CA Chorus™ Infrastructure Management for Networks and Systems



CA Performance Alerts and
Charts



CA NetMaster to Mobile and Beyond a bold new frontier

Thank you..

Craig Guess
CA Technologies

August 12th 2013
13296

