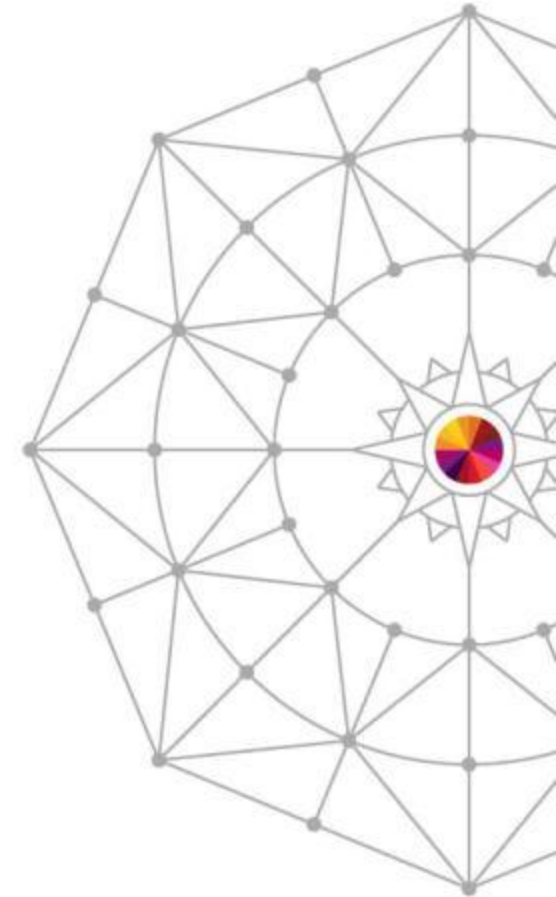


# CA Chorus™ Infrastructure Management Update

Speaker Name: Sam Knutson, Craig Guess  
Speaker Company: CA Technologies

Date of Presentation: March 13<sup>th</sup>, 2014  
Session Number: 15377



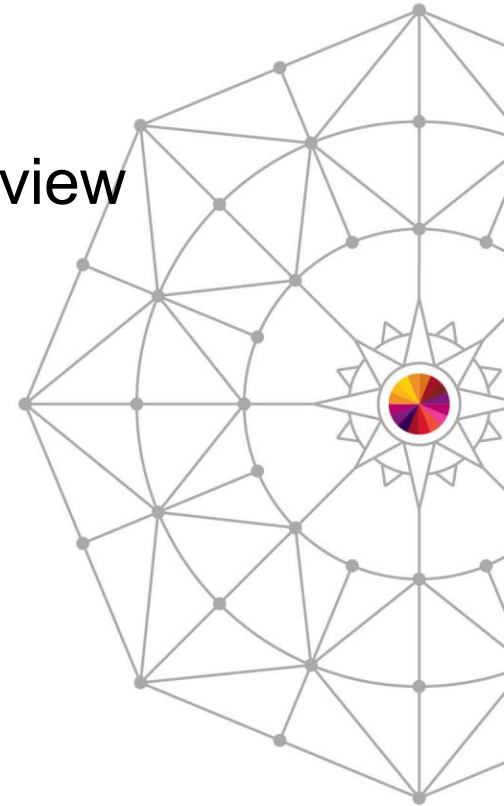
# Agenda

Disruption in the Data Center

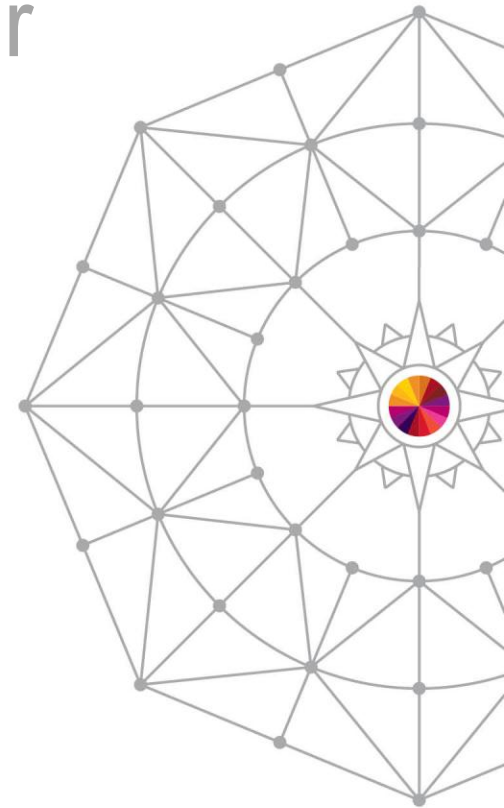
CA Chorus™ Infrastructure Management Overview

Demo of Chorus™ IM

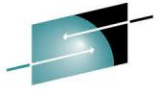
Q&A



# Disruption in the Data Center



# Dynamic Data Center: Business Solutions on Demand



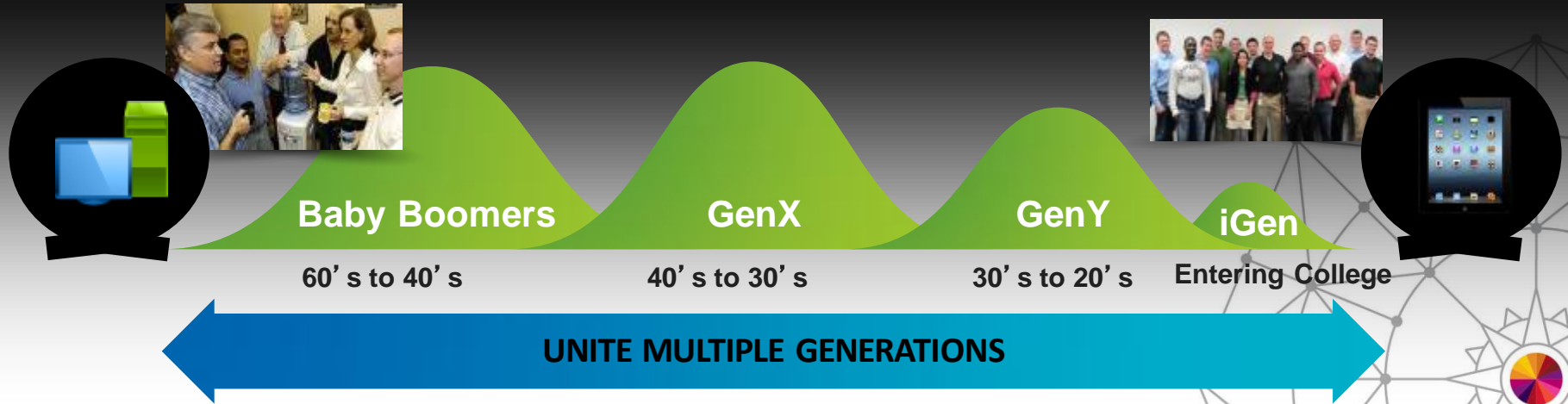
ARE  
lections • Results





# Changing World of IT

## PEOPLE



**AGILITY**

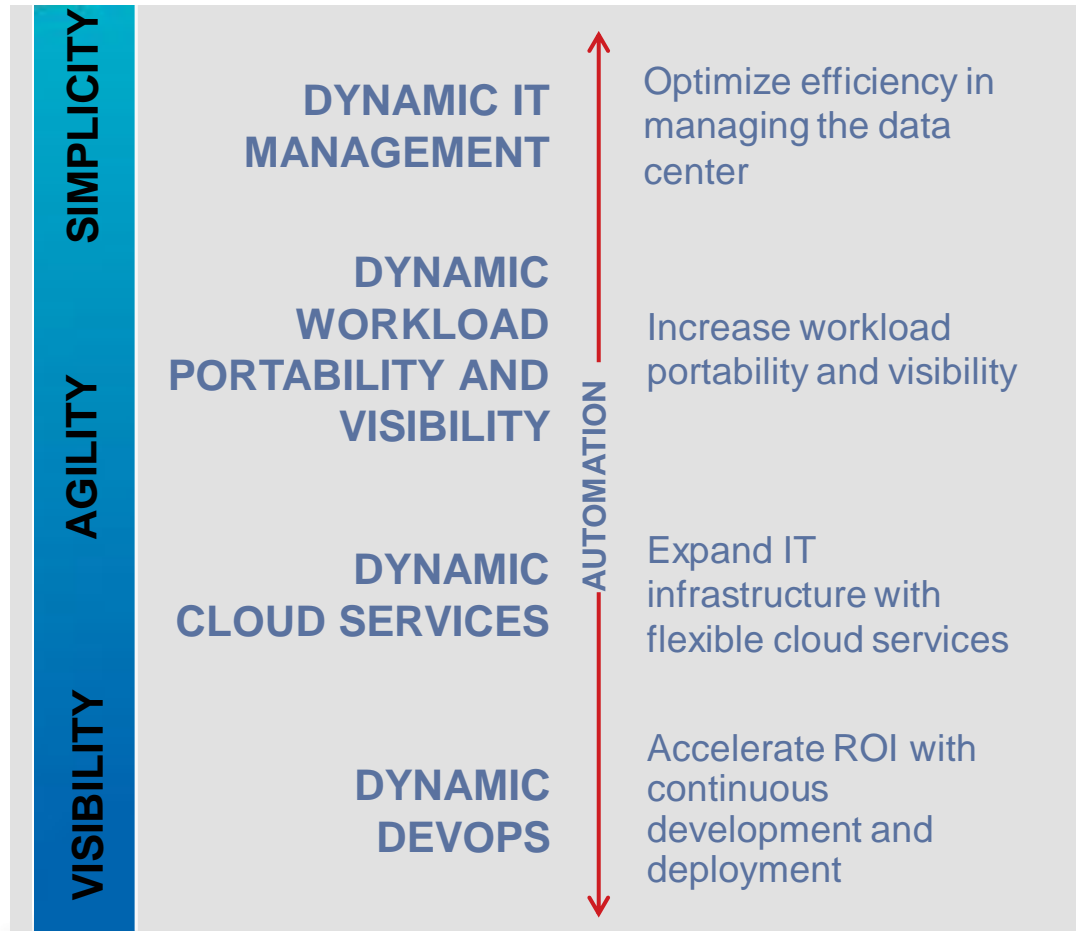
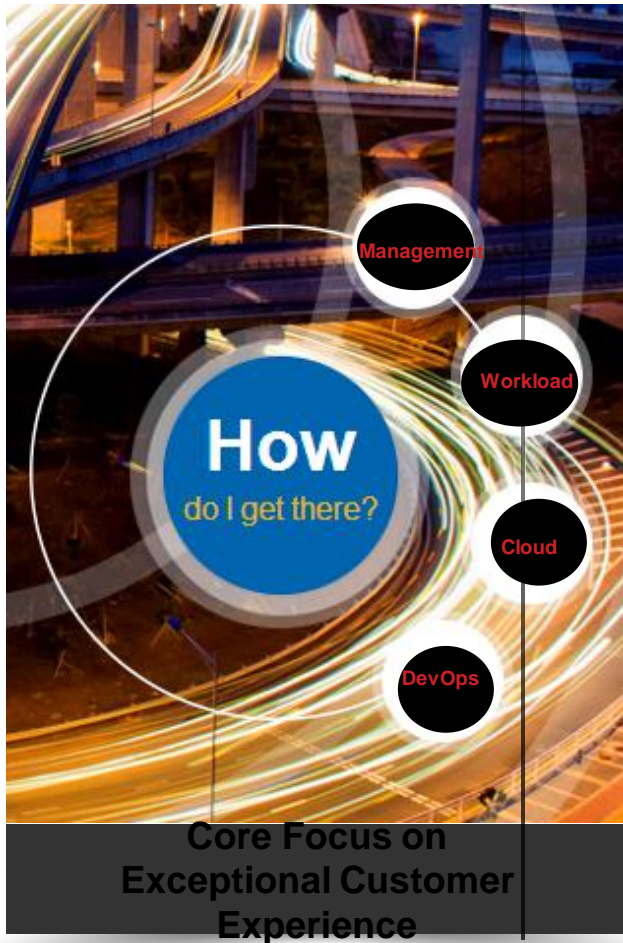


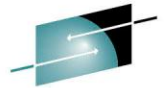
**ENABLEMENT**



**TECHNOLOGY**

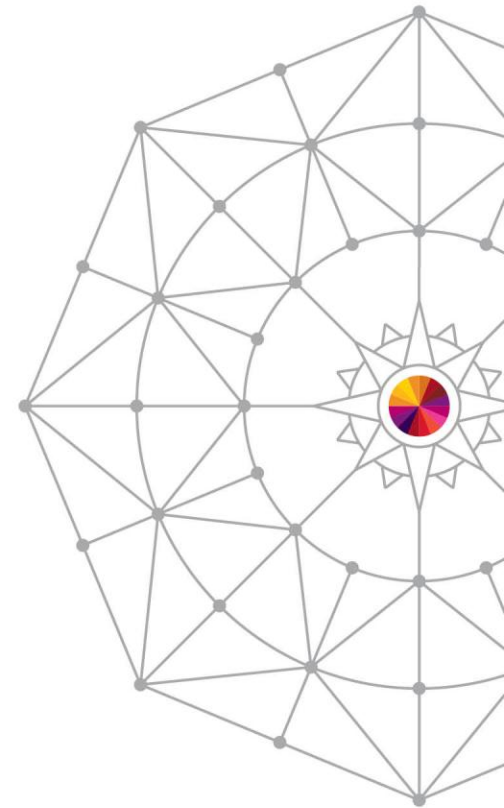
# CA Technologies Empowers the Dynamic Data Center





**SHARE**  
Technology • Connections • Results

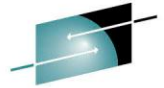
# CA Chorus



Complete your session evaluations online at [www.share.org/Anaheim-Eval](http://www.share.org/Anaheim-Eval)



# www.experiencecachorus.com



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Contact Us

**CA Chorus™** It's all about results for you and your business



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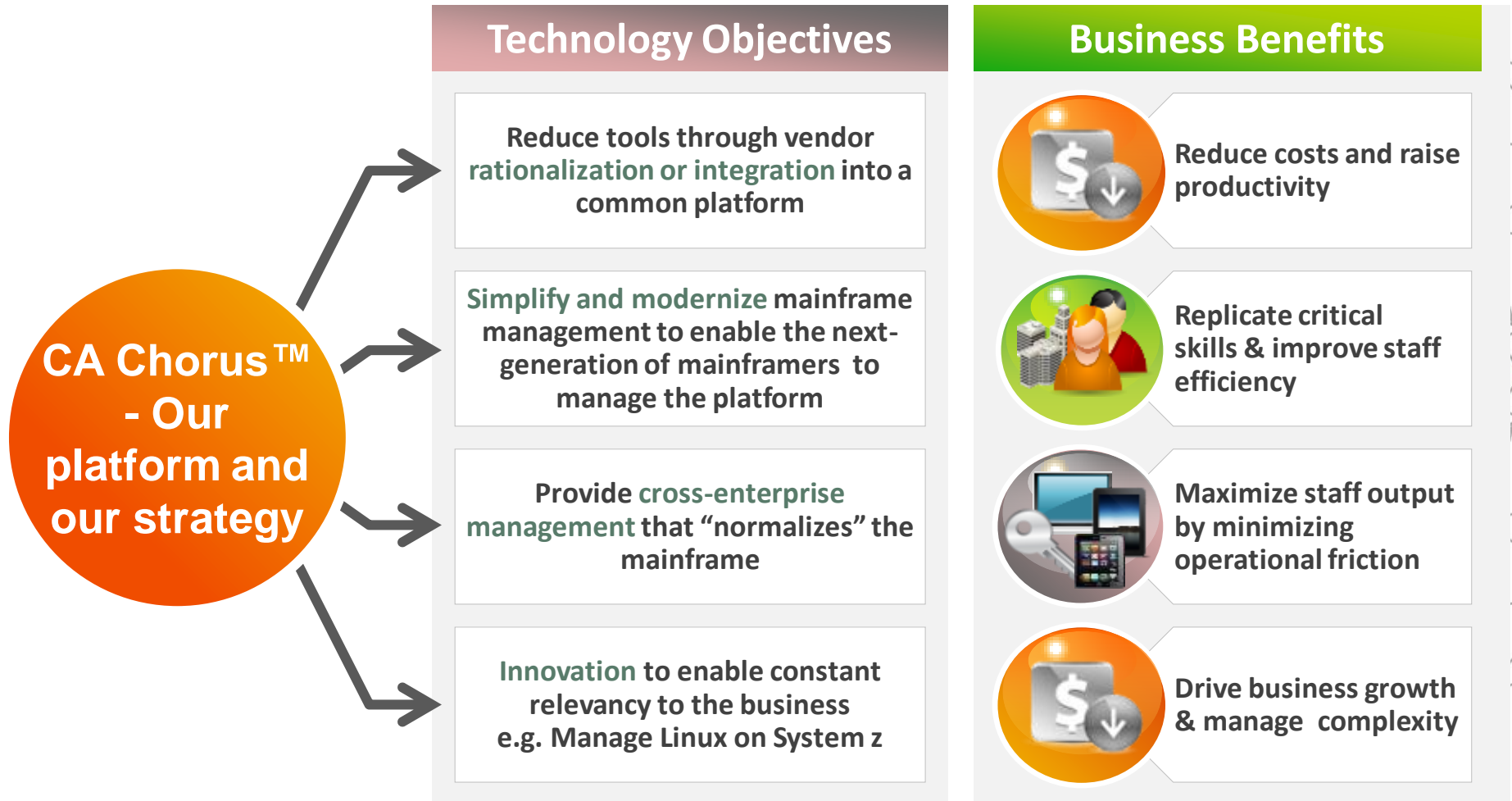
Copyright © 2013 CA. All rights reserved.



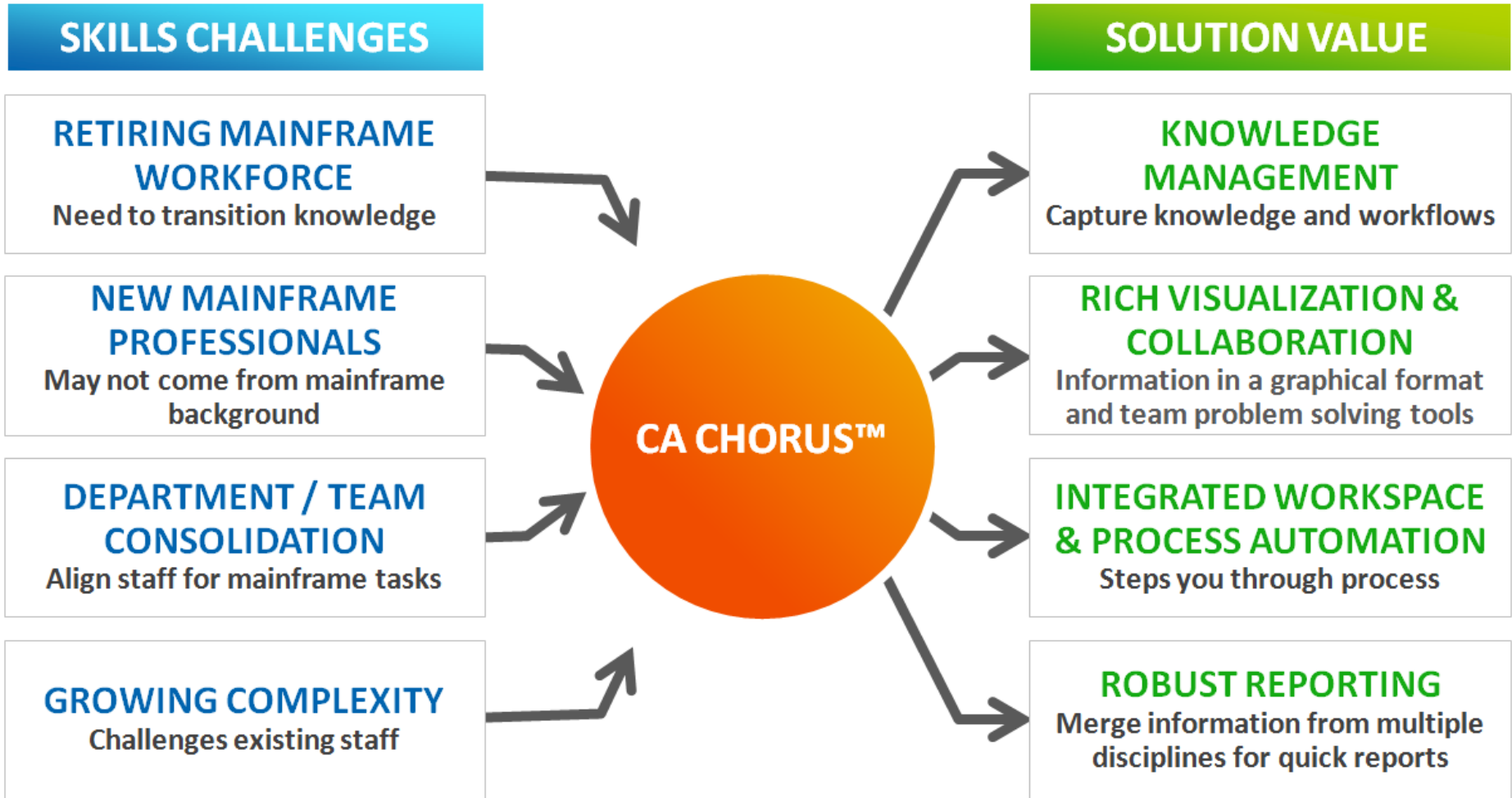


# Transforming IT Management

## Managing the Dynamic Data Center



# Innovation to increase productivity and knowledge transfer

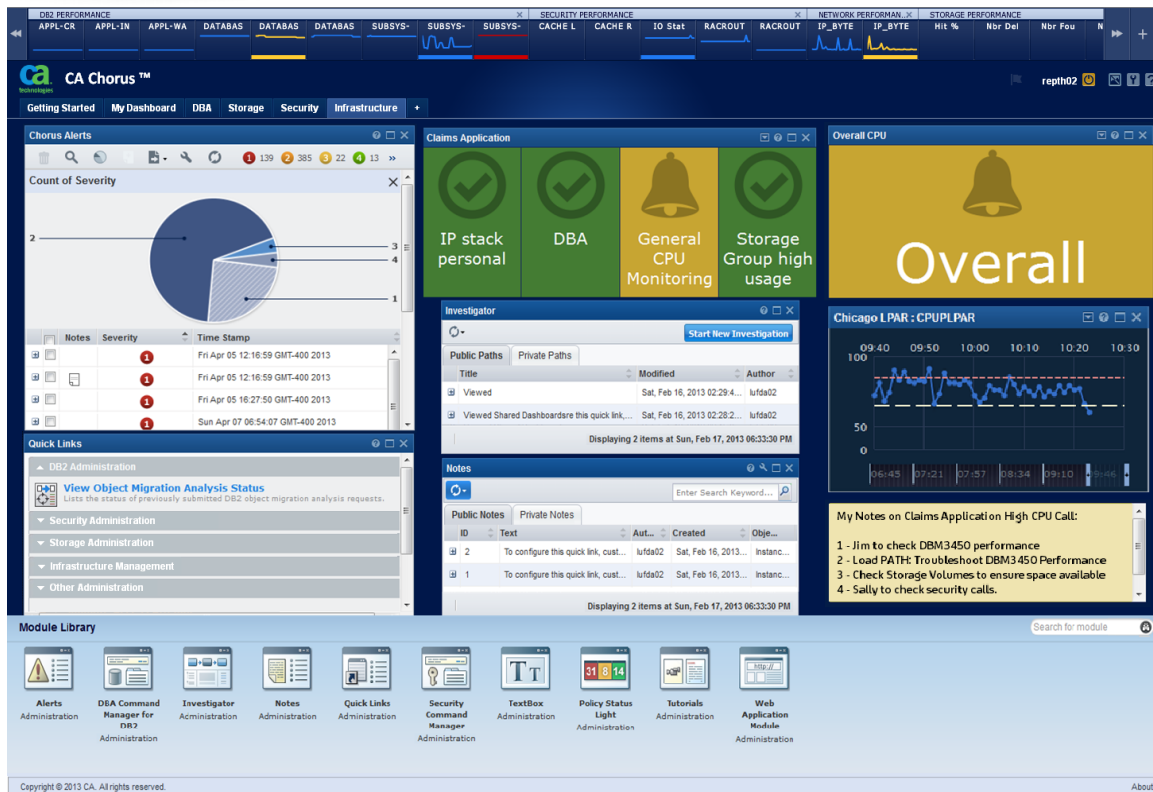


# Dynamic IT Management

## CA Chorus™



### DEFINITIVE MANAGEMENT TOOL FOR THE DYNAMIC DATA CENTER



**INCREASE EFFICIENCY** using integrated workspace

**SOLVE PROBLEMS FASTER** with graphical diagnostics

**ACCELERATE LEARNING CURVE** through knowledge capture

**REDUCE ERRORS AND RISK** with proactive analytics and automation



# Strategy

Transformational IT Management Driving the Dynamic Data Center



Experiences

Any Time, Any Where, Any Device

**Unified Workspace**

**Intuitive User Experience**

Services

**Analytics and Automation**

Proactive • Programmatic • Predictive

**Knowledge Management**

Capture & Transfer • In-context Help • Community Contributed • Social

**Software Management**

Acquisition • Installation • Maintenance • Deployment • Configuration • License  
Key

Data Sources

**Unparalleled Integration**

Cross-domain • Rich Content • Robust Ecosystem • Platform SDK

**Domain Capabilities**

Database • Security & Compliance • Storage • Systems • Networks • Workload • System Automation • others

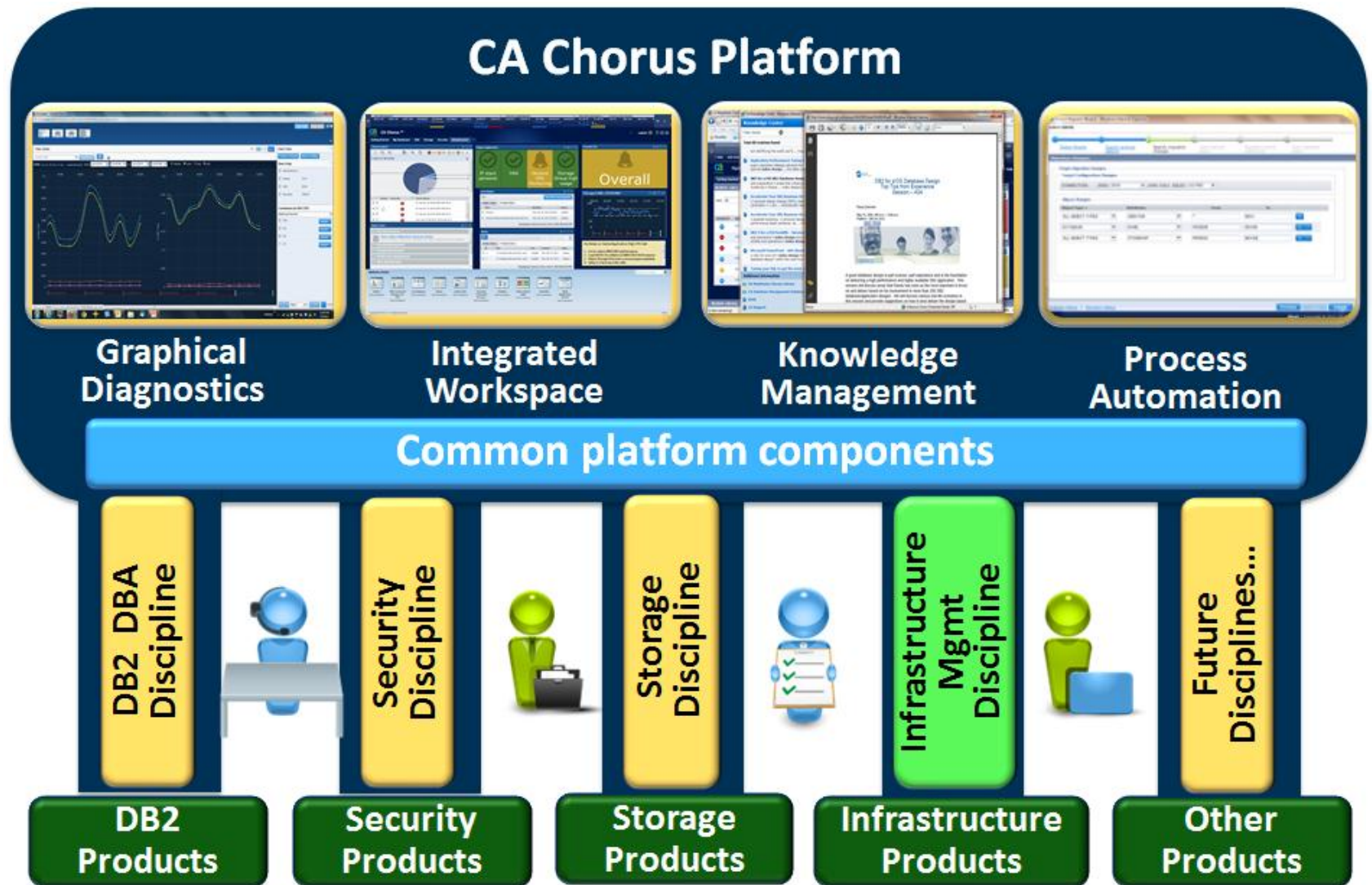
**Platform Agility & Alignment**  
z/OS • z/Linux • P series, X series, L-Intel • Mobile • SaaS

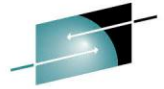
Legend: Current; Future

For CA Technologies Internal Use Only - Strictly Confidential



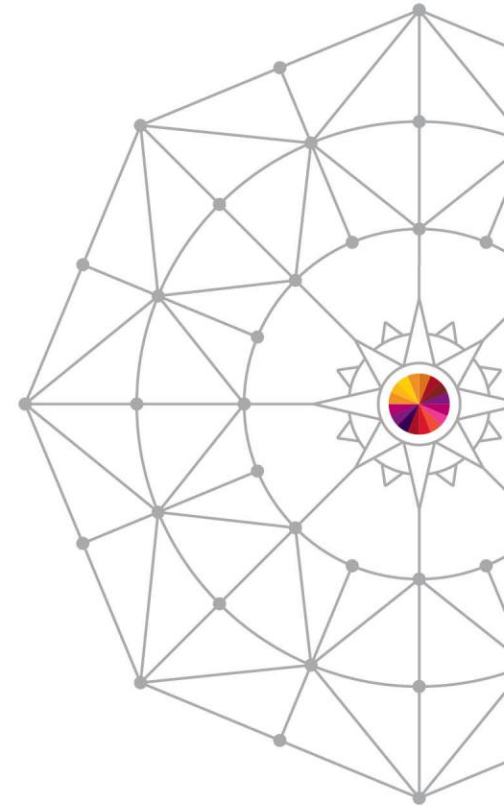
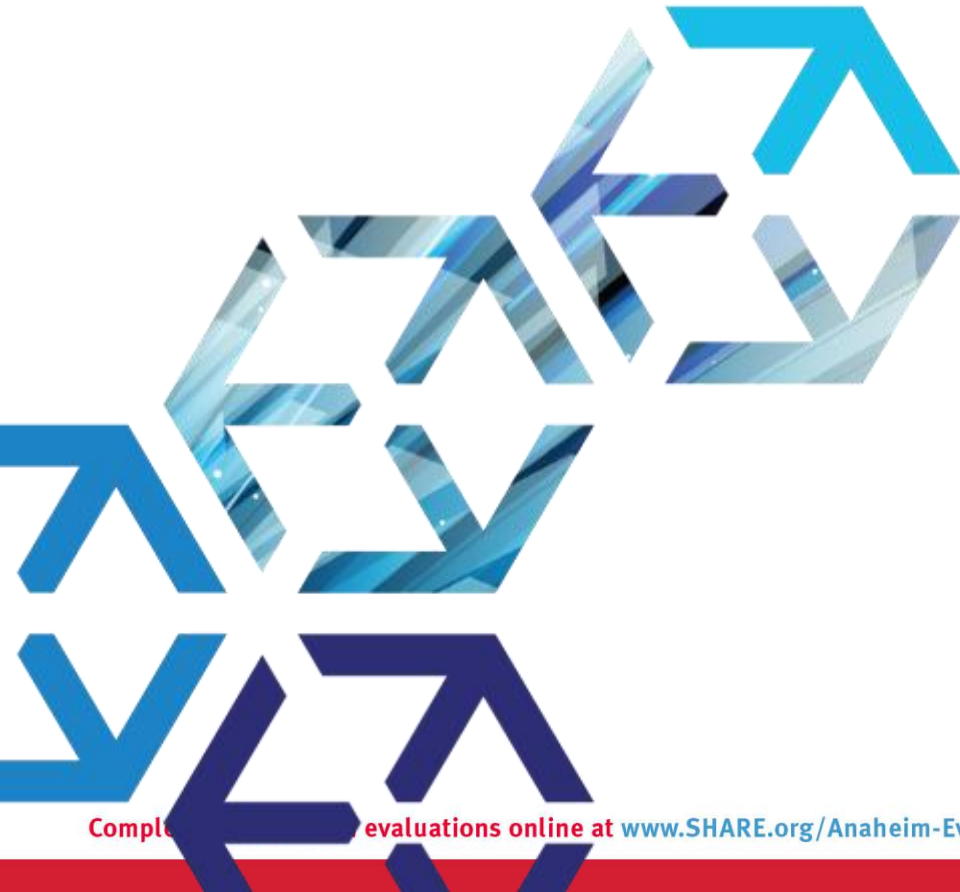
# CA Chorus™ an overview...





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# CA Chorus™ Infrastructure Management Update



Complete evaluations online at [www.SHARE.org/Anaheim-Eval](http://www.SHARE.org/Anaheim-Eval)



# CA Chorus™ Infrastructure Management for Networks and Systems



---

**Enterprise Health Monitoring** → Policy driven consolidated views 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.

---

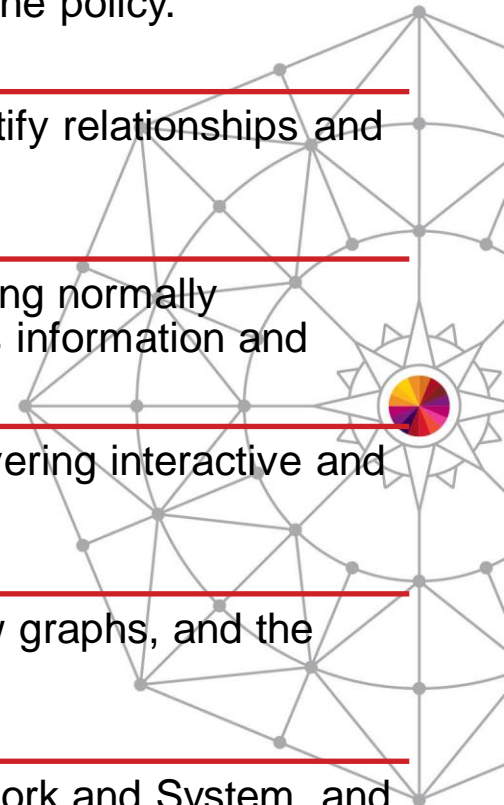
**New System, Network , and Personalized Alert modules** → Delivering interactive and actionable alert notifications.

---

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

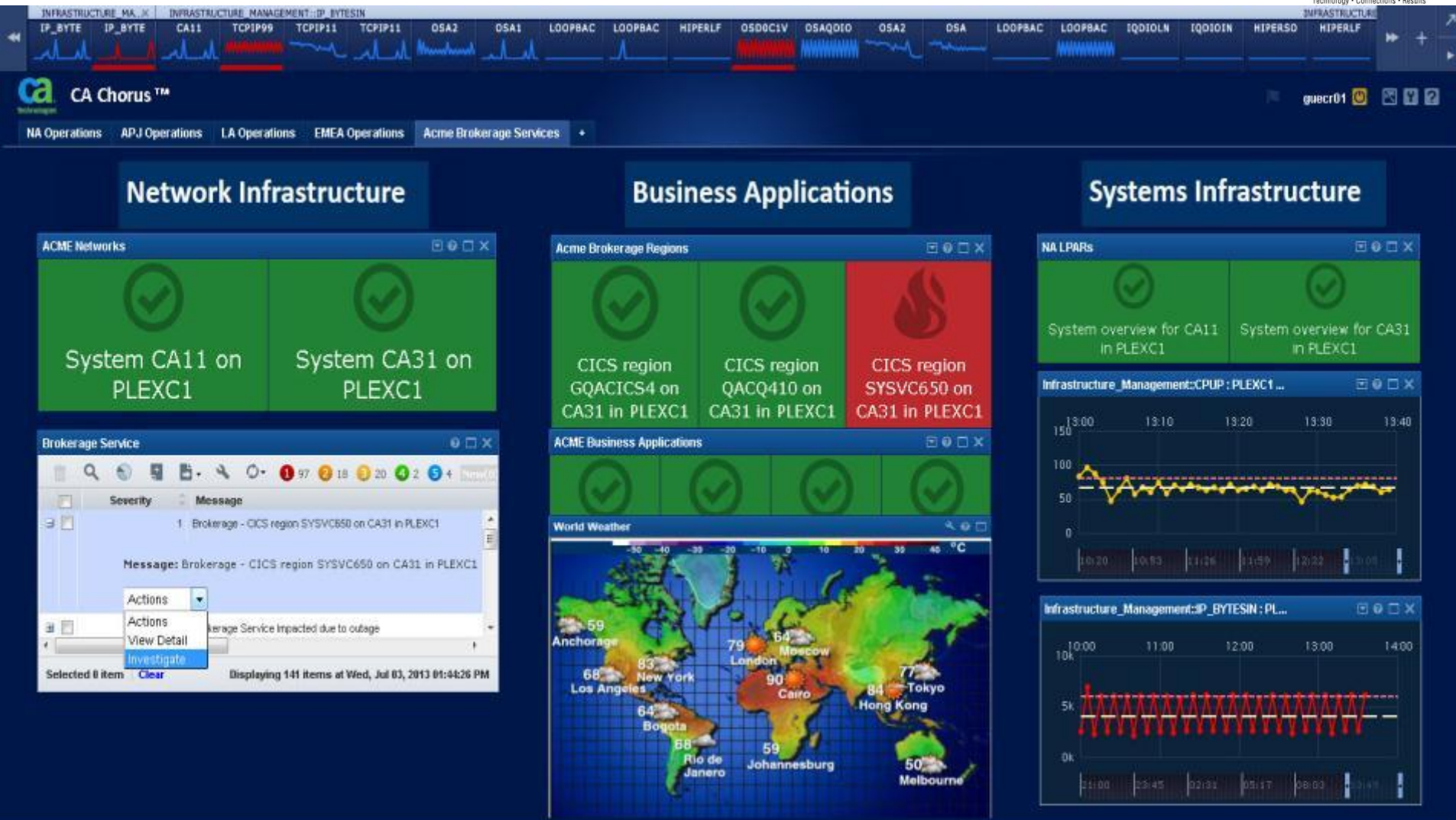
---

**Investigator Quick-link Web Navigation** → New additions for Network and System, and Open to any URL that supports the iFrame technology.





# Enterprise Health Monitoring Dashboards





# Enterprise Health Monitoring Dashboards



Complete your session evaluations online at [www.SHARE.org/Anaheim-Eval](http://www.SHARE.org/Anaheim-Eval)



# Knowledge Sharing Shared Dashboards



The screenshot displays the CA Chorus interface with a 'Shared Dashboards Object Picker' dialog box open. The dialog box has a search field containing 'Chorus' and a list of shared dashboards. The background shows a dashboard with 'Network Infrastructure' and 'Systems Infrastructure' sections, and a 'Brokerage Service' message pane.

**Shared Dashboards Object Picker**

Chorus

Enter a search keyword

**Shared Dashboards**

	Notes	Dashboard Name	Dashboard Au...
<input type="checkbox"/>		Test Storage	tosma01
<input type="checkbox"/>		Scotts shared dashboard	guecr01
<input type="checkbox"/>		SCotts dashboard #2	guecr01
<input type="checkbox"/>		Shared Storage Dashboard	linro03
<input type="checkbox"/>		Leland's Shared Dashboard	towle02
<input type="checkbox"/>		Test	mitde05
<input type="checkbox"/>		Alerts Mods share	flow100
<input type="checkbox"/>		DBA Mod Share	flow100
<input type="checkbox"/>		Test Mods1_Share	flow100
<input type="checkbox"/>		Test Mods2_Share	flow100

Displaying 39 items at Fri, Mar 07, 2014 02:02:06 PM

**Details**

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# Investigator – Analysis across the enterprise



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	PSOMC41T	EXECUTING	NOSTART	NONE

Selected 1 item Clear

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

**Actions**

- Add Entity 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

**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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# Investigator – Analysis across the enterprise



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Infrastructure Management > Sysplexes > PLEXC1 >

Open Systems Adapter (OSA)

Status	Notes	System	Stack	CHPID value	OSA Name	Device Type	CHPID Type	Interface sp...	Bytes t
<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 TCP11 on System CA11 PLEXC1



# Enterprise Health Monitoring

## Viewing Alerts



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ca11.ca.com:31804/Chorus/Chorus.html

INFRASTRUCTURE MANAGEMENT: IP\_BYTESIN

CA11 TCP1P99 TCP1P11 TCP1P11 OSA2 OSA1 LOOPBAC LOOPBAC HIPERLF OSD0C1V OSAQD1O OSA2 OSA LOOPBAC LOOPBAC IQDIOLN IQDIOIN HIPERSO HIPERL

CA Chorus™

Getting Started My Dashboard

**CICS Alerts**

Notes	Severity	Name	Time
	1	TDATTRIG	Tue Feb 26 03:52:00 GMT-500 2013
	1	TDATTRIG	Fri Feb 22 22:28:00 GMT-500 2013
	2	SOCKSTAT	Tue Feb 26 03:52:00 GMT-500 2013
	2	SOCKSTAT	Fri Feb 22 20:29:00 GMT-500 2013
	2	SOCKSTAT	Fri Feb 22 22:27:00 GMT-500 2013

Displaying 114 items at Tue, Feb 26, 2013 08:44:04 PM

**z/OS Alerts**

Notes	Severity	Name	Time
	1	CPUSTAT	Tue Feb 26 05:27:00 GMT-500 2013
	1	STGESQA%	Tue Feb 26 05:36:30 GMT-500 2013
	1	STGSQAF	Mon Feb 25 03:08:00 GMT-500 2013
	1	JOBGPU%	Sat Feb 23 05:16:00 GMT-500 2013
	1	JOBGPU%	Mon Feb 25 20:43:00 GMT-500 2013

Displaying 182 items at Tue, Feb 26, 2013 09:30:14 PM

**Network Alerts**

Notes	Severity	Resource Name	Message
	2	141.202.36.74	IPNODE: NETSTATUS is Timeout
	2	D11ADIST	ASMON (TCP1P31-TCP(5254)): PortStatus is UNKNOWN
	2	D11ADIST	ASMON (TCP1P31V-TCP(5254)): PortStatus is UNKNOWN
	2	TCP1P31	STACK (OSX15A): #StatusOper is Down
	2	TCP1P31	STACK (OSX2300): #StatusOper is Down

Displaying 19 items at Tue, Feb 26, 2013 09:30:33 PM

**Network Alerts**

Count of Alert ID

Alert ID	Count
NMQA1431 20130226115100...	1
NMQA1431 201302261201...	1
NMQA1511 2013022612...	1
NMQA1511 20130226...	1
NMQA1431 20130226...	1
NMQA1431 20130226...	1
NMQA1431 2013022611...	1
NMQA1431 201302261201...	1
NMQA1511 20130226121400...	1
10 OTHERS	10

Module Library

ca11.ca.com:31804/Chorus/Chorus.html#

About

# Interactive Problem and Diagnostic Time Series Facility – Flexible Time Analysis

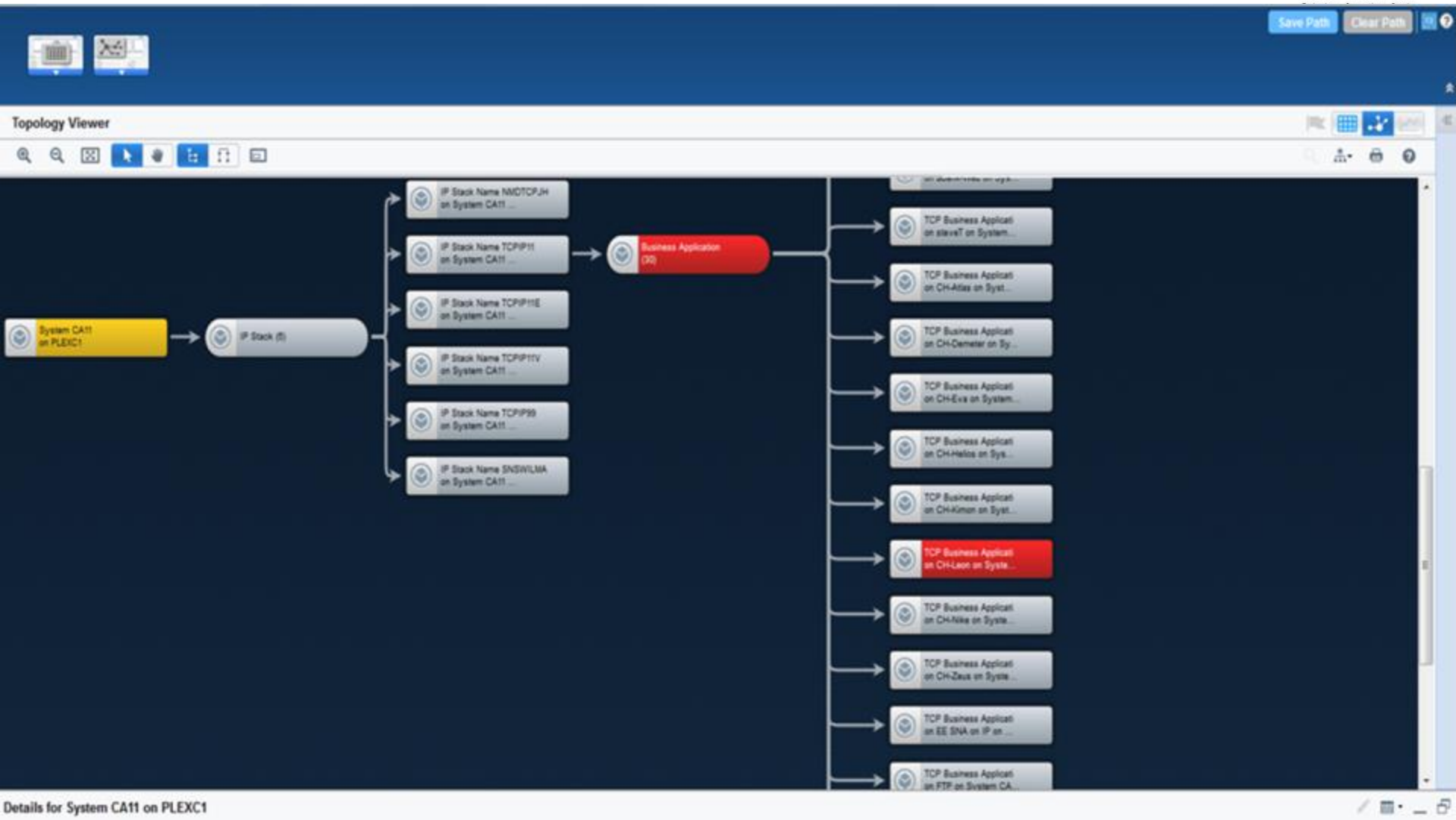


# Interactive Problem and Diagnostic Tools

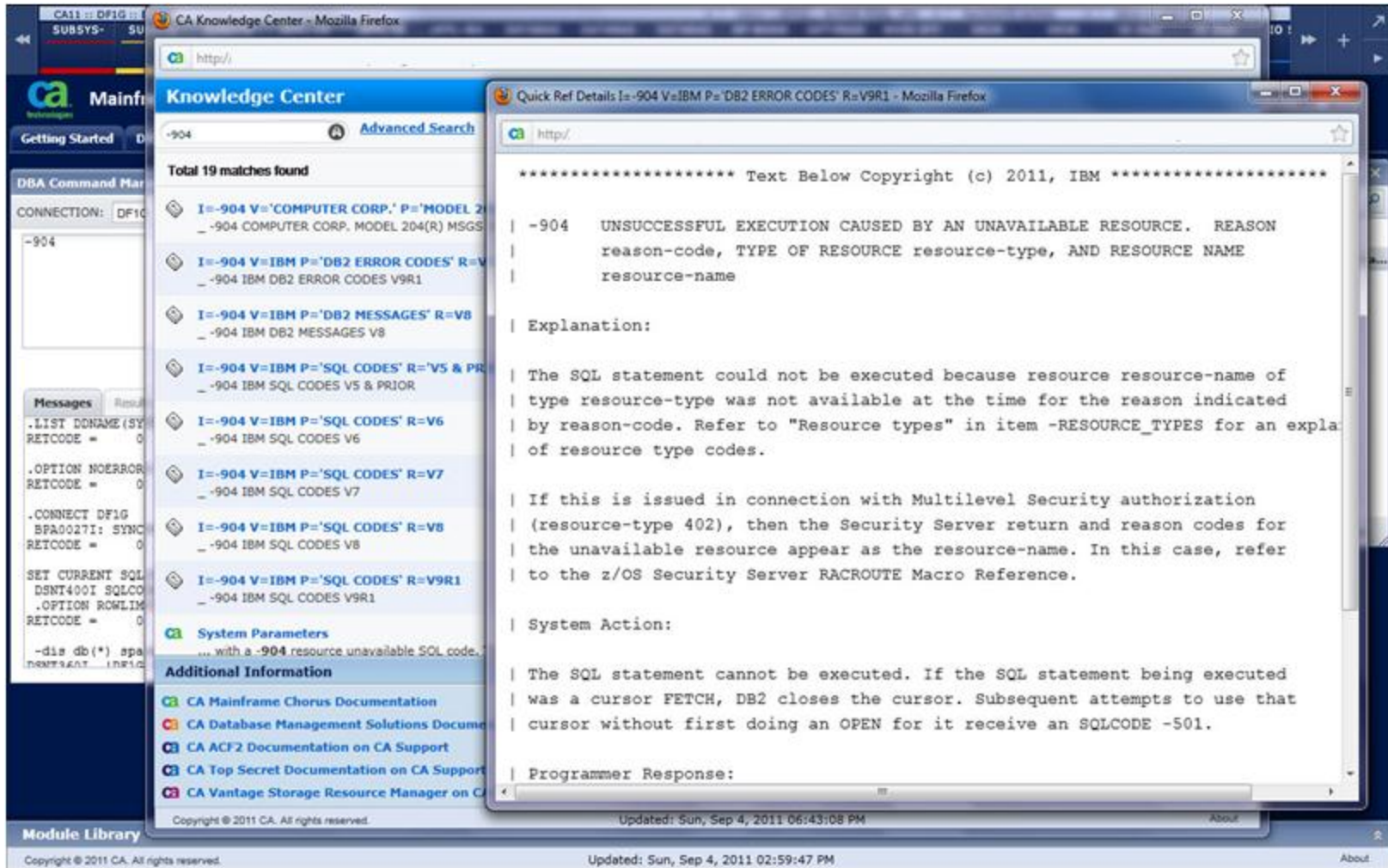
## Topology – Relationships and Status



Save Path Clear Path



# Knowledge Center: Quickref



The screenshot displays the CA Knowledge Center interface in Mozilla Firefox. The main window shows search results for the query '-904', listing 19 matches. The results include various IBM DB2 error codes and their descriptions, such as 'COMPUTER CORP. MODEL 204(R) MSGS', 'DB2 ERROR CODES V9R1', 'DB2 MESSAGES V8', 'SQL CODES V5 & PRIOR', 'SQL CODES V6', 'SQL CODES V7', 'SQL CODES V8', and 'SQL CODES V9R1'. Below the search results, there are links to additional information, including CA Mainframe Chorus Documentation, CA Database Management Solutions Documentation, CA ACF2 Documentation on CA Support, CA Top Secret Documentation on CA Support, and CA Vantage Storage Resource Manager on CA Support.

An inset window titled 'Quick Ref Details I=-904 V=IBM P='DB2 ERROR CODES' R=V9R1' provides detailed information for the selected error code. The content includes:

```

***** Text Below Copyright (c) 2011, IBM *****

-904  UNSUCCESSFUL EXECUTION CAUSED BY AN UNAVAILABLE RESOURCE.  REASON
      reason-code, TYPE OF RESOURCE resource-type, AND RESOURCE NAME
      resource-name

Explanation:

The SQL statement could not be executed because resource resource-name of
type resource-type was not available at the time for the reason indicated
by reason-code. Refer to "Resource types" in item -RESOURCE_TYPES for an expla
of resource type codes.

If this is issued in connection with Multilevel Security authorization
(resource-type 402), then the Security Server return and reason codes for
the unavailable resource appear as the resource-name. In this case, refer
to the z/OS Security Server RACROUTE Macro Reference.

System Action:

The SQL statement cannot be executed. If the SQL statement being executed
was a cursor FETCH, DB2 closes the cursor. Subsequent attempts to use that
cursor without first doing an OPEN for it receive an SQLCODE -501.

Programmer Response:
  
```

The interface also shows a terminal window on the left with commands like 'CONNECT DF1G', 'SET CURRENT SQL DSNT400I SQLCO', and 'OPTION ROWLIM'. The footer of the interface includes copyright information for 2011 CA and update dates for the content.



# Collaboration export and launch Excel

Infrastructure Management > ... > PLEXDEMO > CA06 > CICS >

Enter a search keyword

**CICS Regions**

Notes	Sysplex	System	Jobname	ExecStage	Status	Row
	PLEXDEMO	CA06	CICSRGN1	EXECUTING	ACTIVE	NORM
	PLEXDEMO	CA06	CICSRGN2	EXECUTING	ACTIVE	NORMAL

Export to CSV  
Export Metadata

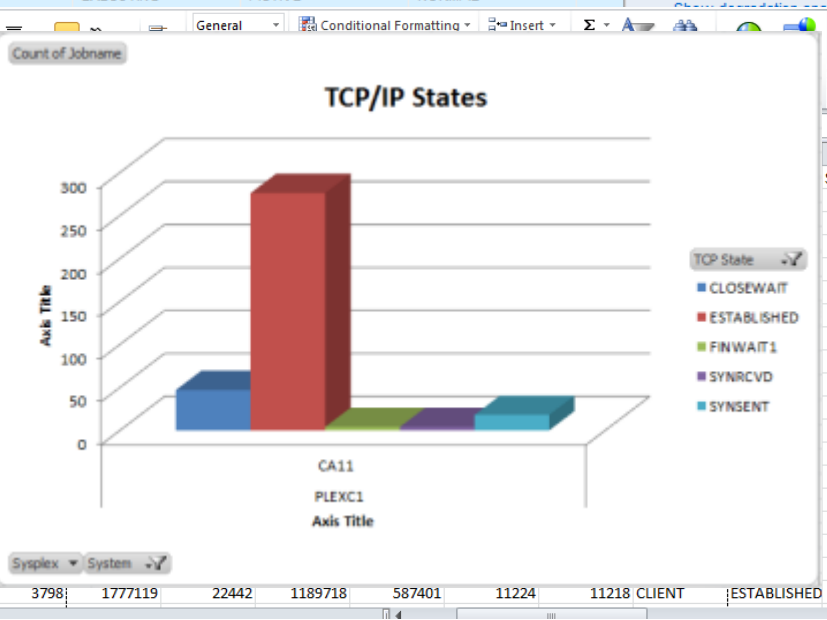
Navigation  
Add to Topology Viewer  
Show degradation analysis on sys

Clipboard

Font

Count of Jobname

### TCP/IP States



D	E	F	Pa
1	Local Address	Local Port	Bytes 5 Min
2	141.202.65.11	15928	7474351
3	141.202.65.11	33107	7474351
4	141.202.65.11	35999	6980189
5	141.202.65.11	9307	6980189
6	141.202.65.11	7000	1826016
7	141.202.65.11	6791	1291509
8	141.202.65.11	31804	1482304
9	141.202.65.11	31804	1480757
10	141.202.65.11	31804	1263514
11	141.202.65.11	20573	578048
12	141.202.65.11	9388	578048
13	141.202.65.11	20579	563255
14	141.202.65.11	9388	563255
15	141.202.65.11	1023	411652
16	141.202.65.11	31804	388450
17	141.202.65.11	1023	354637
18	141.202.65.11	1023	353814
19	141.202.65.11	56642	299626

3798 | 1777119 | 22442 | 1189718 | 587401 | 11224 | 11218 CLIENT | ESTABLISHED

Updated Fri, Mar 07, 2014 02:35:15 PM

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# Knowledge Sharing Custom Views

Infrastructure Management > ... > CA11 > Network > Infrastructure >

Enter a search keyword

- Policies
- Sysplexes
  - PLEXC1
    - Workload Manager Systems Co
    - Open Systems Adapter (OSA)
    - Sysplex Distributor Target Jobs
    - CA11
      - CICS
        - CICS Regions
        - CICS Exception Alerts
        - Statistics
        - DB2
        - IMS
        - Network
          - IP Activity
          - Infrastructure
            - IP Stacks

	Bytes Out	Packets In	Packets Out	Conns 0.01S	Conns 0.1S	Conns 0.5S	Conns
65,433	656,262	12,538	7,595	0	0	0	
71,144	137,765,206,627	135,185,226	169,575,829	1,247,501	655,845	3,452,956	
24,420	44,502,061	230,475	290,375	7,133	0	2	
34,727	2,349,088	34,894	34,894	0	0	0	

Selected 0 item | Clear

Details for IP Stack Name TCP/IP11 on System CA11 PLEXC1

Traffic 1 Min | Traffic 5 Min | Conn Durations | Stack Details | Job Activity | Custom Packets +

Packets in, last 5-minute clock interval	788,496
Packets in, 2 intervals ago	765,058
Packets in, 3 intervals ago	692,843
Packets in, 4 intervals ago	119,112
Packets out, 4 intervals ago	131,426

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Views

Public Views | Private Views

Title	Modified	Author
Packet Intervals	Fri Mar 07 12:50:02 GMT-500 2014	guecr01
Custom Packet View	Fri Mar 07 13:57:40 GMT-500 2014	guecr01

System Default | Close

Actions

- Show IP Network Growth Graphs
- Show IP Traffic Rate Graphs
- Enter Netstat Command
- Diagnose this IP Stack
- Show CSM Storage Measurements
- Show Stack IP, TCP, UDP Measure
- Trace and View IP Packets
- Show Job Activity
- Show Network Interfaces
- Show VIPA Interfaces





... online at [www.SHARE.org/Anaheim-Eval](http://www.SHARE.org/Anaheim-Eval)

# Knowledge Sharing Saved Paths

## Knowledge Center

### Advanced Search

guecr01  

#### Show results with

The exact phrase:

All of these words:

Any of these words:

None of these words:

#### Show results from

Select All

MVS/QuickRef

User Documentation

CA Chorus Documentation

CA Database Management Solutions Documentation on CA Support

Always search only these sources






Search

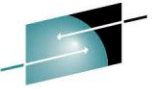
Close

#### Total 13 matches found

-  **Path:IM TCP Port Analysis**  
[No Path Description Available]
-  **Path:IM OSA Analysis**  
[No Path Description Available]
-  **Path:flow100, IM\_2\_Complete\_Public**  
Created, IM\_2\_Complete\_Public
-  **Path:IM CICS Region Analysis**  
CICS Region analysis
-  **CA Technologies IT management Software and Solutions**  
... Nur CA Technologies kann diese Anliegen **im** gesamten... Channel Index von CA Technologies 21.10.2013 KuppingerCole zeichnet CA Technologies **im** aktuellen Leadership Compass **im** Bereich Access Management and Federation aus

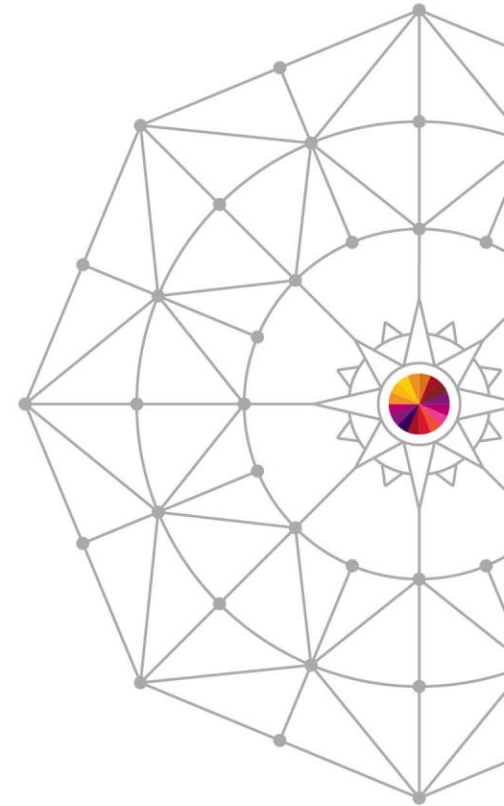
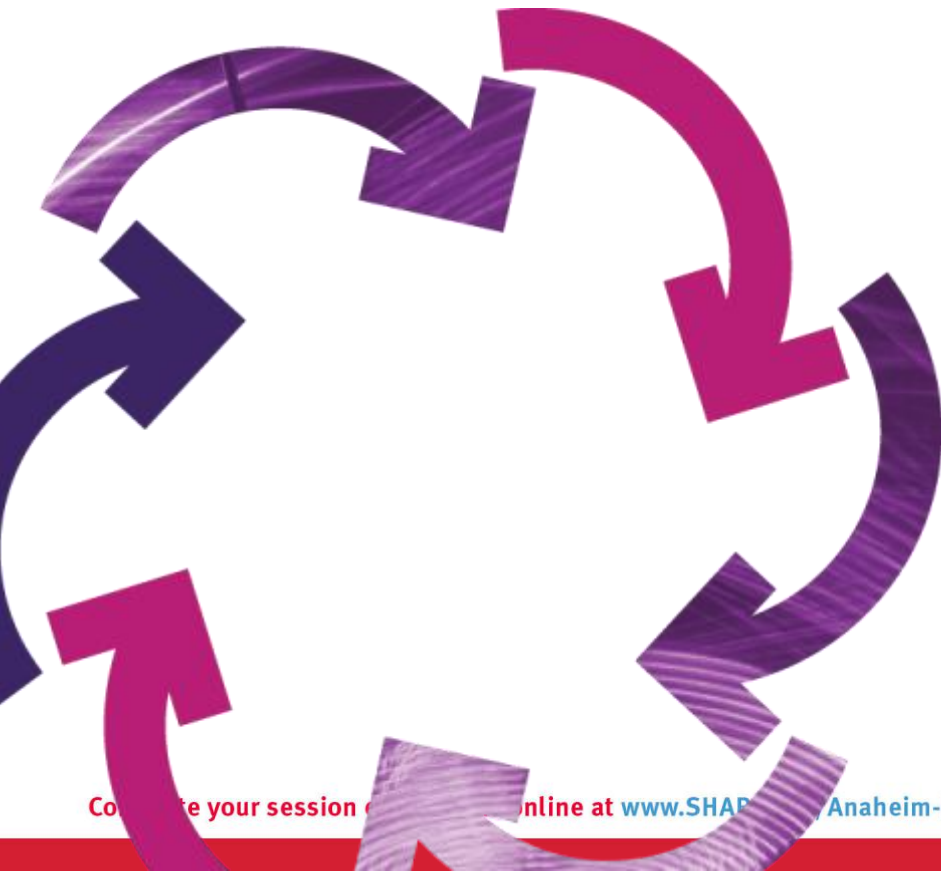
#### Additional Information

-  CA Chorus™ Documentation
-  CA Database Management Solutions Documentation on CA Support
-  CA ACF2 Documentation on CA Support
-  CA Top Secret Documentation on CA Support
-  CA Vantage Storage Resource Manager on CA Support



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# Demo



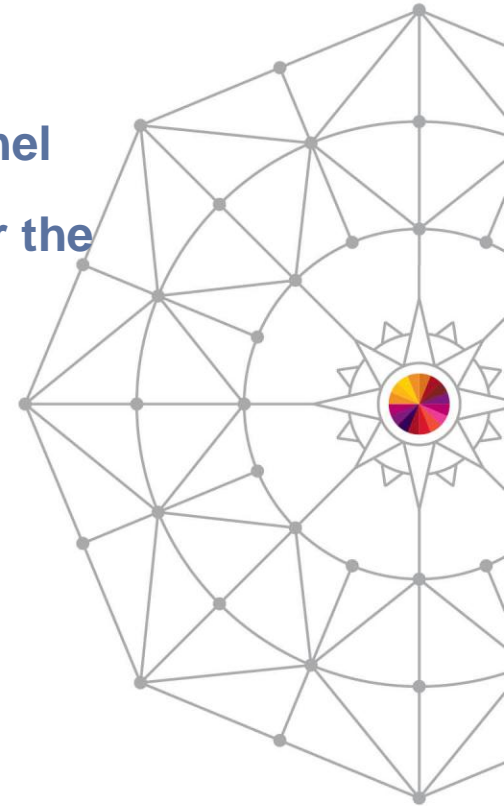
Complete your session online at [www.SHARE.org](http://www.SHARE.org) Anaheim-Eval





# Use case examples

- 1) Identify the Business Applications on an OSA
- 2) View and Investigate Object Performance Data in the Metrics Panel
- 3) Display all CICS workload delays for the connections



# Example 1.

## Identify the Business Applications on an OSA

The Need:

As a performance analyst, you want to verify that the appropriate business applications are using a particular OSA.

### Follow these steps:

1. Log in to CA Chorus.
2. Add the Investigator module to your dashboard from the Module Library, and click Start New Investigation.
3. Select Infrastructure Management from the discipline drop-down list.
4. Expand the tree, Sysplexes-sysplex\_name, and select Open Systems Adapter (OSA).
5. The table view opens listing the OSAs in the sysplex with the busiest OSA first:
  - I. You can search for the required OSA by clicking the View Filter icon on the toolbar.
  - II. You can customize your view of the columns by clicking the Customize Your Data View icon (the spanner) on the toolbar.
6. Click the Applications Using this OSA Stack Interface tab.

A list of business applications that are using the OSA appear. You can enlarge the pane by clicking the Expand icon at the top right corner of the pane.

From the list, you can verify that only the appropriate business applications are using this OSA.



# Example 2.

## View and Investigate Object Performance Data in the Metrics Panel

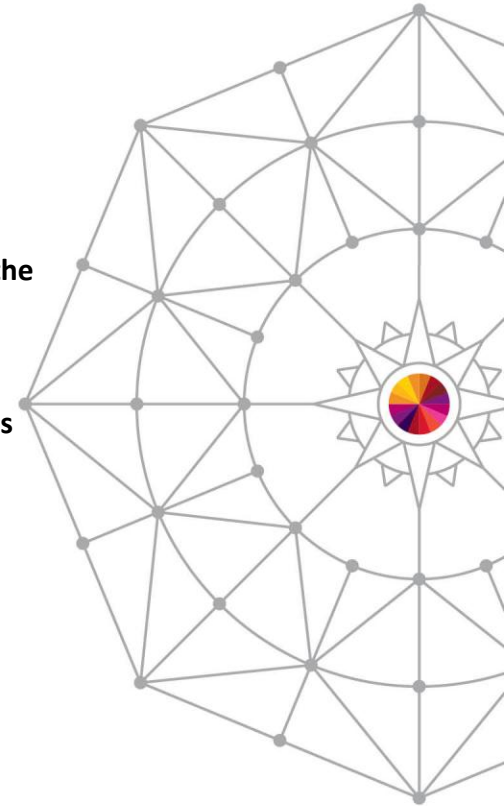


The Need:

As a performance analyst, you want to monitor system metrics like CPU.

### Follow these steps:

1. Log in to CA Chorus.
2. Click the plus sign control (+) on the Metrics panel.
3. Identify the metric and the data source to populate your Metrics panel by following the prompts.
4. Expand the tree, Sysplexes-sysplex\_name, and select Open Systems Adapter (OSA).
5. Select available metrics as follows:
  - a. Use the right arrow keys to select individual or all metrics. The available metrics change based on the category that is specified on the previous dialog.
  - b. Specify the name of the metric group in the Name the Metric Group field.
6. Default: Name of the system that the user selected.  
Click Finish.



# Example 3.

## Display all CICS workload delays for the connections

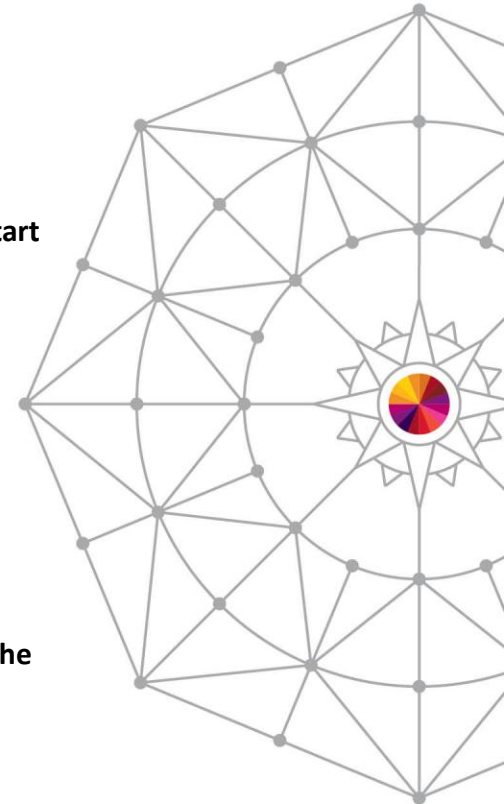
The Need:

You want to list your jobs with CPU usage of 50 or less for regions experiencing delays.

### Follow these steps:

1. Log in to CA Chorus.
2. Add the Investigator module to your dashboard from the Module Library, and click Start New Investigation.  
The Investigator opens.
3. Select Infrastructure Management from the discipline drop-down list.  
The Infrastructure Management object tree opens.
4. Select CICS, CICS Regions from the tree.
5. Click the Filter icon, which resides above the table on the left.
6. Filter the data:
  1. Select JobCPU from the Search drop-down list.
  2. Select  $\leq$  from the second drop-down list and type 50.
7. Click Search.  
The table displays all CICS regions with CPU usage of less than or equal to 50 for the last 30-second interval.

Use the metrics in this object to explain the reason CICS is experiencing delays.





# Thank you for attending!

## Questions?



**Why**  
be dynamic?

**What**  
is it?

**How**  
do I get there?

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**Dynamic Data Center**  
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