

CA Capacity Command Center

Release Notes Version 2.7

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1.0 Welcome to CA Capacity Command Center

Welcome to CA Capacity Command Center (CCC) 2.7.

This document contains information about new features, system requirements, installation considerations, and known issues that you should read before installing the update.

About the product

Capacity Command Center includes the following components:

- Capacity Command Center 2.7 base product
- Data Manager 5.3
- (*optional*) Virtual Placement Manager (VPM) 2.7

Note: Capacity Command Center also includes Current Capacity Reporter, which is installed separately and described in separate documentation. You can find all documentation on the CA support site: support.ca.com.

2.0 What's new in version 2.7

This section describes the new features included in CA Capacity Command Center (CCC) 2.7.

Note: Refer to the CA Support site at <http://ca.com/support> for the latest version of the release notes.

2.1 Support for IBM VM probe

The CA UIM Data Adapter (formerly Nimsoft Data Adapter) now supports data collection from the CA UIM Monitor IBM VM (ibmvm) probe, version 2.14.

The ibmvm probe monitors the health and performance of IBM virtualization-enabled systems.

For additional information, see "CA UIM Data Collection" in the *CA Capacity Command Center Administration Guide* Version 2.7.

2.2 Generic metric design

The requirement to configure the CA UIM capman_da probe to collect metrics is replaced with a generic metric design. This enhancement automatically collects a set of default metrics, during probe deployment.

For additional information, see "CA UIM Data Collection" in the *CA Capacity Command Center Administration Guide* Version 2.7.

Important: In this release, additional metrics should be added by your CA Support representative to avoid system operational issues.

2.3 Enhanced support for CDM probe

The CA UIM Data Adapter supports CA UIM cdm (CPU, Disk and Memory) probe, version 5.02. The following, additional cdm metrics are collected:

- GBL_DISK_READ_BYTE_RATE
- GBL_DISK_TOTAL_BYTE_RATE
- GBL_DISK_WRITE_BYTE_RATE
- GBL_MEM_SYS_UTIL
- GBL_MEM_USR_UTIL
- GBL_NETWORK_BYTES_RECV_RATE
- GBL_NETWORK_BYTES_SEND_RATE
- GBL_NETWORK_BYTES_TOTAL_RATE

- VOLUME_TOTAL_SIZE_MB

For additional information, see "CA UIM Data Collection" in the *CA Capacity Command Center Administration Guide* Version 2.7.

2.4 Considerations

This section includes guidelines that you need to be aware of for CA CCC Release 2.7.0.

2.4.1 Version Support

Your system must be running CA Unified Infrastructure Management (UIM) r8.0 or later to collect data using the CA UIM capman_da probe.

2.4.2 Upgrade

After upgrading the capman_da probe from 2.6 to 2.7, certain probe configuration entries must be removed from the probe UI.

Follow these steps:

1. Remove the section setup/admin_console_connection and all keys.
2. Remove the section metric_mapping and all its children and keys.

2.4.3 NIS API Probe

The CA UIM NIS API probe is included in the CA UIM r8.1 installation package.

To deploy the NIS API probe on systems running pre-r8.1 software, do **one** the following:

1. Download the [nisapi_wasp 8.1](#) archive from the AWS site, and install the archive on the robot running the Unified Management Portal (UMP). Restart the wasp probe on the robot running UMP.
2. Download the [nisapi_service_host 8.1](#) archive from the AWS site, and install the archive on the robot running the UIM Server. Restart the service_host probe on the robot running the UIM Server.

2.4.4 QoS Metrics Configuration

Caution: Additional metrics can be added to the CA UIM Data Adapter. In CA CCC Release 2.7, adding metrics, manually, must be performed by a CA Support representative, to avoid system operational issues.

2.4.5 Access to CA UIM Probe Directories

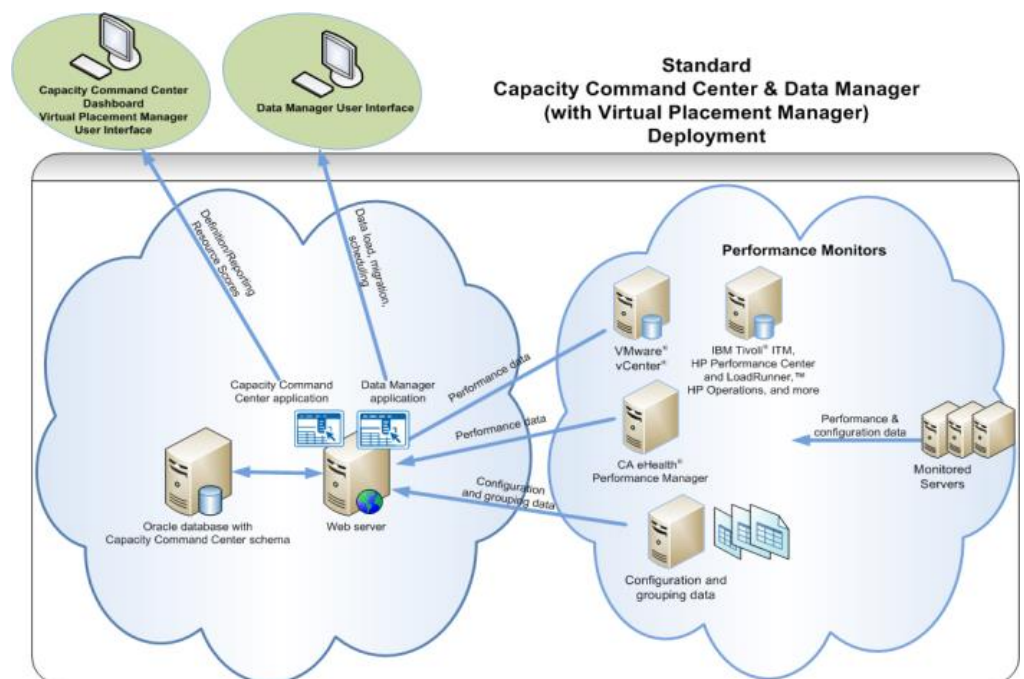
Important: The same operating system must be running on the CA UIM robot (where the capman_da probe is installed) and CA Data Manager, to obtain access to the UIM probe directories through Data Manager. For example, if the UIM robot is running on Linux, the Data Manager must be running on Linux.

3.0 Product deployment overview

Capacity Command Center is comprised of three system components:

- Client
- Application server
- Oracle database server with the CCC schema

The following diagram shows a standard Capacity Command Center deployment. For information about installing Capacity Command Center, see the *Capacity Command Center Installation Guide*.



4.0 Installation considerations

The CCC 2.7 installer performs either a full new installation or an upgrade installation.

You can upgrade from the following versions of Capacity Command Center only:

- 2.6
- 2.5
- 2.4
- 2.3

To upgrade from earlier versions, you must first upgrade to CA CCC 2.3.

For complete information about installing the product, see the *Capacity Command Center Installation Guide*.

5.0 Supported platforms and system requirements

Before installing Capacity Command Center, review the following requirements:

5.1 Application server and database server configuration requirements

The application server and the Oracle database server must be configured as follows:

5.1.1 *Co-location of application and database servers*

The CCC and Data Manager applications must be able to communicate with the Oracle database server. CA strongly recommends that you host the CCC and Oracle instances within the same data center to avoid performance problems caused by network latency issues.

5.1.2 *Same time zone for application and database server*

The application server and the Oracle database server must use the same time zone.

5.1.3 *Regional setting requirements*

The regional setting must be English-United States (US-EN) for the CCC application server, the CCR application server, and the CCC Oracle database server.

Important: Neglecting to set the region to English-United States *prior to installation* can cause critical failures when loading or staging data. If you have already installed on servers with the incorrect region setting, contact your CA Services representative.

5.2 Application server requirements

The Capacity Command Center application server supports the following software and hardware requirements:

5.2.1 Minimum hardware requirements

The following are the minimum hardware requirements for the application server:

Hardware	Minimum requirement
CPUs	2 (or dual core)
Memory (RAM)	
- Small to medium systems	8 GB
- Enterprise-level systems (data for more than 10,000 servers)	16 GB
Disk space	7 GB

5.2.2 Supported operating systems

Capacity Command Center supports the following operating systems.

Note: CCC supports only 64-bit operating systems.

- Microsoft Windows Server 2012 (with GUI only)
- Microsoft Windows Server 2008
- Microsoft Windows Server 2008 R2
- Red Hat Enterprise Linux ES 6.2
- Red Hat Enterprise Linux ES 5.4 to 5.7

Note: Installation on Windows Server 2012 in Server Core Mode (without a GUI) is not supported.

5.2.3 Software requirements

Capacity Command Center requires

- Java SE Runtime Environment (JRE) version 1.7.0_40
- Apache Tomcat version 7.0.54

Note: The CCC installer automatically installs the required JRE environment and the Apache Tomcat service.

5.2.4 Supported virtual environments

Capacity Command Center can be installed on supported operating systems running in the following virtual environments:

- VMware® ESXi 5.x
- VMware ESX 4.x

In general, the Capacity Command Center application can be installed on supported operating systems running in virtual environments without incident. (The database should be installed on a physical system.) However, it is important to note that CA does not attempt to run quality assurance tests for every possible setup of its products with each and every virtual platform and cannot certify specific client configurations. For information about CA's policy regarding virtual environments, log onto the CA support site to see the CA Support Statement for Virtualization available on the CA support site at <http://ca.com/support>.

5.3 Database server requirements

The requirements for a database server depend on the size of the database. Below are the minimum requirements based on the expected size for the CCC database. Please work with your CA Services Team to get a Data Management plan and sizing exercise completed to appropriately size your implementation.

Important: For large systems, CA strongly recommends using dedicated resources such as Oracle Enterprise Edition running on a physical server with fast access to storage disks.

Small to medium databases

The following are the minimum requirements for small to medium databases (500-2000 servers):

- CPU cores : 4 to 8
- Memory : 16 GB
- Storage : Fibre channel SAN or direct attached storage
- Recommended block size : 16 KB
- Database version : Oracle 11.2 Standard or Enterprise Edition (see [5.4 Database requirements](#).)

- Number of table spaces : 2 for staging data and index, 2 for data marts and index

Medium to large databases

The following are the minimum requirements for medium to large databases (2000-20000 servers):

- CPU cores : 16
- Memory : 32 GB
- Storage : Fibre channel SAN or direct attached storage
- Recommended block size : 16 KB
- Database version : Oracle 11.2 Enterprise Edition (see [5.4 Database requirements](#))
- Number of table spaces : 2 for staging data and index, 2 for data marts and index.

For more information about creating the CCC user and table spaces, see the topic called "Creating the CCC user and table spaces" in the *Capacity Command Center Installation Guide*.

5.4 Database requirements

The following sections describe the CCC requirements for the Oracle database:

5.4.1 Oracle database support

Capacity Command Center supports databases running under the following versions of Oracle:

Oracle 11g R1 and R2: Standard Edition, Standard Edition One, Enterprise Edition, and RAC

Note: CCC supports only 64-bit databases.

5.4.2 Oracle software requirements

The Oracle utility program **sqlplus** must be installed on the application server. It is required by the installer to set up the database. The installer will inform you if it cannot locate **sqlplus**.

If you intend to install the Capacity Command Center and Data Manager applications and database on different servers, you must install the appropriate Oracle client on the server on which the applications will be installed. Consult your database administrator to obtain the correct Oracle client.

Note: The application server and the Oracle database server must be in the same time zone.

5.4.3 Database sizing recommendations

The amount of space required for the data stored in the CCC database varies depending on factors such as the number of servers and VMs in your environment, the number of unique server configurations, the number of groups, and the number of days that data is stored.

For sizing recommendations and example statements used to create table spaces and add data files, see the *Capacity Command Center Administration Guide*.

5.5 Client requirements

Capacity Command Center requires the following on the client machine:

5.5.1 Required software

- Microsoft Excel® 2007 (with SP2 or SP3) or 2010
Required to update the server configuration spreadsheet only.
- Adobe Reader® 9 or later
Required to read PDF versions of the product documentation.

5.5.2 Supported browsers

Capacity Command Center supports the following browsers to access the CCC and Data Manager application user interfaces:

- Microsoft Internet Explorer® 8, 9, or 10
- Firefox® 24 ESR

5.6 Third-party software

Capacity Command Center contains certain third-party software that CA is licensed to redistribute with its products. A list of third-party software vendors and products can be found in the About box in the Capacity Command Center user interface and in the *Capacity Command Center Third Party Acknowledgements* document.

6.0 Performance and scalability guidance

This section describes performance and scalability details including elapsed times and table space usage for a very large database.

The example information in this section is intended to provide guidance for such things as hardware configuration requirements and table space sizing. Your experience will vary based on your data, database, hardware, and other factors.

Information about scalability is provided as follows:

6.1 <i>Small to medium-sized systems</i>	16
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6.3 <i>Running the CCC Oracle database on VMware</i>	22

6.1 Small to medium-sized systems

Small to medium sized installations (500-2000) servers have been tested and consistently attain acceptable levels of performance. The following subsections provide configurations and benchmark data for a small system.

6.1.1 Test database specifications

The performance tests providing the details in this section were run on an Oracle® 11g database with 90 days of 5-minute and 10-minute system level data, as follows:

- Physical servers: 550
- Virtual machines: 2,100
- Server fact metric rows: 415,000,000
- Server groups: 200
- Preferred groups: 200
- Enabled data sources: 6

Benchmark tests of the initial load indicate:

- The vast majority of the time is spent on the database server (as opposed to the application server)
- The time scales linearly with the number of servers.

6.1.2 Benchmark test configurations

This section describes the configuration of the database and application servers used to conduct the tests.

Database server

In the benchmark tests, the database server with the Capacity Command Center schemas was configured as follows:

Item type	Configuration
Model	Dell™ PowerEdge™ R710
Processors	64 bit Intel®Xeon® E5520 2.26 GHz Quad Core
Chips	2
Cores per chip	4
Threads per core	2
Multi-threading capable	Yes
Multi-threading enabled	Yes
Total cores	8
Total threads	16
Memory GB	16
I/O cards	SCSI
Drives	SCSI
Drive for OS	500GB RAID 0 (direct attached storage)
Drive for DB	1.8 TB RAID 0 (direct attached storage)
NIC	4 x Broadcom BCM5709C NetXtreme II GigE
OS	Microsoft® Windows® Server 2008 R2 Enterprise 64 bit
Oracle	11g 11.2.0.1.0
IO	6 Gbps

Application server

In the benchmark tests, the WebApp server was a Windows Server 2008 R2 Enterprise Virtual Machine (VM) running on VMware® ESX 5.0 configured as follows:

Item type	Configuration
Model	VMware Virtual Platform
ESX processor family	64 bit Intel Xeon CPU E7 - 8837 2.67 GHz Quad Core

Item type	Configuration
Number of CPU cores on the ESX server	32
Number of chips on the ESX server	4
Threads per core	1
Physical memory on the ESX server	64 GB
Number of VCPUs on the VM used for the CCC application server	2
Memory allocated for the VM used for the CCC application server	4 GB
OS	Microsoft Windows Server 2008 R2 Enterprise 64 bit

6.1.3 Test database table space sizing

The following tables show the size of key table spaces used by CCC after the precalculation process was run for the initial data load of 90 days 5-minute and 10-minute data and then again after three incremental loads of one day each.

Sizing after initial load

Table space name	Size in megabytes (MB)
TEST_TBL	83,399
TEST_IDX	125,001
TEST_STG_TBL	241
TEST_STG_IDX	21
Total	208,662

Sizing after three days of incremental loads

Table space name	Size in megabytes (MB)
TEST_TBL	85,558
TEST_IDX	127,181
TEST_STG_TBL	473
TEST_STG_IDX	49
Total	213,262

6.1.4 Processing time

The following processing times were required for the initial data load of 90 days of 5-minute and 10-minute data and for a single incremental load of one day of data.

Processing time required for initial load

The precalculation process for the initial load of the baseline data (90 days of 5-minute and 10-minute data) took 5 hours.

Processing time required for an incremental load of one day

The precalculation process for the incremental load of a single day of data took approximately 35 minutes. These timings are based on running three incremental loads, using the same amount of metric rows for each run.

Processing time required for dashboard group member caching

If your system contains groups with more than 1500 members, CCC automatically calculates and caches the values to be displayed on the dashboard. The amount of time this takes varies greatly depending on the number and size of the groups in your data. In general, if caching is performed, the process adds between 15 and 60 minutes to the rollup processing.

6.2 Large systems

Tests have shown acceptable levels of performance with large systems (2000-20000 servers) when configured as shown in the following subsections.

Important: Inadequate hardware and storage configurations cause performance problems for systems of all sizes, but extremely large scale systems (>20,000 servers) are the most likely to experience unacceptable levels of performance.

6.2.1 Benchmark test configurations

This section describes the configuration of the database and application servers used to conduct the tests.

Database server

In the benchmark tests, the database server with the Capacity Command Center schemas was configured as follows:

Item type	Configuration 1	Configuration 2
Configuration	12 cores – 32 GB RAM	8 Processors – 16 GB RAM
Operating system	Microsoft Windows Server 2008 R2 Enterprise 64 bit (running on a Physical Server)	UNIX (running on AIX LPAR)
Storage	Internal storage (internal storage) 10K SCSI Hard Drives	Fibre channel (10K) drives attached to NetApp SAN
Oracle	11.2 Enterprise	11.2.0.3 Standard
Block Size	8 K	16 K
Memory Management	Maximum 25 GB	Automatic memory management
Parallel Server Configuration	Automatic	Automatic
Number of Table Spaces	2 for staging data and index, 2 for data marts and index	2 for staging data and index, 2 for data marts and index

Application server

In the benchmark tests, the WebApp server was a Windows Server 2008 R2 Enterprise Virtual Machine (VM) running on VMware® ESX 5.0 configured as follows:

Item type	Configuration 1	Configuration 2
Configuration	Dual VCPU 8GB RAM VMware Virtual Platform	Dual VCPU 8GB RAM VMware Virtual Platform
Operating system	Microsoft Windows Server 2008 R2 Enterprise 64 bit	Microsoft Windows Server 2008 R2 Enterprise 64 bit

6.2.2 Test database specifications

The configurations had the following servers

Item type	Configuration 1	Configuration 2
Number of servers	20000	2000
Number of groups	200	180
Temporary space	120 GB	30 GB
Daily (incremental) rollups	approximately 1-2 hours	approximately 1 hour

Benchmark tests of the initial load indicate:

- The vast majority of the time is spent on the database server (as opposed to the application server)
- The time scales linearly with the number of servers.

6.3 Running the CCC Oracle database on VMware

Some users have successfully installed the CCC Oracle database on VMware. However, large databases require robust hardware and storage configurations, and performance is adversely impacted by inadequate processing power, memory, and storage throughput. CA has not tested large CCC databases on VMware and strongly cautions users to be aware of Oracle's support policies regarding installation on VMware. CA cannot provide support for installations beyond Oracle's stated level of support.

7.0 Resolved Issues

The following issue was resolved in this release.

218899	Description The CA Nimsoft capman_da and cdm probe directories are not accessible through the CA Data Manager.
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8.0 Known issues

When using Capacity Command Center, you might encounter the following known issues:

Item #	Known Issue
DE38866	<p>Description</p> <p>The VM metric file displays duplicate data in the vm_overall_cpu_usage column of the .csv file.</p> <p>Workaround</p> <p>Do one of the following:</p> <ol style="list-style-type: none"> Use Admin Console to update the capman_da probe configuration as follows: <pre><vm_overall_cpu_usage> matching_metric_type = '1.5:35' additional_match = (primaryRole.indexOf('Virtual') == 0) && ((pds.getPDS('udata').getString('target')).indexOf('Over allCpuUsage') == 0) </vm_overall_cpu_usage></pre> Deactivate the VMware CPU Usage in MHz (Average) monitor.
DE38865	<p>Description</p> <p>The Capman_da probe may fail to start when the Restart option is selected in UIM Admin Console.</p> <p>Workaround</p> <p>In UIM Admin Console, select Deactivate, and then select Activate.</p>
DE38565	<p>Description</p> <p>Data Manager may display multiple instances of the same data source.</p>
DE38570	<p>Description</p> <p>Archives may become corrupted if directories containing data generated by the capman_da probe contain subdirectories.</p>
DE38862	<p>Description</p> <p>When DM Groups are created for IBM VM data, hosts are shown in CCC as 'nonvirtualized;' VMs are grouped as 'na.'</p>
DE38863	<p>Description</p> <p>IBM VM hosts are shown as physical servers in Capacity Manager.</p>

Item #	Known Issue
	Workaround In the Alphabetic View, edit the server's configuration, and assign it a VMM.
DE38668	Description IBM VM LPAR Online_Memory metrics are not displayed in Data Manager.
DE37621	Description The CCR Group Sync feature may fail after the DM Groups job completes. Workaround Contact CA technical support for assistance.
218125	Description If you reload the browser after logging into the CA Data Manager, a "500 error in Tomcat" error is generated. Workaround Exit the Data Manager and log back in.
209262	Description When the Generic CSV data adapter is used as the base for a new data adapter, it does not validate and does not support cml_name. Workaround Contact CA technical support for assistance.
151222	Description During a Data Manager upgrade an Err-zero.registry error occurs for one of the following reasons: <ul style="list-style-type: none"> ▪ If you uninstall the Web application and try to reinstall it. ▪ If you change the connection parameters. Workaround Follow these steps: <ol style="list-style-type: none"> 3. Navigate to the directory where the installation files are located. 4. Delete the file: com.zerog.registry.xml. 5. Rerun the Capacity Command Center installer.
149786	Description The charts in the usage pane of the CCC dashboard do not show values greater than 100%. Any utilization value greater than 100% is reported as 100%. Workaround

Item #	Known Issue
	<p>If you see a value of 100% for either the maximum utilization (shown as a blue line on the graph) or for the planning percentile (shown as a blue dot on the graph and as a percentage beside the graph), you should go to the Usage charts to determine whether usage has exceeded capacity.</p>
149366	<p>Description</p> <p><i>(for Solution Kits installed on Linux systems)</i> Red Hat Enterprise Linux versions 6.0 and later no longer include some 32-bit libraries that are required by the CA Solution Kits for Data Manager.</p> <p>The following 32-bit libraries are required:</p> <ul style="list-style-type: none"> • glibc.i686 • libX11.i686 <p>This requirement does not apply to installations on Windows systems.</p> <p>Workaround</p> <p>Before installing the solution kits, verify that the required libraries are available by running the following commands at a command prompt:</p> <pre>yum install libX11.i686 yum install glibc.i686</pre>
147478	<p>Description</p> <p><i>(For users of the Custom Data Adapter SDK™ 2.0)</i> The Data Adapter sample files distributed with the Custom Data Adapter SDK 2.0 do not contain the most recent data source type version. The earlier data source type version causes the example files to support only the metrics available in Data Manager 4.3. This limitation excludes metrics documented in the SDK reference guide as well as the metrics added since the reference guide was last updated. Attempting to load the newer metrics using a custom Data Adapter containing the wrong version of the data source type causes the loads to fail.</p> <p>Workaround</p> <p>Edit the custom Data Adapter XML file that you created based on the outdated sample file and change the data_source_type version to match the XML Schema Definition (XSD) for the version of Data Manager that you are using. For example,</p> <pre>data_source_type version="4.5"</pre> <p>XSD versions for the supported releases of Data Manager are:</p> <ul style="list-style-type: none"> • CCC 2.0.0 (Data Manager 4.4) XSD version=4.4 • CCC 2.0.1 (Data Manager 4.5) XSD version=4.4 • CCC 2.1.0 (Data Manager 4.6) XSD version=4.5 • CCC 2.2.0 (Data Manager 4.7) XSD version=4.5 • CCC 2.2.1 (Data Manager 4.8) XSD version=4.5 • CCC 2.3.0 (Data Manager 4.9) XSD version=4.5 • CCC 2.4.0 (Data Manager 5.0) XSD version=4.5

Item #	Known Issue
122745	<p>Description</p> <p>The CA Application Performance Management (APM) Data Adapter (DA) might not collect the CPU metrics (defined in the cpuMetrics map of the DA XML file) when more than one agent is running on a host.</p> <p>This problem can occur when all the following conditions are met:</p> <ul style="list-style-type: none"> • Two (or more) agents are running on a host. • One of the agents does not collect CPU metrics. • Both agents are defined in the data source definition. • The CA APM DA pulls data for the agent not collecting CPU metrics first. <p>Workaround</p> <p>Create separate data sources for the two agents. That is, create one data source for the agent that provides CPU information and a separate data source for the agent that does not provide CPU information.</p>
97108	<p>Description</p> <p>When you change or delete groups in CCC, the charts and group navigation lists do not always reflect the changes immediately.</p> <p>Workaround</p> <p>To see the groups in the Server Configuration panel only (which enables you to set their status to preferred), you can run the much shorter process of reloading the Server and Group Configurations by clicking Reload on the System Health tab.</p> <p>After you change or delete groups, refresh the browser display. If you still do not see your changes, run the precalculation rollup process, as follows:</p> <ol style="list-style-type: none"> 1. In the Capacity Command Center user interface, select the Administration tab, then the System Health tab. 2. Select Start beside Precalculations and Rollups.
95669	<p>Description</p> <p>Server names might appear as "[Name Unknown]" in server lists within CCC (for example, in lists of reference servers used when creating a workload template).</p> <p>This problem occurs when all of the following conditions are met:</p> <ul style="list-style-type: none"> • You collect data from multiple data sources. • Different data sources provide different server configuration details (for example, one data source provides the server name, while other data sources provide details about chips and memory). • You have disabled the data source that provides the server name within CCC. <p>Workaround</p> <p>Enable any disabled Data Sources that contain necessary server configuration details. (You can also deactivate servers with missing names if you no longer</p>

Item #	Known Issue
	need them.)
84832	<p>Description</p> <p>VM consumption appears to exceed VM capacity in the CCC Resource Score Charts.</p> <p>This condition can occur for the following reasons:</p> <ul style="list-style-type: none"> On hosts with processor chips that have turbo-mode (dynamic overclocking) capabilities (select AMD, IBM, and Intel chips), VM consumption can at times appear to exceed VM capacity. If the rest of the system is not heavily loaded, the turbo-mode feature can allocate an increased clock rate to the processors of a single VM with a high service demand, which results in that VM receiving more than its typical share of the capacity of the host. The charts correspondingly show consumption exceeding capacity. In rare cases, the modeling of the CPU consumption of the hypervisor might cause the capacity of the host to be undercalculated. <p>Workaround</p> <p>No workaround is required. The CCC charts accurately represent the consumption of the VM.</p> <p>You should consider rightsizing VMs that frequently exceed their capacity. The additional capacity that turbo-mode capabilities can provide are dependent on the load on all VMs on the host and might not always be available when required, causing potential performance degradation.</p>
74903	<p>Description</p> <p>If you run the Virtual Placement Manager installer or a CA Solution Kit for data Manager installers from the Microsoft Windows desktop, then the Windows Program Compatibility Assistant will display a dialog after the installation completes which says, "This program might not have installed correctly" and offers the option of reinstalling. The cause of this dialog is that the installer does not tell Windows that it works correctly with Windows 7. There is no need to reinstall.</p> <p>Workaround</p> <p>You can safely dismiss the dialog or choose the "This program installed correctly" option. The program installed correctly.</p>
45057	<p>Description</p> <p>Scheduled Loads in Data Manager fail when you select more than one data source in the first dialog.</p> <p>Workaround</p> <p>You must currently select a single data source for each scheduled load.</p>
45048	<p>Description</p> <p>The CA Data Manager Data Adapter for NMON assumes that simultaneous</p>

Item #	Known Issue
	<p>multithreading (SMT) is set to a value of '2', which is incorrect for POWER7 platforms which have SMT set to '4'.</p> <p>Workaround</p> <p>You can override the SMT=2 assumption by loading host configuration in a generic CSV file:</p> <ol style="list-style-type: none"> 1. In a Generic CSV file, define Server Name, Time Stamp, Total Cores, Total Threads, and Threads/Core. 2. In the Data Manager user interface, load and migrate the Generic CSV file. 3. In the CCC user interface, on the Data Sources tab (available from the Administration tab), give the Generic CSV data source a higher priority than the NMON data source and save your changes. 4. In the CCC user interface, on the Server Configuration tab (available from the Administration tab), download the server configuration spreadsheet and assign a server configuration for each server in the Generic CSV data. Upload the edited server configuration spreadsheet.
44933	<p>Description</p> <p>To optimize application responsiveness, some of the database data is cached in memory. For that reason, newly loaded data may not show in the user interface of the application.</p> <p>Workaround</p> <p>Reload or refresh the browser page.</p>
44907	<p>Description</p> <p>(<i>Linux installations only</i>) The Apache Tomcat service sometimes fails to shut down completely after you perform the normal steps to stop the service (using the bin\shutdown.sh utility) even though a message states the shutdown was successful.</p> <p>In this case, the task which required the shut down of Tomcat (for example, installing Solution Kits) is likely to fail.</p> <p>Workaround</p> <p>Verify that the service shut down completely by entering the following command at a command prompt:</p> <pre>ps -ef grep omcat</pre> <p>If the command returns an ID, the process is not stopped.</p> <p>To kill the process, enter the following command:</p> <pre>kill <process id></pre>
44838	<p>Description</p> <p>When the CCC user interface processes operations that take a long time (such as loading preferred servers), Microsoft®Internet Explorer® (IE) version 8</p>

Item #	Known Issue
	<p>sometimes might display a warning that states,</p> <p>"Stop running this script? A script on this page is causing your web browser to run slowly. If it continues to run, your computer might become unresponsive."</p> <p>Workaround</p> <p>If you see this message, click "No" to allow CCC to continue its processing.</p> <p>You can use IE 9 or a supported version of Firefox to avoid this problem.</p> <p>(<i>advanced Windows users only</i>) To prevent this message from being displayed in IE 8, you can edit the Windows registry, as described in the Microsoft Knowledge Base article at http://support.microsoft.com/kb/175500.</p>
44691	<p>Description</p> <p>When loading data for VMware vCenter™ 4.0 using the VMware_VC40_DAILY and VMWARE_VC40_WEEKLY Data Adapters, the following error is issued:</p> <p>"Error collecting data from the monitor database. Contact the administrator to investigate accessibility of monitor database."</p> <p>This error message is issued because the Data Adapters attempt to gather folder information which is not stored in a supported format in VMware vCenter 4.0. All other data is collected correctly.</p> <p>Workaround</p> <p>Upgrade to VMware vCenter version 4.1 or later, which provides the expected folder information.</p>
44557	<p>Description</p> <p>If your data contains metrics which have null values and if CCC performs arithmetic transformations on those metrics during the staging process, the CCC database might display an error message stating "Value for the column cannot be determined " or "Error parsing the expression." The error message is issued because CCC cannot calculate the value for a derived metric when the base metric is not available. The available metrics are staged correctly, and no data is lost.</p> <p>Workaround</p> <p>The error messages are informational only, and no workaround is required.</p>
44269	<p>Description</p> <p>If installation fails while in the process of creating the database schema, the uninstall process is not able to drop the schema objects because the uninstall scripts (drop_all_objects.sql and so on) have not yet been installed.</p> <p>Workaround</p> <p>To work around this problem, you must drop the schema or run the drop_all_objects.sql manually, correct the original cause of the failure, then rerun the installer.</p>

Item #	Known Issue
44182	<p>Description</p> <p>The following CA Data Manager Data Adapters for VMware vCenter include "VC40" in their names even though they support VMware vCenter versions 5.0, 4.1, and 4.0.</p> <ul style="list-style-type: none"> • <i>VMWARE_VC40_Daily</i> • <i>VMWARE_VC40_Weekly</i> <p>Workaround</p> <p>No workaround is required. These DAs support all three versions of vCenter.</p>
44012	<p>Description</p> <p>For multi-threaded platforms, many data sources do not provide enough information to know whether multi-threading is on or off. For these data sources, CCC assumes that multi-threading is on. This can cause (host or physical) capacity to be reported incorrectly.</p> <p>Data collected with the following Data Adapters for servers which have multi-threading disabled might exhibit this problem:</p> <ul style="list-style-type: none"> • BMC Output File • CA APM • HP-OVI • HP-OVPI hourly data • HP-OVPI rate data • Performance Monitor output file • SAR output file • Tivoli ITM 5.1 • Tivoli ITM 6.1 Windows • Tivoli ITM 6.2 AIX Premium • Tivoli ITM 6.2.2 Windows <p>Workaround</p> <p>To work around this problem, you can override 'threads per core' via a CSV file into the database so that CCC has enough information to correctly compute server capacity. Set 'threads per core' to 1 if multi-threading is off. If multi-threading is on, set 'threads per core' to N, where N is the number of threads per core supported by the hardware platform. For information about how to override server configuration information, see the Capacity Command Center online help.</p>
43571	<p>Description</p> <p>Some Data Manager views are not compiled during installation which causes them to be displayed with a red X in the SQL Developer view list. This is a display issue only. The views work properly and will display properly after being used the first time.</p> <p>Workaround</p> <p>No workaround is required. Select and use the views as you normally would.</p>

Item #	Known Issue
43340	<p>Description</p> <p>When loading SAP ST03 data into the database using the Data Adapter for SAP, an exception can occur during migration. This exception is caused by null ACCOUNT_ID values in the SAP ST03 data.</p> <p>The error message associated with this exception is "Error writing to database due to insufficient information in the input data row to create mandatory entries in the database."</p> <p>Workaround</p> <p>Contact CA technical support for assistance.</p>
43024	<p>Description</p> <p>The maximum memory constraints for some models in the Component Model Library (CML) might be too low because of changes made to newer hardware releases by vendors. Because the value for the model changed since the model was developed, you might not be able select the correct model when configuring a server if the amount of configured memory for the server is greater than that allowed for the model.</p> <p>Workaround</p> <p>Contact CA technical support to request a new CML model.</p>
42972	<p>Description</p> <p>Duplicate rows in source workload data can cause rows to be dropped by the staging process, resulting in data loss.</p> <p>Workaround</p> <p>Before loading workload data (either by CSV or JDBC), ensure that no duplicate entries exist in your source data.</p>
41936	<p>Description</p> <p>If you disable the only data source that provides configuration information for an existing cluster, when you reload Capacity Command Center (by restarting the Tomcat CA_CCC service), the cluster is displayed as [Name Unknown] in the selection list in the Placement Definition panel.</p> <p>Workaround</p> <p>Enable a data source that provides configuration information for the cluster.</p>
41624	<p>Description</p> <p>The VM power state (on or off) is not taken into consideration during placements which can lead to disabled VMs being included in a placement. This can cause capacity or consumption to be overstated.</p> <p>Workaround</p> <p>For the most accurate results, do not include disabled VMs in placement</p>

Item #	Known Issue
	definitions.
41300	<p>Description</p> <p>Changes made to the properties file (ccc.properties) sometimes do not take effect immediately because session variables are still in effect on your system.</p> <p>Workaround</p> <p>After updating the properties file, perform the following actions:</p> <ul style="list-style-type: none"> • Stop and restart the Capacity Command Center Apache Tomcat service. • Close and then reopen your browser session.
41246	<p>Description</p> <p>When VMware data is imported into Data Manager using the VMware Data Adapter, VMware templates are stored in the CCC database as physical servers and therefore appear in the Capacity Command Center Server Configuration tab as physical servers.</p> <p>Workaround</p> <p>Ensure that you do not select any VMware templates as preferred servers when performing server configuration activities within Capacity Command Center. Templates are often identified by the word "template" in the name.</p>
41236	<p>Description</p> <p>A placement can fail if a VM, host, or converged compute template is deleted after it has been selected for use in a placement but before the placement is run. This is most likely to occur in a multi-user environment in which the user maintaining the templates is unaware that another user is creating a placement.</p> <p>Workaround</p> <p>To avoid the problem, ensure that no users are creating placements before deleting templates.</p> <p>If the problem occurs during placement creation, select a different template and rerun the placement.</p>
41080	<p>Description</p> <p>When defining a placement exercise, if you select an existing empty cluster (that is, a cluster which has no hosts) as a target and uncheck the Autoscale cluster option, the following message is displayed when you click Solve Placement:</p> <p>"Model placement failed. IllegalArgumentException".</p> <p>Workaround</p> <p>Ensure that the Autoscale cluster option is selected when using an empty cluster as a target.</p>

Item #	Known Issue
41037	<p>Description</p> <p>During a placement exercise using the Autoscale cluster option, choosing a host template that is too small to accommodate some of the VMs might cause an empty host to be added to the cluster. This occurs because the capacity required for the cluster as a whole causes a host to be added without regard for the size of the VMs that must be placed on the new host.</p> <p>Workaround</p> <p>Select a larger host template to use for the placement exercise.</p>
40763	<p>Description</p> <p>The product is unable to recognize when a virtualized server is converted to a physical server if it retains the same server name. In this case, the product continues to treat the physical server as though it was a VM.</p> <p>Workaround</p> <p>When you convert a VM to a physical server, you should give the physical server a different name.</p>
40547	<p>Description</p> <p>In the Data Source dialog, the asterisk which indicates a change was made is not always displayed correctly. For example, disabling a data source and then changing its priority causes the asterisk to be removed, while re-enabling the data source at the new priority position causes the asterisk to be displayed.</p> <p>Workaround</p> <p>This is a display issue only and no workaround is required. Data source changes are retained correctly.</p>
40038	<p>Description</p> <p>When creating data sources, be aware that you cannot use more than 4000 characters when specifying servers within a single data source.</p> <p>Workaround</p> <p>Use the new wild card functionality to specify large numbers of servers in a single data source or create multiple data sources. See the <i>Administration Guide</i> or online help for information about how to use wild cards.</p>

9.0 Documentation set

The CCC documentation set includes the following:

Title	Description
<i>Release Notes</i>	(<i>this document</i>) Provides information about new features, system requirements, corrected problems, and known issues.
<i>Administration Guide</i>	Describes the administrative tasks required to configure the applications and maintain the database, including information about data sources and metrics collection requirements, Data Manager performance and optimization information, and troubleshooting tips.
<i>API Reference Guide</i>	Provides information about the data and components managed within the product that are exposed to users through the application programming interface (API).
<i>Installation Guide for Windows</i> <i>Installation Guide for Linux</i>	Describes how to install and configure CA Capacity Command Center and Data Manager, including information about system requirements and prerequisites.
<i>Online Help</i>	Consolidated help accessible from both the CCC and Data Manager user interfaces, allowing searching across all topics. It includes user and administrative information about features and functionality for CCC, VPM, and Data Manager.
<i>Partitioning Guide</i>	Provides instruction for partitioning the Oracle database to enhance database administration, management, availability, and performance.
<i>Third Party Acknowledgments</i>	Provides legal notifications for the third party software products that are used by or distributed with the product.
<i>User Management Guide</i>	Provides instructions on how to configure and use the authentication feature of Capacity Command Center (CCC). It also provides an overview of the way in which authentication works in the Capacity Command Center, Data Manager, and Current Capacity Reporter (CCR) applications.
<i>Virtual Placement Manager Installation Instructions</i>	(<i>available only with VPM</i>) Provides instructions for installing the Virtual Placement Manager module.
<i>Virtualization Reporting Guide</i>	Describes using the Data Manager application to analyze the utilization and configuration data collected in a virtualized environment.
Additional documentation	Complex key tasks are documented separately in standalone PDF and HTML format and are available in the online help. These scenarios are also available on the documentation bookshelf located on the product page on the CA support site.

10.0 Software Release Matrix

This table lists the feature changes introduced in previous releases. For more information about these features, reference the Release Notes for the particular release or the *CA Capacity Command Center Administration Guide*.

Feature	2.6	2.5	2.4	2.3
CA UIM(formerly Nimsoft) data adapter	X			
Automatic CML model mapping	X			
Support for vSphere API	X			
Enhanced daily purge process	X			
Additional support for CA APM	X			
Updated Component Model Library	X			
Role based access control		X		
Virtual Placement Manager placement history		X		
Support for vSphere 5.5		X		
Server configuration CML mapping enhancements		X		
Supported browser and platform updates		X		
Support for CCR 1.5 threshold parameters		X		
Updated Component Model Library		X		
Capacity Command Center chart enhancements			X	
Enhanced partitioning and compression			X	
Enhanced purge for partitioned tables			X	
Capacity Command Center user authentication			X	
Improved group and server configuration workflow			X	
Persistent table settings			X	
Improved performance for Capacity Manager system-level modeling			X	
Updated Component Model Library			X	
New dashboard				X
Wild card support for data sources				X
Migration performance improvements				X
Enhanced Generic CSV Data Adapter				X
Customizable product display header				X
API enhancements				X
Placement results summary				X
Placement table enhancements				X
Placement definition enhancements				X
Group navigation performance improvements				X
Updated Java Runtime Environment				X
Support for Microsoft SCOM				X

Feature	2.6	2.5	2.4	2.3
Updated Component Model Library				X
Documentation enhancements				X

11.0 Additional support and information

More information about Capacity Management is available, as follows:

Capacity Management Technical Support

You can find more information about CCC, Data Manager, and the Capacity Management suite of products online on the following CA Support site pages.

Note: To access CA Support site pages, you must register and log in. Clicking the links below will take you to the log in page and then on to the specific product page after successful log in.

- [Capacity Management](#)
- [Capacity Command Center](#)
- [Virtual Placement Manager](#)

Capacity Management Global User Community

The Capacity Management Global User Community is a virtual CA user community focused on the CA Capacity Management suite of products.

The community provides technical product information, collaboration through online message boards, blogs, online documentation, peer to peer networking, support and education, knowledge exchange (best practices, tips and tricks), input into CA Product Management, access to subject-matter experts, and more.

Visit the Capacity Management Global User Community at the following link: [Capacity Management Global User Community](#)

A.0 Additional third-party software information

This section provides third-party acknowledgements in addition to the *Third-Party Acknowledgements* document available at support.ca.com.

ehcache-core 2.6.9

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