CA Performance Management Data Aggregator

Release Notes

2.4.1

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CA Technologies Product References

This document references the following CA Technologies products and components that are part of CA Performance Management or provide an integration with it:

- CA Performance Management Data Aggregator
- CA Performance Center
- CA Mediation Manager

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information that you need for your Home Office, Small Business, and Enterprise CA Technologies products. At http://ca.com/support, you can access the following resources:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
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Chapter 1: Welcome

Welcome to CA Performance Management Data Aggregator. Review these *Release Notes* before installing the Data Aggregator software.

This document contains important information and installation notes, including the following topics:

- Product documentation availability
- Supported deployment options
- System requirements
- Upgrade considerations
- Known limitations and known issues from previous releases

This section contains the following topics:

New Features and Enhancements (see page 8)
Product Documentation (see page 10)
Technology Certification Portal (see page 11)
Third Party Acknowledgements (see page 11)

New Features and Enhancements

The following features have been added in CA Performance Center 2.4.1 and Data Aggregator 2.4.1.

Note: For a complete list of new features and enhancements, see the *GA Release Letter*. For information about late-breaking changes, see the product *Readme* files.

Usability Enhancements

Improved Navigation

Enhanced breadcrumbs provide faster access to groups and sites, which simplifies navigation. A full path to the currently selected group now appears. Users can click a site or group to change the context of the dashboard.

Enhanced Site List Views

The ability to edit view settings for the site list is now available. Four selections are available:

- All Sites: Shows all sites under the selected group
- Parent Sites: All sites at the parent level
- Peer Sites: All sites at the same level as the selected site
- Child Sites: Direct children of the selected site

Raw CSV Export

Export to a CSV file in RAW format without units. The units are now listed in the column headers in the CSV file.

Non-Integer Scorecard Threshold Values

Scorecards now supports decimals when showing metric values. Users can also enter decimal numbers in the scorecard's view settings.

Drill from Views into DA Admin Page

Access the DA administrator page directly from a page associated with the DA. The new role right "Drill from Views into DA Admin Page" has been created for this purpose.

Changing Dashboard Layout No Longer Removes All Views

When a user changes a dashboard layout, no views are removed, but are instead moved to the first pane of the new layout. All view edits are preserved when the views are moved to the new layout.

Improved Component Level Poll Controls

Poll filtering now applies to all metric families. In addition, a new UI has been created to support the creation of filter expressions. Expressions involving logic are supported, including nested AND/OR/NOT expressions.

User Interface Enhancements

Fixed Context Views

A new ‘Context’ drop-down lets users fix a dashboard to a specific group from the dashboard settings dialog. A lock icon now indicates whether a view is fixed to the selected context or whether it is fixed to the page-level context.

Configuring URL Parameters of a Browser View

When configuring the browser view, a number of URL parameters are now available. URL parameters can set the language, resolution, and other properties. Identifiers can also be added to each URL parameter to act as meaningful labels.

Group Tree Enhancement

The group that is currently selected is highlighted in the group tree when users switch between groups.

View Dashboards Results at Higher Resolution

The new "Run Dashboards at Higher Resolution" role right lets users select more granular time ranges when viewing dashboards. Users without this role right are still limited to the default time ranges set by CA Performance Center.

Reporting

Customize Access to On-Demand Reports

Two new role rights can be assigned to limit access to viewing and managing on-demand reports:

Create On-Demand Report Templates

Lets users create, edit, and delete on-demand report templates. This role right also determines who can view the on-demand report templates.

Run On-Demand Report Templates

Lets users run on-demand report templates.

API

Open API

New public API for building queries to access configuration information and metric data. The OpenAPI query builder produces a URL using the OData 2.0 standard, which lets you view custom metric data in the specified format.

Vendor Certifications

New XML Attributes

Two new XML general attributes have been created for vendor certifications and metric families.

- Version
- Author

Certification Migration Tool

Upgrading to a new version of Data Aggregator now requires users to run the certification migration tool, which is included in the installer package. The migration tool moves vendor and CAMM certifications and metric families to the appropriate directory.

Certification Installer

In addition to using a REST client to import a certification, users can now use the new certification installer. The installer can install single or multiple certifications, and certifications that are located in specific directories. The certification installer does not have to be run on the Data Aggregator machine. The installer has both Windows and Linux versions, with a UI available for both, and command line available for Linux.

Product Documentation

CA provides a full set of technical documentation for all products. The guides available for CA Performance Management Data Aggregator are as follows:

- Overview Guide
- Administrator Guide
- Installation Guides
- Upgrade Guides
- Uninstallation Guides
- Release Notes
- Basic Self-Certification Guide
- Power User Certification Guide
- REST Web Services API Guide
- Report Information Base (RIB) API Guide
- Scenarios (Use Cases)

A Readme file contains the most recent list of known issues and workarounds. We recommend downloading the latest version of the Readme file and Release Notes from CA Support Online.

You can open these guides in PDF and HTML format from the Documentation Bookshelf. Access the bookshelf from the Help menu in the CA Performance Center user interface.

Context-sensitive online Help is available for pages and views when you click a Help (?) button or select Help for This Page from the Help menu.

Use the online Help system when you need more information about configuration tasks, navigating the user interface, and performance data.

Technology Certification Portal

The Technology Certification Portal lists out-of-the-box certifications by Data Aggregator version, vendor certification, and metric families:

http://serviceassurance.ca.com/im/ http://serviceassurance.ca.com/im/

Third Party Acknowledgements

Third-party software was used in the creation of Data Aggregator. All third-party software has been used in accordance with the terms and conditions for use, reproduction, and distribution as defined by the applicable license agreements.

Third-party license agreement information is provided in a text document (caim_thirdpartycontent.txt) and in PDFs, which are installed automatically with the Data Aggregator software in the installation directory.

Chapter 2: Deployment Requirements and System Requirements

This section contains the following topics:

Data Aggregator Deployment Options (see page 13)
Supported Browsers and Optimization (see page 14)
Virtual and SAN Environment Requirements (see page 15)
Small Deployment For Up To 15,000 Metrics Per Second (see page 15)
Medium Deployment For Up To 75,000 Metrics Per Second (see page 18)
Large Deployment For Up To 150,000 Metrics Per Second (see page 21)
Java Runtime Support (see page 23)

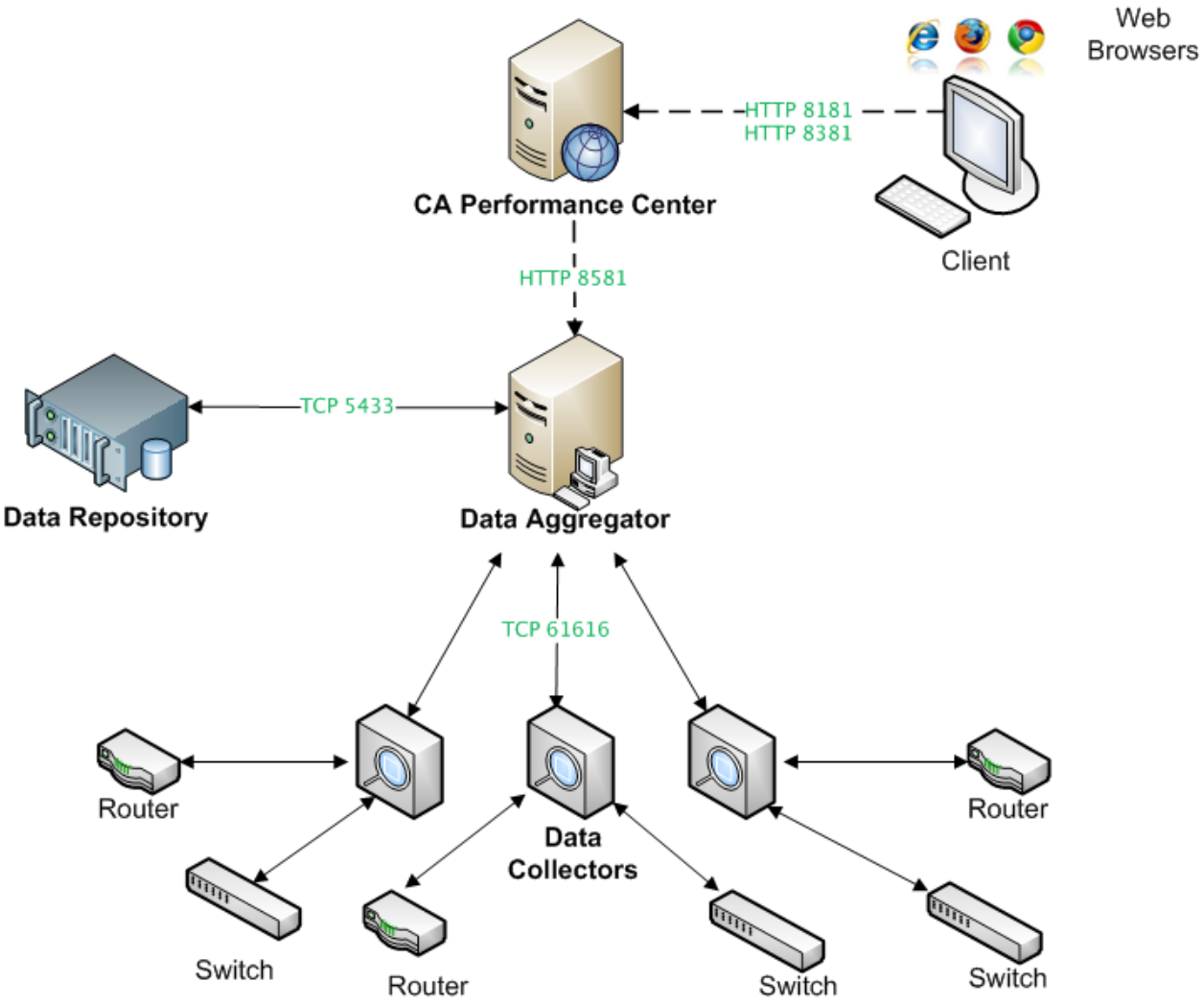
Data Aggregator Deployment Options

You have three options for a Data Aggregator deployment, depending on the amount of monitoring that you need:

- A small deployment, capable of handling 15,000 metrics per second, for monitoring up to 100,000 devices and components.
- A medium deployment, capable of handling 75,000 metrics per second, for monitoring up to 500,000 devices and components.
- A large deployment, capable of handling 150,000 metrics per second, for monitoring up to 1,000,000 devices and components.

  Note: We recommend a clustered Data Repository deployment (based on three nodes) for medium and large deployments.

The following diagram demonstrates how each component works together:



Supported Browsers and Optimization

The following browsers are supported:

- Microsoft Internet Explorer version 8 (with compatibility mode off)
- Google Chrome (current version)
- Mozilla Firefox (current version)

For optimal user experience, do not view CA Performance Center pages while running Internet Explorer 8 in compatibility view mode. If Internet Explorer 8 Developer Tools are installed, press F12 on your keyboard to check for compatibility mode. If the main menu reads "Browser Mode: IE 8 Compatibility View," click this menu item and select Internet Explorer 8. This change affects only the current browser session. In some cases, a group policy can force the Internet Explorer 8 browser to operate in compatibility mode for internal websites. In these cases, we recommend that you use Google Chrome or Mozilla Firefox.

Virtual and SAN Environment Requirements

Review the document titled *CA Support Statement for Running CA Infrastructure Management Products in Virtualization and SAN Environments* on CA Support Online:

https://support.ca.com/phpdocs/7/5637/CA_Support_Statement_for_Running_CA_NVM_Products_in_Virtualization_Environments.pdf

The document discusses the CA policies for installing and operating Infrastructure Management products on virtualized servers or Storage Array Networks (SAN). You must be logged in as a registered user to view documentation on CA Support Online.

Small Deployment For Up To 15,000 Metrics Per Second

The following information describes the requirements for a small deployment that is intended to support 15,000 metrics per second, for monitoring up to 100,000 devices and components. This deployment can be configured on the following four-host virtual machine environment:

- One CA Performance Center host
- One Data Repository host
- One Data Aggregator host
- One Data Collector host

Note: For information about CA Performance Center system requirements, see the *CA Performance Center Release Notes*.

Data Repository Requirements

The following table lists the minimum system requirements for installing the Data Repository host:

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	2 dedicated virtual CPUs
Processor speed	2.0 GHz
Memory (RAM)	16 GB
Disk space	3 partitions are required for the following directories: ■ catalog directory ■ data directory ■ backup data directory **Note:** For information about disk space, see the system sizing tool, which is available in the 'Recommended Reading' section on support.ca.com.
Disk input/output	200 Mega Bytes/second

Data Aggregator Requirements

The following table lists the minimum system requirements for installing the Data Aggregator host:

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	2 dedicated virtual CPUs
Processor speed	2.0 GHz

Component	Requirement
Memory (RAM)	16 GB
Disk space	50 GB **Note:** If Data Export will be used for one hour of data export, a second, separate 5 GB partition is required.
Disk input/ouput	100 Mega Bytes/second

Note: The data loading process has been rearchitected to persist all polled data temporarily to files on Data Aggregator before loading the data into Data Repository. Polled data files are removed once they are loaded into Data Repository. As a result, the amount of available disk space on Data Aggregator will fluctuate over time.

Data Collector Requirements

The following table lists the minimum system requirements for installing the Data Collector host:

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	2 dedicated virtual CPUs
Processor speed	2.0 GHz
Memory (RAM)	12 GB
Disk space	50 GB
Disk input/output	100 Mega Bytes/second

Note: For information about prerequisite steps and installation, see the *Data Aggregator Installation Guide*.

Medium Deployment For Up To 75,000 Metrics Per Second

The following information describes the requirements for a medium deployment that is intended to support 75,000 metrics per second, for monitoring up to 500,000 monitored devices and components. This deployment can be configured on the following six-host physical machine environment:

- One CA Performance Center host
- Three Data Repository hosts in a cluster
- One Data Aggregator host
- One Data Collector host

Note: For information about CA Performance Center system requirements, see the *CA Performance Center Release Notes*.

Data Repository Requirements

The following table lists the minimum system requirements for installing each Data Repository host.

Important! Although this deployment works with a single node Data Repository environment, we strongly advise a three-node cluster environment.

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	8 cores
Processor speed	2.0 GHz
Memory (RAM)	64 GB

Component	Requirement
Disk space	3 partitions are required for the following directories: ■ catalog directory ■ data directory ■ backup data directory **Note:** For information about disk space, see the system sizing tool, which is available in the 'Recommended Reading' section on support.ca.com.
Disk input/output	200 Mega Bytes/second

Data Aggregator Requirements

The following table lists the minimum system requirements for installing the Data Aggregator host:

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	8 cores
Processor speed	2.0 GHz
Memory (RAM)	32 GB
Disk space	50 GB **Note:** If Data Export will be used for one hour of data export, a second, separate 25 GB partition is required.
Disk input/output	100 Mega Bytes/second

Note: The data loading process has been rearchitected to persist all polled data temporarily to files on Data Aggregator before loading the data into Data Repository. Polled data files are removed once they are loaded into Data Repository. As a result, the amount of available disk space on Data Aggregator will fluctuate over time.

Data Collector Requirements

The following table lists the minimum system requirements for installing the Data Collector host.

Note: These requirements are for a Data Collector instance that is monitoring up to 500,000 devices and components. In practice, multiple lighter Data Collector instances can be substituted, as long as the combined capacity does not exceed 500,000 monitored devices and components. For example, you can use five virtual Data Collector instances to approximate one large one. You can see how many devices and components Data Collector is monitoring in the Data Collector List view. For more information about the Data Collector List view, see the *Data Aggregator Administrator Guide*.

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	4 cores
Processor speed	2.0 GHz
Memory (RAM)	32 GB
Disk space	50 GB
Disk input/output	100 Mega Bytes/second

Note: For information about prerequisite steps and installation, see the *Data Aggregator Installation Guide*.

Large Deployment For Up To 150,000 Metrics Per Second

The following information describes the requirements for a large deployment that is intended to support 150,000 metrics per second, for monitoring up to one million monitored devices and components. This deployment can be configured on the following seven-host physical machine environment:

- One CA Performance Center host
- Three Data Repository hosts in a cluster
- One Data Aggregator host
- Two Data Collector hosts

Note: For information about CA Performance Center system requirements, see the *CA Performance Center Release Notes*.

Data Repository Requirements

The following table lists the minimum system requirements for installing each Data Repository host.

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	12 cores
Processor speed	2.5 GHz
Memory (RAM)	96 GB
Disk space	3 partitions are required for the following directories: ■ catalog directory ■ data directory ■ backup data directory **Note:** For information about disk space, see the system sizing tool, which is available in the 'Recommended Reading' section on support.ca.com.

Component	Requirement
Disk input/output	200 Mega Bytes/second

Data Aggregator Requirements

The following table lists the minimum system requirements for installing the Data Aggregator host:

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	12 cores
Processor speed	2.5 GHz
Memory (RAM)	48 GB
Disk space	100 GB **Note:** If Data Export will be used for one hour of data export, a second, separate 5 GB partition is required.
Disk input/output	100 Mega Bytes/second

Note: The data loading process has been rearchitected to persist all polled data temporarily to files on Data Aggregator before loading the data into Data Repository. Polled data files are removed once they are loaded into Data Repository. As a result, the amount of available disk space on Data Aggregator will fluctuate over time.

Data Collector Requirements

The following table lists the minimum system requirements for installing each Data Collector host.

Important! This information is specific to *each* of the two Data Collector instances. In practice, multiple lighter Data Collector instances can be substituted, as long as the combined capacity does not exceed one million monitored devices and components. For example, you can use five virtual Data Collector instances to approximate one large one. You can see how many devices and components Data Collector is monitoring in the Data Collector List view. For more information about the Data Collector List view, see the *Data Aggregator Administrator Guide*.

Component	Requirement
Operating system	Red Hat Enterprise Linux 5.x for x64 Red Hat Enterprise Linux 6.x for x64 **Note:** Upgrading an existing RH5 Vertica installation to an RH6 installation is not supported.
Processor	4 cores
Processor speed	2.5 GHz
Memory (RAM)	32 GB
Disk space	50 GB
Disk input/ouput	100 Mega Bytes/second

Note: For information about prerequisite steps and installation, see the *Data Aggregator Installation Guide*.

Java Runtime Support

Java 7 runtime 64-bit is supported.

Chapter 3: Upgrade Requirements and Considerations

If you are upgrading Data Aggregator, review the following information.

Supported Upgrade Paths

If you are upgrading from a previous release of Data Aggregator, upgrade your components. You always upgrade the CA Performance Center, Data Aggregator, and Data Collector components. Upgrade Data Repository when you are upgrading to the releases identified in the table that follows.

Important! If you are upgrading from Release 2.0.00 to Release 2.4, upgrade to Release 2.1.00, upgrade to Release 2.2.x, and then upgrade to Release 2.3, first.

The following table indicates the supported upgrade paths and indicates which components to upgrade:

Release	CA Performance Center Component	Data Aggregator Component	Data Collector Component	Data Repository Component
Release 2.0.00 to Release 2.1.00	Upgrade Required	Upgrade Required	Upgrade Required	Upgrade *Not* Required
Release 2.1.00 to Release 2.2.00	Upgrade Required	Upgrade Required	Upgrade Required	Upgrade Required
Release 2.2.00 to Release 2.2.1	Upgrade Required	Upgrade Required	Upgrade Required	Upgrade *Not* Required
Release 2.2.00 or 2.2.1 to 2.2.2	Upgrade Required	Upgrade Required	Upgrade Required	Upgrade Required
Release 2.2.[1, 2, 3] to 2.3.[0, 1, 2, 3]	Upgrade Required	Upgrade Required	Upgrade Required	Upgrade *Not* Required
Release 2.2.x to 2.3.4	Upgrade Required	Upgrade Required	Upgrade Required	Upgrade Required **Note:** Vertica Release 7 is introduced in Release 2.3.4.

Release	CA Performance Center Component	Data Aggregator Component	Data Collector Component	Data Repository Component
Release 2.3.[0, 1, 2, 3] to 2.3.4	Upgrade Required	Upgrade Required	Upgrade Required	Upgrade Required **Note:** Vertica Release 7 is introduced in Release 2.3.4.
Release 2.4	Upgrade Required	Upgrade Required	Upgrade Required	

Note: For information about upgrading Data Aggregator components, see the *Data Aggregator Installation Guide*. For information about upgrade requirements and considerations for releases before 2.3.x, see the *Release Notes* or *Fixed Issues* file for the release to which you are upgrading.

Update the Configuration File for Automatic Backups

When you set up automatic backups of the Data Repository component, you create a configuration file.

Note: If you are upgrading from CA Performance Management 2.3.4, you do not need to perform the steps to update the configuration file.

We strongly recommend that you create a *new* configuration file after you upgrade the Data Repository component. For Release 2.4.1, when you upgrade the Data Repository component, you are upgrading to Vertica 7. Although your Vertica 6 configuration file works when you upgrade the Vertica 7 database, Vertica 7 changed the format of the configuration file. At some point in the future, the Vertica 6 configuration file format might be decommissioned.

See the *Data Aggregator Installation Guide* (CLI, Wizard, or Silent) for information about how to create the configuration file.

Upgrade Impact for Environmental Sensor - Temperature Status (NormalizedTempSensorInfo) Metric Family and Device Components

New device components discovered based on the Environmental Sensor - Temperature Status metric family have a new context page available out-of-the-box. However, existing device components that are associated with Environmental Sensor - Temperature Status may display on a different context page. This design lets you keep historical data. For existing device components to display on the same context page as the newly discovered device components, delete and rediscover the corresponding devices.

Chapter 4: Known Limitations

IPv4 and IPv6 IP Addresses

If a device supports both IPv4 and IPv6 IP addresses, discover the device with its IPv4 IP address. If you later create a discovery profile that includes an IPv6 address for the same device, it is possible that duplicate device items will be created with the IPv6 address.

VMware Virtual Machine Tab on the Device Context Page Is Not Shown for Server

Symptom:

The VMware Virtual Machine tab on the device context page is not shown for servers when there is an Application Delivery Analysis data source.

Solution:

To work around this known issue, navigate to the VMware overview page and drill down to the component context page for the desired virtual machine.