Data Center Automation Classic (Ultimate)

Software Version: 2017.08

Getting started

Hewlett Packard Enterprise

Legal Notices

Warranty

The only warranties for Hewlett Packard Enterprise Development LP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise Development LP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from Hewlett Packard Enterprise Development LP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notice

© Copyright 2015 - 2017 Hewlett Packard Enterprise Development LP

Trademark Notices

Adobe™ is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

This product includes an interface of the 'zlib' general purpose compression library, which is Copyright © 1995-2002 Jean-loup Gailly and Mark Adler.

Documentation Updates

To check for recent updates or to verify that you are using the most recent edition of a document, go to: https://softwaresupport.hpe.com/.

This site requires that you register for an HPE Passport and to sign in. To register for an HPE Passport ID, click **Register** on the HPE Software Support site or click **Create an Account** on the HPE Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HPE sales representative for details.

Support

Visit the HPE Software Support site at: https://softwaresupport.hpe.com/.

Most of the support areas require that you register as an HPE Passport user and to sign in. Many also require a support contract. To register for an HPE Passport ID, click **Register** on the HPE Support site or click **Create an Account** on the HPE Passport login page.

To find more information about access levels, go to: https://softwaresupport.hpe.com/web/softwaresupport/access-levels.

HPE Software Solutions Now accesses the HPESW Solution and Integration Portal website. This site enables you to explore HPE Product Solutions to meet your business needs, includes a full list of Integrations between HPE Products, as well as a listing of ITIL Processes. The URL for this website is https://softwaresupport.hpe.com/km/KM01702731.

Contents

Get started

The Data Center Automation (DCA) Classic 2017.08 is a complete automation solution for standardizing and automating routine data center operations.

The DCA Classic Ultimate edition is used to manage infrastructure lifecycle management and compliance for IT at Enterprise scale.

This edition helps you to automate activities for data center management including server discovery, provisioning, configuration and virtualization management, software, database and middleware management, patching, audit, compliance and remediation, and infrastructure lifecycle actions across your data center.

It provides tools that automate:

- Critical areas of your data center's server management

- Business service compliance

- IT processes, including provisioning, configuration, compliance, and patching

- Release management for databases and applications services at Enterprise scale

Key features and capabilities

This section provides information on the various features and capabilities of the DCA Classic Ultimate.

Enable agile IT operations and business service delivery

The DCA Classic Ultimate is a unified, scalable, analytics-driven infrastructure management solution that automates tasks, orchestrates end-to-end processes, enforces compliance, and optimizes IT infrastructure. It reduces the cost of IT operations and accelerates service delivery.

It delivers end-to-end lifecycle management across virtual and physical servers, databases, and middleware; including discovery, provisioning, configuration, patching, compliance assessment, remediation, software deployment, upgrades, migrations and retirement.

Policy-based deployments and out-of-the-box workflows ensure proven, consistent processes are followed, enterprise standards are enforced and greatly speed up and simplify operations, either as discreet tasks or within an orchestrated multi-domain end-to-end process. Additionally, the DCA Classic Ultimate provides capacity and performance optimization in an easy-to-use platform, purpose-built for virtualization and capacity analytics.

It supports heterogeneous and multivendor automation for popular operating systems and commercial applications, including, but not limited to, Windows®, Linux®, Oracle, SQL Server, DB2, Sybase, WebSphere, WebLogic, Apache and JBoss. The most diverse and complex IT environments rely on DCA for managing day-to-day operations.

Automated provisioning and configuration

With DCA Classic Ultimate, you can automate provisioning and configuration for virtual servers, physical servers, databases, and middleware. A template-based approach simplifies mass-scale deployment while enabling consistent results. Key features and capabilities include:

- Bare-metal provisioning
- Virtual machine (VM) deployment

- Database and middleware provisioning, configuration, schema updates, and migrations and upgrades for standalone or clustered instances

- Template-based provisioning and configuration

- Sequence multiple resource types (for example, update registry settings, install applications, edit user or group settings, and run scripts)

- Out-of-the-box OS build plans
  - Heterogeneous operating system (OS), BIOS setup, and RAID configurations

- Proven scalability across more than 100,000 servers, and 20,000 database instances

Policy-based software and patch deployment

The DCA Classic Ultimate simplifies the management of software installations, updates, patching/rollback, and uninstalls. It identifies and automatically remediates vulnerabilities based on defined policies to maintain compliance. Customers can manage patch schedules to protect against vulnerabilities for multivendor OS, database, and middleware platforms. The capabilities include:

- Explicitly control sequence of software updates and patches
  - Manage attributes for patch severity, date, and type; or region and application tailoring

  - Capture incremental changes in policies, recreate or revise templates to maintain standards

  - Manage patches at the Group or infrastructure level

  - Rollback / remove patches
- Know when or where patches or software are deployed

- Scheduled or manually initiated remediation

- Extensible design integrates with third-party patch management systems

- Delivers only the patches that are needed

Continuous compliance with remediation

The DCA Classic Ultimate offers near continuous compliance for corporate and regulatory compliance across servers (virtual and physical), databases, and middleware. Details of the key capabilities are outlined as follows

- Automated change detection, configuration updates, patching, audit and remediation
- Service-level compliance assesses and remediates selected resources in a business service
  - Focus on business services rather than individual infrastructure components
- Built-in service-level objectives (SLOs) to meet requirements for frequency of audit and time to remediate
- Out-of-the-box industry-standard compliance policies (for example PCI, CIS, HIPAA) via the HPE Live Network Content Marketplace to audit and remediate using current compliance rules

Analytics-driven capacity optimization

The VM optimizer is purpose-built for virtualization and capacity analytics, with a near real-time visual dashboard to identify bottlenecks and poor utilization. Key features include:

- Manage sprawl by reclaiming unused, forgotten, idle, and oversized VMs
- Best-fit placement suggestions for new VM workloads. Right-sizing VM environment based on historical resource usage trends and available capacity
- Identify days to forecast capacity based on historical consumption
- Identify hot spots with near real-time dashboards associated with performance, resource utilization, and capacity

Built-in process orchestration

A built-in process orchestration engine connect tasks and process flows to help automate data center management. The orchestration engine allows customers to tailor processes their specific needs based on out-of-the-box operations.

- Thousands of pre-built operation flows to create powerful and repeatable deployments
- Out-of-the-box content built using industry standards, vendor best practices, and real-world experience
- Workflows for many common, processes such as end-to-end provisioning (infrastructure to application), vulnerability management, and disaster recovery.

- Integration engine for open source and proprietary third-party scripts (for example Chef, Puppet, and Ansible), extending capabilities (for example software audit and tracking, user access management, and compliance)

- Easy flow creation
  - Design and debug flows with intuitive, drag-and-drop interface and integration
  - Integrate existing customer content, for example, PowerShell scripts, Web Services, REST

- SOAP APIs

- Integrated development environment (IDE) that supports hundreds of authors across geographies
  - Graphical and textual dual authoring experience

Product integration matrix

	SA 10.60	OO 10.70	ITOC 1.20	DMA Premium 10.50.001	OBR 10.20	CO 3.01
SA 10.60		✅	✅	-	✅	-
OO 10.70	✅		-	✅	-	-
ITOC 1.20	✅	-		-	-	-
DMA Premium 10.50.001	-	✅	-		-	-
OBR 10.20	✅	-	-	-		✅
CO 3.01	-	-	-	-	✅	

The following sections provide information about the individual products that comprise the DCA Classic Ultimate 2017.08 release.

Server Automation

Server Automation (SA) is a data-center automation software that centralizes and streamlines many data center functions and automates critical areas of your data center's server management including the following:

- Server discovery

- Operating system provisioning

- Operating system patching

- Software provisioning

- Audit and compliance

- Application configuration

- Application deployment

- Software compliance

- Reporting

Virtual environment management

You can also manage your heterogeneous virtual environment including:

- Virtualization services (VSs)

- Virtual machines (VMs)

- VM templates

You can provision, patch, configure, and audit all of your virtual machines the same way that you manage your physical servers.

SA enables you to make changes more safely and consistently because you can model and validate changes before you commit them to a managed server. SA provides methods to ensure that modifications you plan for your managed servers work because they have been tested before being applied, thereby reducing downtime.

Operations Orchestration

Operations Orchestration (OO) is the industry-leading solution for IT process automation and runbook automation.

OO is a system for creating and using actions in structured sequences (called flows) which maintain, troubleshoot, repair, and provision your IT resources by performing the following actions:

- Checking the health, diagnosing, and repairing, networks, servers, services, software applications, and individual workstations.

- Deploying applications, patching, and maintaining them by checking client, server, and virtual machines for required software and updates, and, if needed, performing the necessary installations, updates, and distributions.

- Performing repetitive tasks, such as checking status on internal or external web site pages.

Database and Middleware Automation Premium

Database and Middleware Automation (DMA) Premium software automates administrative tasks like:

- P rovisioning and configuration

- Compliance

- Patching

- Release management for databases and application servers

When performed manually, these day-to-day software administration operations are error-prone, time consuming, and difficult to scale.

DMA automates these administration tasks that take up 60-70% of a database or application server administrator's day. Automating these tasks enables greater efficiency and faster change delivery with higher quality and better predictability.

DMA provides role-based access to automation content. This enables you to better utilize resources at every level:

- End users can deliver routine, yet complex, DBA and middleware tasks.

- Operators can execute expert level tasks across multiple servers including provisioning, patching, configuration, and compliance checking.

- Subject matter experts can define, enforce, and audit full stack automation across network, storage, server, database, and middleware.

DMA workflows

Use a DMA workflow to perform a specific automated task, such as:

- Provisioning databases or application servers

- Patching databases or application servers

- Checking a database or application server for compliance with a specific standard

You specify environment-specific information that the workflow requires by configuring DMA parameters. You can also group related DMA workflows into a solution pack.

IT Operations Compliance

IT Operations Compliance (ITOC) allows IT Operations users to track business service compliance against corporate and regulatory policies, making their environment compliant and therefore secure.

With ITOC, you can:

- Scan compliance of business services against policies in a repeatable and reliable manner

- Remediate non-compliance

- Provide an overall view of compliance status across policies and business services

- Track exceptions of resources to requirements in the Statement of Applicability (SoA)

- Track the life cycle and revisions of policies, business services, controls, and SoAs

Operations Bridge Reporter

Operations Bridge Reporter (OBR) is a cross-domain historical infrastructure performance reporting solution. It leverages the topology information to show how the underlying infrastructure's health, performance, and availability are affecting your business services and business applications in the long term. OBR manages the relationship of infrastructure elements to the business services at run-time by using the same topology services that are used by the products that collect the performance data from the managed nodes.

OBR collects data from different data sources, processes the data, and generates top-down and bottoms-up reports with the processed data. The SAP BusinessObjects, HP Vertica database, and PostgreSQL database are embedded software component of OBR.

You can use the interactive reports in OBR to:

- Report and analyze the pattern of problems in your IT environment.

- Forecast IT resource performance based on historical data.

- Drill down across time boundaries for the available data. For example, you can drill down from yearly level reports to monthly and daily level reports and vice versa to analyze the pattern of problems in a specific period of time.

- Perform a custom analysis of the data using report filters.

You can use OBR to determine the changes that you can make in your IT environment to improve the performance of your business services.

OBR has high data retention capability. This makes it possible to maintain high performance data over a long period of time and aid in decision making.

OBR provides Content Pack which is a data mart—a repository of data collected from various sources—that pertains to a particular domain, such as system performance or virtual environment performance, and meets the specific demands of a particular group of knowledge users in terms of analysis, content presentation, and ease of use.

Content Packs contain the rules that define how the metrics will be collected, transformed, and aggregated in the reports. A typical Content Pack defines the metrics for a specific domain along with the necessary rules for analysis required in that domain.

OBR allows you to perform the following functions:

- Create your own Content Packs. OBR provides Content Development Environment (CDE) to create new Content Packs and customize existing Content Packs.
- Customize and extend the out-of-the-box Content Packs provided in the product.
- Create your own groups for reporting. For example, you can create groups based on the business management chain or business functions.

Cloud Optimizer (CO)

Cloud Optimizer (CO) is a web-based analysis and visualization tool that analyzes the performance trends of elements in virtualized environments. It enables virtualization monitoring by providing an overview of the environment, near-real-time and historical data analysis and triaging using an interactive dashboard. It also enables monitoring for cloud and hypervisor environments. CO provides essential recommendations in capacity analysis and optimization such as right-sizing, placement of VMs, forecast for resources based on their usage, and impact of adding or deleting resources in your environment.

Here are the key capabilities of CO:

Capacity Analysis and Optimization

- Capacity Overview provides right size recommendation for the resources in the environment.
- Placement provides suggestions for adding new VMs based on available or reclaimable capacity.

- Forecast helps you to project future capacity utilization levels of different resources for a predefined time period. Using the Forecast feature, you can determine the Days to Capacity information to make optimal allocation and placement.

- Modeler helps to determine the impact of adding or deleting resources in your environment. You can estimate the future capacity utilization to proactively plan your hardware requirements.

Performance Monitoring

- Dashboard provides quick and easy navigation to other CO views.

- Treemap provides a graphical representation of the health of the environment. You can also identify and view the problems at a glance. Treemap provides a quick analysis of the entities such as Datacenter, Host, or VMs.

- Workbench helps you visualize and triage the performance of the monitored resources. You can troubleshoot problems that occurred in the past for a specific time period. You can draw and view graphs with the help of available metrics. Additionally, you can save frequently used graphs as favorites.

- Alerts help you to identify and troubleshoot the problems generated in your virtualized environment.

- Real Time Guest Drill Down detects overloads in the environment. You can drill-down to determine the performance overload issue in VMs.

- Filter allows to filter domain specific entities based on the metric values.

Business Group and Resource Meter

- Business Group helps you to customize the operational view of your virtual infrastructure, based on your business applications and services. Using Business Grouping, you can categorize and group your Servers, Hypervisors, or Datastores based on the needs and priorities of your organization.

- Resource Meter helps you to track the CPU, Memory, and Storage allocation of a set of VMs over a specific time interval. It also enables us to charge back the respective groups, which use the services.

Product library

Product	Version	Documentation library link
Server Automation (SA)	10.60	go
Operations Orchestration (OO)	10.70	go
Databases and Middleware Automation (DMA) Premium	10.50.001	go
Operations Bridge Reporter (OBR)	10.20	go
IT Operations Compliance (ITOC)	1.20	go
Cloud Optimizer (CO)	3.01	go

Send documentation feedback

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Getting started (Data Center Automation Classic Ultimate 2017.08)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to hpedca-docs@hpe.com.

We appreciate your feedback!