# IBM SmartCloud Orchestrator V2.2 is designed to deliver end-to-end automation of cloud service delivery

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## At a glance

IBM SmartCloud® Orchestrator V2.2 is a comprehensive solution that can automate the delivery of cloud services.

With IBM SmartCloud Orchestrator V2.2, you can:

- Accelerate the delivery of cloud services, via a fully automated self-delivery model, leveraging a sophisticated, yet easy-to-use orchestration engine
- Automate the deployment of whole multinode application topologies
- Monitor the health of the cloud environment, with performance and planning capabilities
- Provide visibility of IT costs with features that are designed to measure, analyze, report, and invoice the utilization and cost of cloud computing resources

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For ordering, contact Your IBM® representative or an IBM Business Partner.
For more information contact the Americas Call Centers at
800-IBM-CALL (426-2255).

Reference: YE001
```

## Overview

In today's ever changing business environment, IT has become a fundamental business process that allows enterprises to be more effective at delivering solutions to their customers. The cloud paradigm can dramatically increase the speed of delivery of new business services while reducing operational cost and improving quality of services.

IBM SmartCloud Orchestrator is an integrated cloud automation platform that is designed to help orchestrate the development, deployment, and management of robust enterprise cloud services for increased business agility as well as to accelerate overall time-to-market.

IBM SmartCloud Orchestrator provides comprehensive automation of cloud services, supporting infrastructure as well as application and platform services. They are delivered through a self-service portal and completely automated by an easy-to-use workload editor tightly integrated with an orchestration engine. Application topologies are graphically composed in the workload editor and then linked to a wide set of automation workflows built with a sophisticated yet very intuitive orchestrator.

This combination is intended to maximize speed and flexibility to build and deliver cloud services.

IBM SmartCloud Orchestrator integrates infrastructure, application, storage, and network automation into a single open and extensible automation platform. IBM SmartCloud Orchestrator is built on open standards and leverages the OpenStack technology, which provides a rich and powerful set of infrastructure features to provision workloads on a cloud environment.

Integration with IBM and third-party tools or adaptation to existing data center processes is simplified by leveraging a large set of ready-to-use automation packages for an immediate adoption of a cloud delivery model.

IBM SmartCloud Orchestrator is available in two editions:

1. IBM SmartCloud Orchestrator (Base edition) includes workload provisioning capabilities and the orchestration platform.
2. IBM SmartCloud Orchestrator (Enterprise edition) also adds integrated monitoring and availability management of the cloud environment, and includes sophisticated performance and capacity planning capabilities. It also provides visibility of the IT costs with features that are designed to measure, analyze, report, and invoice the utilization and costs of cloud computing resources.

IBM SmartCloud Orchestrator V2.2 offers significantly increased data protection capabilities, scalability, and performance for all its database-intensive operations which, based on IBM DB2® technology, is designed to manage data more effectively and efficiently. Greater availability is delivered through enhancements such as online, automated database reorganization. In addition, the increased scalability and the ability to leverage the latest in server technology helps deliver increased performance of backup and recovery processes.

## Key prerequisites

Refer to the Hardware requirements and Software requirements sections.

## Planned availability date

- May 8, 2013: Electronic download
- May 24, 2013: Physical delivery

## Description

With IBM SmartCloud Orchestrator V2.2, you can:

- Automate the complete lifecycle of cloud service delivery, including tasks such as network and storage configuration, approval workflows, integration with change and management systems.
- Deploy whole multitier applications, through graphical composition of virtual patterns.
- Enable a self-service consumption model of cloud services for multitier application deployment that requires complex automation as well as simple infrastructure services can be exposed in a self-service catalogue, giving the IT administrator the option to hide much of the underlying complexity from the end users.
- Take advantage of a rich set of ready-to-use automation packages to integrate with IBM tools and third-party tools.
- Support deployments on Amazon Elastic Compute Cloud, allowing the implementation of a hybrid cloud model.

- Reduce the effort to manage your library of virtual images, to control image sprawl, image drift, security vulnerability, and reduce business risk through rich analytics, image versioning, and federated image library features.
- Simplify the process of creating virtual images through the use of a graphical tool to construct and compose virtual images.
- With IBM SmartCloud Orchestrator (Enterprise edition) V2.2, you can also:
  - Measure the cost of cloud services with metering and chargeback capabilities, via integration with IBM SmartCloud Cost Management.
  - Keep track of cloud service health and perform capacity management of the cloud resources.

IBM SmartCloud Orchestrator V2.2 provides a unique combination of capabilities, which allow you to get the most benefit of a cloud implementation.

**Full automation of cloud services**

IBM SmartCloud Orchestrator V2.2 can automate the entire process of delivering a new business application in the cloud, thus helping reduce the need to perform manual tasks.

IBM SmartCloud Orchestrator provides a flexible and easy-to-use graphical orchestrator that can automate the provisioning of compute and storage resources, configuration network devices such as firewall and load balancers integration with service request and change management systems, automate human tasks such as approvals, and integrate with custom tools and processes that exist in the data center.

IBM SmartCloud Orchestrator platform enables automation of infrastructure services to complex multitier applications, thus providing a unique combination of capabilities.

IBM SmartCloud Orchestrator V2.2 enables rapid deployment of whole multitier applications using workload patterns. IBM SmartCloud Orchestrator can reuse a large number of ready-to-use application patterns or new patterns can be created from scratch using a graphical editor.

**An extensible platform**

IBM SmartCloud Orchestrator V2.2 is designed to be easily extended and customized. New application patterns can be easily created with a graphical tool, and new automations can be created and plugged into the orchestration platform.

**A comprehensive cloud management solution**

IBM SmartCloud Orchestrator (Enterprise edition) provides the key capabilities needed to implement a cloud delivery model. It provides an integrated solution with built-in cost management capabilities, thus allowing visibility and control of the cost structure of the cloud.

IBM SmartCloud Orchestrator (Enterprise edition) also provides monitoring capabilities and capacity analytics to help right-size, consolidate, or balance workloads, while also providing visibility through health dashboards, thereby, helping increase cloud availability.

**Built on open standards for an open world**

IBM SmartCloud Orchestrator is built on a foundation based on open standards. This foundation is driven by OpenStack and provides a rich and powerful set of capabilities to provision infrastructure services, leveraging Open Source virtualization technologies.

IBM SmartCloud Orchestrator V2.2 also supports OASIS Topology and Orchestration Specification for Cloud Applications standard, which enables an interoperable description of application and infrastructure cloud services. Cloud services, based on OASIS Topology and Orchestration Specification for Cloud Applications specification,

can be deployed and managed by any cloud management platform supporting the standard, thus helping you avoid vendor lock-in, and maintaining your investments in the definition and customization of cloud services.

IBM SmartCloud Orchestrator V2.2 also ships with Jazz™ for Service Management, a set of open integration services utilizing a common infrastructure based on community driven specifications from Open Services for Lifecycle Collaboration (OSLC). Loosely coupled data integration allows for simple, bidirectional sharing of data, for example, between IBM SmartCloud Orchestrator and any IBM or third-party tool. The common registry service provides the means for virtually any tool to publish direct links to its data or easily search for links to data listed in the registry by other participating tools. Other integration services include shared visualization, administration, reporting, and security (for example, single sign-on).

These open standards allow for flexibility and choice among vendors that are critical in picking a cloud solution that meets today's needs while still allowing for tomorrow's adjustments. They enable IBM SmartCloud Orchestrator to provide a rich and powerful Platform as a Service feature set that can help simplify the ability to build robust patterns and efficient cloud services while still providing a robust and comprehensive infrastructure to help meet cloud administration needs.

**Comprehensive image lifecycle management**

With tools such as the Virtual Image Library, Image Construction and Composition Tool and the Pattern Editor, IBM SmartCloud Orchestrator can help organizations manage image sprawl, ensure compliance, create base images, automate software installation, and build repeatable patterns. This breadth of capabilities helps the organization's efforts to ensure it not only creates a robust cloud environment but also has the ability to control and manage that environment.

**Rapid provisioning and scalability**

With IBM SmartCloud Orchestrator, IT organizations can rapidly implement the specific type of cloud environment they need virtually regardless of size and can start taking advantage of the increased flexibility and performance that cloud computing offers. At any point, the cloud can be quickly scaled up or down, as needed, helping organizations meet changing IT requirements without disrupting operations.

**Accessibility by people with disabilities**

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

   http://www.ibm.com/able/product_accessibility/index.html

## Product positioning

The IBM SmartCloud foundation provides a comprehensive set of technologies that can enable organizations to deploy and manage Infrastructure as a Service and Platform as a Service. It enables organizations to build and scale private cloud environments with enhanced time-to-market, integration, and management.

IBM SmartCloud Orchestrator V2.2 is a key component of the IBM SmartCloud foundation offerings, which accelerates the delivery of cloud services through a robust open orchestration platform that can fully automate the deployment and the lifecycle management of cloud services.

IBM SmartCloud Orchestrator V2.2 is aimed at helping large enterprises and service providers as well as general business organizations to quickly leverage the benefits of a cloud delivery model. The ease of use and the graphical composition capabilities of IBM SmartCloud Orchestrator V2.2 allow any organization of any size to quickly realize the cost benefits of a fully automated cloud delivery model.

Some of the challenges addressed by SmartCloud Orchestrator V2.2:

- Business pains
  - Increased pressure to cut operational costs and contribute more to the business
  - Need to react quickly to market demand and speed cycle of innovation
- IT pains
  - Reduce time to deploy multinode business applications that require multiple configuration tasks performed by different IT teams and ensure these environments are delivered in a consistent and repeatable state.
  - Need to be able to provision and manage a greater number of systems, over time, without greatly increasing staff.
  - Standardize application components to reduce deployment errors.

## Program number

```
Program                    Program
number        VRM          name

5725-H28      2.2          IBM SmartCloud Orchestrator
```

## Education support

Comprehensive education for IBM Tivoli® products is offered through Worldwide Tivoli Education Delivery Services. A wide range of training options are available, including classes led by instructors, learning on demand, on-site training, and blended learning solutions.

For additional information, visit

http://www-306.ibm.com/software/tivoli/education/

## Offering Information

Product information is available via the Offering Information website

http://www.ibm.com/common/ssi

Also, visit the Passport Advantage® website

http://www.ibm.com/software/passportadvantage

## Publications

IBM SmartCloud Orchestrator Quick Start Guide will be delivered on the Quick Start CD in PDF and HTML format.

At general availability, IBM SmartCloud Orchestrator Installation and User's Guide (English) may be downloaded from

http://www.ibm.com/software/tivoli/library

The IBM Publications Center

http://www.ibm.com/shop/publications/order

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive

search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries, free of charge.

## Technical information

### Specified operating environment

#### *Hardware requirements*

The following are minimum required values for memory and disk space for IBM SmartCloud Orchestrator V2.2.

- RHEL 6.3 x86-64 Linux™ System VT enabled
  - Number of processors: 4
  - Number of NICs: 1
  - Memory: 24 GB
  - Disk: 550 GB

- Business Process Manager (BPM):

  When running SmartCloud Orchestrator, the BPM server can either run in the All-in one machine with SmartCloud Orchestrator or more efficiently in a separate virtual machine:

  - RHEL 6.3 x86-64 Linux system
    -- Number of processors: 2
    -- Memory: 6 GB
    -- Disk: 50 GB

#### *Software requirements*

The following operating systems are supported by IBM SmartCloud Orchestrator V2.2.

IBM SmartCloud Orchestrator V2.2 runs a hypervisor as a virtualization layer between the hardware and the operating system. The supported hypervisors are:

- VMware ESXi V4.1, VMware vSphere 5.0, VMware vSphere 5.1
- Kernal-based Virtual Machine hosted on RHEL 6.3 x86_64

  Note: The installer only supports Red Hat Enterprise Linux 6.3 x86_64.

- IBM DB2 is the backend database. The supported version is DB2 10.1 x86_64.

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a readme file, or other information published by IBM , such as an announcement letter. Documentation and other program content may be supplied only in the English language.

#### *IBM Electronic Support*

The IBM Support Portal is your gateway to technical support. This includes IBM Electronic Support tools and resources, for software and hardware, to help save time and simplify support. The Electronic Support tools can help you find answers to questions, download fixes, troubleshoot, automate data collection, submit and track problems through the Service Request online tool, and build skills. All these tools are made available through your IBM support agreement, at no additional charge.

Read about the Electronic Support portfolio of tools

http://ibm.com/electronicsupport

Access the IBM Support Portal

http://ibm.com/support

Access the online Service Request tool

http://ibm.com/support/servicerequest

## Planning information

### *Direct customer support*

For technical support or assistance, contact your IBM representative or visit

http://www.ibm.com/support

### *Packaging*

IBM SmartCloud Orchestrator V2.2 is distributed with:

- International Program License Agreement (Z125-3301)
- License Information document
- DVD media
- Publications (refer to the Publications section)

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

### Security, auditability, and control

IBM SmartCloud Orchestrator V2.2 uses the security and auditability features of the operating system software. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

## Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

http://www.ibm.com/software/sw-services/

## Licensing metric definitions and pricing examples

### Licensing metric definitions

### Resource Value Unit (RVU)

RVU is a unit of measure by which the program can be licensed. RVU Proofs of Entitlement (PoEs) are based on the number of units of a specific resource used

or managed by the program. Licensee must obtain entitlements for this program sufficient to cover the resources managed by the program. Licensee must obtain sufficient entitlements for the number of RVUs required for licensee's environment for the specific resources as specified in the resource table found in the program's announcement or License Information document. RVU entitlements are specific to the program and the type of resource and may not be exchanged, interchanged, or aggregated with RVU entitlements of another program or resource.

**Standby or backup systems**

For programs running or resident on backup machines, IBM defines three types of situations: cold, warm and hot. In cold and warm situations, a separate entitlement for the copy on the backup machine is normally not required and typically no additional charge applies. In a hot backup situation, the customer needs to acquire other licenses or entitlements sufficient for that server. All programs running in backup mode must be solely under the customer's control, even if running at another enterprise's location.

As a practice, the following are definitions and allowable actions concerning the copy of the program used for backup purposes.

**Cold:** A copy of the program may reside, for backup purposes, on a machine as long as the program is not started. There is no additional charge for this copy.

**Warm:** A copy of the program may reside for backup purposes on a machine and is started, but is idling, and is not doing any work of any kind. There is no additional charge for this copy.

**Hot:** A copy of the program may reside for backup purposes on a machine, is started, and is doing work. The customer must acquire a license or entitlements for this copy and there will generally be an additional charge.

Doing work includes, for example, production, development, program maintenance, and testing. It also could include other activities such as mirroring of transactions, updating of files, synchronization of programs, data, or other resources (for example, active linking with another machine, program, database or other resource, and so on), or any activity or configurations that would allow an active hot switch or other synchronized switchover between programs, databases, or other resources to occur.

In the case of a program or system configuration that is designed to support a high availability environment by using various techniques (for example, duplexing, mirroring of files, or transactions, maintaining a heartbeat, active linking with another machine, program, database, or other resource), the program is considered to be doing work in the hot situation and a license or entitlement must be purchased.

**Product and licensing websites**

A complete list of IBM Tivoli products is available at

   http://www.ibm.com/software/tivoli

IBM Tivoli product licensing documents are available at

   http://www.ibm.com/software/tivoli/products/licensing.html

**Passport Advantage**

Through the Passport Advantage Agreement, you may receive discounted pricing based on their total volume of eligible products, across all IBM brands, acquired worldwide. The volume is measured by determining the total Passport Advantage points value of the applicable acquisitions. Passport Advantage points are only used for calculating the Entitled Passport Advantage discount.

To determine the required IBM Tivoli product configuration under Passport Advantage , the IBM Tivoli Enhanced Value-Based Pricing Model applies. The customer's environment is evaluated on a per-product basis.

Use the following two-step process to determine the total Passport Advantage points value:

1. Analyze your environment to determine the number of charge units for a product. The quantity of each product's part numbers to be ordered is determined by that analysis.
2. Order the Passport Advantage part numbers. A Passport Advantage point value, which is the same worldwide for a specific part number regardless of where the order is placed, is assigned to each IBM Tivoli product part number. The Passport Advantage point value for the applicable part number, multiplied by the quantity for that part number, will determine the Passport Advantage points for that IBM Tivoli product part number. The sum of these Passport Advantage points determines the Passport Advantage point value of the applicable IBM Tivoli product authorizations which then may be aggregated with the point value of other applicable Passport Advantage product acquisitions to determine the total Passport Advantage points value.

The discounted pricing available through Passport Advantage is expressed in the form of Suggested Volume Prices (SVPs), which vary depending on the SVP level. Each SVP level is assigned a minimum total Passport Advantage point value, which must be achieved, in order to qualify for that SVP level.

Media packs and documentation packs do not carry Passport Advantage points and are not eligible for SVP discounting.

For additional information on Passport Advantage , refer to the following

http://www.ibm.com/software/passportadvantage

The following Passport Advantage part number categories may be orderable:

- License and Software Maintenance 12 Months - This is the product authorization with maintenance to the first anniversary date.
- Annual Software Maintenance Renewal - This is the maintenance renewal for one anniversary that applies when a customer renews their existing coverage period prior to the anniversary date at which it expires.
- Software Maintenance Reinstatement 12 months - This is for customers who have allowed their Software Maintenance to expire, and later wish to reinstate their Software Maintenance.
- Media packs - These are the physical media, such as CD-ROMs, that deliver the product's code.
- Documentation packs - These contain printed documentation such as the User's Guide and Release Notes .

**Pricing example**

The resource for the purpose of the RVU calculation is Activated Processor Cores managed by the program. An Activated Processor Core is a processor core that is available for use in a physical or virtual server, regardless of whether the capacity of the processor core can be or is limited through virtualization technologies, operating system commands, BIOS settings, or similar restrictions. Licensee can deploy the program using either full capacity licensing or virtualization capacity (sub-capacity) licensing according to the Passport Advantage Sub-Capacity Licensing Terms (refer to the webpage below). If using full capacity licensing, each Activated Processor Core in the physical hardware environment managed by the program must be counted, except for those servers from which the program permanently no longer manages. If using virtualization capacity licensing, the Virtualization Capacity License Counting Rules that defines how many Activated Processor Cores must be counted, is located at

The RVU table for Activated Processor Cores on RVUs is below:

| Tier | From quantity | To quantity | Factor |
|---|---|---|---|
| 1 | 0 | 2,500 | 1.00 |
| 2 | 2,501 | 10,000 | 0.80 |
| 3 | 10,001 | 50,000 | 0.60 |
| 4 | 50,001 | 150,000 | 0.40 |
| 5 | 150,001 | – | 0.20 |

**Pricing example 1**

A customer wishes to license for the servers in the following core environment.

Distributed servers

- 20 One Processor, Single Core servers
- 65 One Processor, Dual Core servers
- 12 Two Processor, Dual Core servers
- 10 Two Processor, Quad Core servers
- One Eight Processor, Dual Core server with two virtual or logical partitions
- One Four Processor, Quad Core server

The customer wants to manage the applicable distributed server environment:

| Systems managed | Quantity in customer environment | Activated Processor Cores to be licensed |
|---|---|---|
| One Processor, Single Core | 20 | 20 |
| One Processor, Dual Core | 65 | 130 |
| Two Processors, Dual Core | 12 | 48 |
| Two Processors, Quad Core | 10 | 80 |
| Eight Processors, Dual Core (2 logical partitions) | 1 | 16 |
| Four Processors, Quad Core | 1 | 16 |
| Total processors to be licensed | | 310 |

Based on the 310 Activated Processor Cores, the customer would require 310 RVUs.

**Pricing example 2**

A customer wishes to license in the following core environment:

- Servers with 45,000 Activated Processor Cores

The following calculation is used to determine the number of RVUs required to license the 45,000 Activated Processor Cores in the server environment.

| Tier | Quantity of Activated Processor Cores | RVUs |
|---|---|---|
| 1 | 2,500 | 2,500 |

| 2 | 7,500 | 6,000 |
|---|---|---|
| 3 | 35,000 | 21,000 |
| Total | | 29,500 |

- The first tier based on the RVU table is used to calculate the first 2,500 Activated Processor Cores at a factor of 1 per core or in the case above 2,500 RVUs (2,500 x 1).
- The second tier is used to calculate the Activated Processor Cores from 2,501 to 10,000 at a .8 factor or 7,500 x .8 = 6,000.
- The third tier is used for those Activated Processor Cores between 10,001 and 50,000.
- In the example, 35,000 of the Activated Processor Cores reside in tier 3 or 35,000 x .6 = 21,000.
- Adding the RVUs together for each tier, the customer requires 29,500 RVUs to license the 45,000 Activated Processor Cores.

## Ordering information

This product is only available via Passport Advantage . It is not available as shrinkwrap.

These products may only be sold directly by IBM or by authorized IBM Business Partners for Software Value Plus.

For more information about IBM Software Value Plus, visit

http://www.ibm.com/partnerworld/page/svp_authorized_portfolio

To locate IBM Business Partners for Software Value Plus in your geography for a specific Software Value Plus portfolio, visit

http://www.ibm.com/partnerworld/wps/bplocator/

```
Product group:  Tivoli IT Service Management
Product:  IBM SmartCloud Orchestrator (5725-H28)

Product category: IBM SmartCloud Provisioning
```

### Current licensees

Current licensees of IBM SmartCloud Orchestrator V2.1 can order the new media pack for V2.2.

### New licensees

Orders for new licenses will be accepted now.

Shipment will begin on the planned availability date.

### Basic license

### Ordering information for Passport Advantage

Passport Advantage allows you to have a common anniversary date for Software Maintenance renewals, which can simplify management and budgeting for eligible new versions and releases (and related technical support) for your covered products. The anniversary date, established at the start of your Passport Advantage Agreement, will remain unchanged while your Passport Advantage Agreement remains in effect. New software purchases will initially include twelve full months of Software Maintenance. Software Maintenance in the second year (the first year of renewal) can be prorated to be coterminous with your common anniversary date.

Thereafter, all Software Maintenance will renew at the common anniversary date for twelve full months of maintenance.

Refer to the IBM International Passport Advantage Agreement and to the *IBM Software Support Handbook* for specific terms relating to, and a more complete description of, technical support provided through Software Maintenance.

The quantity to be specified for the Passport Advantage part numbers in the following table is per required number of Resource Value Units. To order for Passport Advantage , specify the desired part number and quantity.

```
Product name: IBM SmartCloud Orchestrator V2.2

Product number: 5725-H28

Part     Part
number   description

D0Y7DLL  IBM SmartCloud Orchestrator per Resource
         Value Unit Lic + SW S&S 12 Mo

E0GU8LL  IBM SmartCloud Orchestrator per Resource
         Value Unit Annual SW S&S Rnwl

D0Y7ELL  IBM SmartCloud Orchestrator per Resource
         Value Unit SW S&S Reinstate 12 Mo

D0YGJLL  IBM SmartCloud Orchestrator Resource
         Value Unit from SmartCloud Provisioning
         Resource Value Unit Trade Up Lic + SW S&S
         12 Mo

D0Y81LL  IBM SmartCloud Orchestrator FTL Resource
         Value Unit Initl FT Lic+S&S 12 Mo

E0GUFLL  IBM SmartCloud Orchestrator FTL Resource
         Value Unit SubSq FT Lic+S&S 12 Mo

Product name: IBM SmartCloud Orchestrator Enterprise V2.2

Product number: 5725-H28

Part     Part
number   description

D0Y7ULL  IBM SmartCloud Orchestrator Enterprise
         per Resource Value Unit Lic + SW S&S 12 Mo

E0GUDLL  IBM SmartCloud Orchestrator Enterprise
         per Resource Value Unit Annual SW S&S Rnwl

D0Y7VLL  IBM SmartCloud Orchestrator Enterprise per
         Resource Value Unit SW S&S Reinstate 12 Mo

D0YGLLL  IBM SmartCloud Orchestrator Enterprise per
         Resource Value Unit from SmartCloud Provisioning
         Resource Value Unit Trade Up Lic + SW S&S 12 Mo

D0YGMLL  IBM SmartCloud Orchestrator Enterprise per
         Resource Value Unit from SmartCloud Orchestrator
         Resource Value Unit Trade Up Lic + SW S&S 12 Mo

D0YFILL  IBM SmartCloud Orchestrator Enterprise FTL
         Resource Value Unit Initl FT Lic+S&S 12 Mo

E0GW8LL  IBM SmartCloud Orchestrator Enterprise FTL
         Resource Value Unit SubSq FT Lic+S&S 12 Mo
```

To order a media pack for Passport Advantage , specify the part number in the desired quantity from the following table:

```
IBM SmartCloud Orchestrator V2.2
```

```
Description                                     Part number

IBM SmartCloud Orchestrator V2.2.0 for          BJ12WML
Red Hat Enterprise Linux (RHEL)
Multilingual

IBM SmartCloud Orchestrator Enterprise V2.2.0   BJ12XML
for Red Hat Enterprise Linux (RHEL)
Multilingual
```

IBM SmartCloud Orchestrator V2.2 is also available, via web download, from Passport Advantage .

## Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

This product is only available via Passport Advantage . It is not available as shrinkwrap.

### Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use. Part number products only, offered outside of Passport Advantage , where applicable, are license only and do not include Software Maintenance.

These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

### License Information form number

L-DSCT-93XLQH.

The program's License Information will be available for review on the IBM Software License Agreement website

http://www.ibm.com/software/sla/sladb.nsf

### Limited warranty applies

Yes

### Limited warranty

IBM warrants that when the program is used in the specified operating environment, it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation

of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the IBM Software Support Handbook found at

   http://www.ibm.com/support/handbook

IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

### Program technical support

Technical support of a program product version or release will be available for a minimum of five years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect. This technical support allows you to obtain assistance (via telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support (Software Maintenance) also provides you with access to updates (modifications or fixes), releases, and versions of the program. You will be notified, via announcement letter, of discontinuance of support with 12 months' notice. If you require additional technical support from IBM , including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

### Money-back guarantee

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

### Other terms

### Volume orders (IVO)

No

### IBM International Passport Advantage Agreement

### Passport Advantage applies

Yes, and through the Passport Advantage website at

   http://www.ibm.com/software/passportadvantage

### Usage restriction

Yes. Usage is limited to the quantity of Resource Value Units licensed.

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### IBM Operational Support Services - SoftwareXcel

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### Educational allowance available

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The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

### Benefits

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