



IBM SmartCloud Cost Management V2.1 can help determine cost of providing IT services

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At a glance

IBM SmartCloud™ Cost Management V2.1 (formerly known as IBM® Tivoli® Usage and Accounting Manager Enterprise Edition V7.3) lets you manage the cost of your cloud and IT services, by:

- Helping to determine and provide visibility of IT costs with features that are designed to measure, analyze, report, and invoice the utilization and costs of physical, virtualized, and cloud computing resources, storage and network resources, applications, and other non-IT cost drivers.
- Facilitating the collection of data on servers, cloud and virtualized servers, storage, networks, databases, email messaging, and many other shared services.
- Allowing users to organize and restructure collected data into reports that can help track and allocate resources and manage capacity according to business needs and provide a detailed breakdown by organizational structures.
- Automating showback reporting or the chargeback to internal organizations and external clients by integrating with accounting and billing systems.
- Integrating secure cloud usage reporting with the cloud provisioning and management products such as IBM Tivoli Service Automation Manager and IBM Service Delivery Manager.

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL.

Reference: YE001

Overview

IBM SmartCloud Cost Management V2.1 (formerly known as IBM Tivoli Usage and Accounting Manager Enterprise Edition V7.3) provides enterprises and cloud service providers cost management capabilities for their Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) by leveraging internal and external data sources.

With IBM SmartCloud Cost Management V2.1, you get visibility into the usage and costs of the business infrastructure and other non-IT resources. It can help manage business costs by using advanced analytics, showback reporting, which includes a detailed breakdown by organizational structures. You can automate the chargeback of the internal organization and external clients by integrating with accounting and billing systems.

IBM SmartCloud Cost Management V2.1 delivers advanced analytics through IBM Cognos® based common reporting and broadens usage metering coverage for virtualization, storage, and network.

IBM SmartCloud Cost Management V2.1 adds functionality with:

- New product licensing structure for cloud solutions.
- New Rate Management User Interface with improved support for tiered pricing models, rate templates, and rate adjustment planning.
- New cloud and virtualization support including VMWare vSphere 5, IBM PureFlex™ Systems and the IBM SmartCloud product suite addressing both allocation and actual usage in those environments.
- IBM Tivoli Service Automation Manager Extension for Usage and Accounting that delivers enhanced cloud cost management capability by enhancing the integration, the reporting, and the charges preview capabilities for Tivoli Service Automation Manager and IBM Service Delivery Manager.
- Improved Tivoli Common Reporting report coverage with 30 new reports and dashboards covering budgeting, trending, top 10 costs, variances, and drilldown capabilities.
- Updated middleware versions of IBM Tivoli Integrated Portal V2.2 and IBM Tivoli Common Reporting V2.1.1.
- Launchpad for guidance during product installation and upgrades.

Key prerequisites

- Install IBM Tivoli Common Reporting V2.1.1 prior to running the Cognos reports.
- Microsoft™ Reporting Services viewer must be separately downloaded from Microsoft and installed. It is not provided with IBM SmartCloud Cost Management V2.1.
- For Microsoft Reporting Services reporting, a copy of Microsoft Information Internet Services (IIS) is required.
- Either a DB2® , Oracle, or Microsoft SQL server license is required to save historical usage information.

Planned availability date

- August 31, 2012: Electronic
- September 14, 2012: Physical

Description

IBM SmartCloud Cost Management V2.1 (formerly known as IBM Tivoli Usage and Accounting Manager Enterprise Edition V7.3) is an IT management accounting product that helps to track, manage, allocate, and optionally bill end users for IT resources (virtual, storage, network). IBM SmartCloud Cost Management V2.1 assists with:

- Usage-based accounting and chargeback
- IT cost allocation and analysis
- Application allocation and availability
- Resource utilization reporting
- Reporting through IBM Tivoli Common Reporting or a Microsoft Reporting Services web interface

IBM SmartCloud Cost Management V2.1 consolidates different types of usage metering data into an integrated reporting structure. IBM SmartCloud Cost Management can generate reports, invoices, and summary files that show resource consumption and the cost for the different functional units within an organization.

This information is presented on the web, in print, or in file formats for easy availability.

IBM SmartCloud Cost Management provides Administration Server and Tivoli Common Reporting server capabilities.

Administration Server, the central component, consists of:

- IBM SmartCloud Cost Management Console. This is the administration interface operating as part of the IBM Tivoli Integrated Portal. The Tivoli Integrated Portal serves as a unifying platform for all Tivoli products and provides a common user interface (UI) look and feel, common tasks across aggregated views, and seamless cross-product integration.
- IBM SmartCloud Cost Management Engine. This consists of many components including a batch processing facility called Job Runner that launches and controls the underlying processes that convert raw usage data into usable cost management information. It also contains the main rules engine processing components and other data transformation tools.
- Generic collection functionality. This consists of the Integrator and the Universal Collection tools that allow you to build your own collectors. These may be used to collect arbitrary cost driver information as part of IBM SmartCloud Cost Management Enterprise.

IBM Cognos based IBM Tivoli Common Reporting

- IBM Tivoli Common Reporting provides an integrated reporting solution for the products in the Tivoli portfolio and is the strategic reporting tool for IBM SmartCloud Cost Management reporting. It allows linking multiple reports across various Tivoli products to simplify the report navigation and accelerate access to key report information. IBM Tivoli Common Reporting must be separately installed. (For details, refer to the [Hardware requirements](#) and [Software requirements](#) sections.) Cognos Business Intelligence (BI) Reporting is included with IBM Tivoli Common Reporting and provides the reporting capabilities such as UI to administer reports, create reports, and edit reports.
- For existing Tivoli Usage and Accounting Manager Enterprise Edition licensees upgrading to IBM SmartCloud Cost Management Enterprise, Windows™ Web Reporting may continue to be used as an alternative reporting server. Tivoli Common Reporting is the recommended reporting tool for new deployments.
- From Information Internet Services (IIS) under Microsoft Windows only. Windows Web Reporting reports directly from the Microsoft SQL Server, Oracle, or DB2 database using Microsoft Reporting Services runtime viewer as the underlying reporting engine and Microsoft IIS as the web server. This Microsoft Reporting Services viewer must be separately downloaded from Microsoft and installed. It is not supplied with IBM SmartCloud Cost Management V2.1.

IBM SmartCloud Cost Management contains the following core data collectors:

- Infrastructure collectors:
 - AIX® Advanced Accounting, including support for Workload Partition, Virtual I/O Server, and any other Advanced Accounting feature
 - IBM i (collects all usage from IBM i, but the actual collector must be run from Microsoft Windows)
 - Microsoft Windows CPU processor usage
 - Microsoft Windows disk usage
 - UNIX™ , Linux™ , Linux on System z® operating system
 - UNIX , Linux , Linux on System z file system
 - UNIX , Linux , Linux on System z vmstat data collector
 - UNIX , Linux , Linux on System z sar data collector
 - Windows Print (Microsoft Windows only)
 - z/VM®
 - IBM Tivoli Monitoring via Tivoli Data Warehouse data collector

- Virtualization collectors:
 - HP Integrity VM Platform sar data collector
 - IBM PowerVM® HMC data collector
 - KVM usage collector
 - VMware usage collector
 - Virtual I/O server

IBM SmartCloud Cost Management Enterprise is a distinct chargeable component containing the following additional collectors. A notation of Microsoft Windows means only that the collector or sample only runs on Microsoft Windows , not under Linux or UNIX . A notation of Microsoft Windows means only that the collector or sample only runs on Microsoft Windows , not under Linux or UNIX .

- Application collectors:
 - Miscellaneous and recurring adjustment transaction maintenance
 - Lotus Notes®
 - SAP
- Generic collectors:
 - Generic collection (also known as Universal Collection)
- Middleware collectors:
 - IBM Tivoli Decision Support for z/OS® extract and Tivoli Decision for z/OS Support Usage Accounting Collector Data
 - IBM Tivoli Composite Application Manager for SOA
 - IBM WebSphere® Extended Deployment HTTP Server
- Storage collectors:
 - Symantec NetBackup
 - EMC NetVault
 - BackBone NetWorker
 - IBM Tivoli Storage Manager (Microsoft Windows only)
 - IBM Tivoli Storage Productivity Center
 - Sun, HP, Veritas, AIX , and Linux Logical Volume managers (LVM) collector support
- Network collectors:
 - Network Flow collector
- Energy Management collectors
 - Active Energy Manager via IBM Tivoli Data Warehouse collector
 - Eaton via IBM Tivoli Data Warehouse collector

- Sample only collectors

A designation of sample means that the collector is not fully documented, not for global consumption, or tested, and may not run on all platforms. It is provided as a starting point only, but the sample collectors are supported, via the Level 2 and Level 3 support process.

- Evolve (Microsoft Windows only)
- Microsoft Reporting Services (Microsoft Windows only)
- SendMail (Microsoft Windows only)
- Microsoft Windows System Resource Monitor (Microsoft Windows only)
- NetWare (Microsoft Windows only)
- Microsoft Internet Security and Acceleration (ISA) (Windows only)
- Microsoft Proxy (Microsoft Windows only)

- Netscape Proxy (Microsoft Windows only)
- Squid (Microsoft Windows only)
- Sybase (Microsoft Windows only)
- Citrix (Microsoft Windows only)

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

Section 508 of the US Rehabilitation Act

IBM SmartCloud Cost Management V2.1 is capable, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

Product positioning

IBM SmartCloud Cost Management V2.1 is for CFOs, CIOs, CTOs, IT Directors, IT administrators, Financial Analysts, and Asset Managers who are:

- Looking for an IT management accounting solution to deliver accurate and fact-based IT cost transparency to their organization and consumers
- Adopting cloud and virtualization environments to control IT complexity and growth, sharing IT resources across multiple departments and processes, and improving cost efficiencies
- Wanting to gain control of their spiraling storage and networking costs
- Needing to understand the usage of shared IT resources to:
 - Track IT resource utilization and understand who the consumers are
 - Track, identify, and control IT costs to lower total cost of ownership and operation
 - Make better, informed IT decisions (for example, purchase versus outsource hardware acquisition)
- Seeking to bill or charge business units or departments for their share of IT total resource use including systems, storage, networks, energy, and personnel

IBM SmartCloud Cost Management allows them to:

- Link IT expenditures to business value delivered
- Accurately allocate cost across functions and departments
- Understand true IT costs resulting in better IT investment decisions and get more out of their current investments
- Quantify® the costs associated with services delivered including virtualized, cloud, storage area network (SAN), and service-oriented architecture (SOA) environments
- Interactively report and, if desired, charge departments and functions accurately for their use of IT resources

IBM SmartCloud Cost Management provides detailed information about:

- Who is using which IT resources including servers, storage, networking, web servers, databases, email, or applications
- What resources are consumed by IT services and users, and insight into under or over used resources
- What are the true service delivery costs including shared resources

- How IT costs should be allocated and billed

Program number

Program number	VRM	Program name
5724-033	2.1	IBM SmartCloud Cost Management

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

No publications are shipped with this program.

Technical information

Specified operating environment

Hardware requirements

Platform support

Platform	Component			
	Server	Reporting	Client via browser	Collector
AIX V5.3	Yes	Yes	Yes	Yes
AIX V6.1	Yes	Yes	Yes	Yes
AIX V7.1	Yes	Yes	Yes	Yes
Solaris 9 - SPARC	Yes	Yes	Yes	Yes
Solaris 10 - SPARC	Yes	Yes	Yes	Yes
Solaris 10-x64	No	No	Yes	Yes
HP-UX 11i	Yes	Yes	Yes	Yes

HP-UX 11.23 Itanium™	Yes	Yes	No	Yes
IBM i V5.4 Power® System	No	No	No	Yes
IBM i V6.1 Power System	No	No	No	Yes
IBM i V7.1 Power System	No	No	No	Yes
Windows Server 2008 R2 Standard - x86-64	Yes	Yes	Yes	Yes
Windows Server 2008 R2 Enterprise - x86-64	Yes	Yes	Yes	Yes
Windows Server 2008 Standard - x86-64	Yes	Yes	Yes	Yes
Windows Server 2008 Enterprise - x86-64	Yes	Yes	Yes	Yes
Windows Server 2008 Standard - x86-32	Yes	Yes	Yes	Yes
Windows Server 2008 Enterprise - x86-64	Yes	Yes	Yes	Yes
Windows Server 2008 R2 Datacenter Edition x86-64	Yes	Yes	Yes	Yes
Windows Server 2008 Datacenter Edition x86-64	Yes	Yes	Yes	Yes
Windows Server 2008 Datacenter Edition x86-32	Yes	Yes	Yes	Yes
Windows Vista Ultimate x86-64	No	No	Yes	No
Windows Vista Ultimate x86-32	No	No	Yes	No
Windows 7 Enterprise x86-64	No	No	Yes	No
Windows 7 Enterprise x86-32	No	No	Yes	No
Windows XP SP3 x86-32	No	No	Yes	No
z/OS V1.1, V1.2, V1.3, V1.4	No	No	No	Yes
RHEL 5.0 Desktop Edition x86-32	No	No	No	Yes
RHEL 5.0 Desktop Edition x86-64	No	No	No	Yes
RHEL 5.0 for System z (64 bit)	Yes	Yes	Yes	Yes
RHEL 5.0 Adv Platform x86-64	Yes	Yes	Yes	Yes
RHEL 5.0 Adv Platform x86-32	Yes	Yes	Yes	Yes
RHEL 5.0 Power	No	No	No	Yes
RHEL 6.0 AS/ES x86-64	Yes	No	Yes	Yes
RHEL 6.0 AS/ES x86-32	Yes	No	Yes	Yes

RHEL 6.0 AS/ES System z	Yes	No	Yes	Yes
RHEL 6.0 Power	No	No	No	Yes
RHEL 6.0 Desktop Edition x86-64	No	No	Yes	No
RHEL 6.0 Desktop Edition x86-32	No	No	Yes	No
SLED 11.0 x86-32	No	No	Yes	No
SLED 11.0 x86-64	No	No	Yes	No
SLED 10.0 x86-32	No	No	Yes	No
SLED 10.0 x86-64	No	No	Yes	No
SLES 11.0 x86-32	Yes	Yes	Yes	Yes
SLES 11.0 x86-64	Yes	Yes	Yes	Yes
SLES 11.0 System Z	Yes	Yes	Yes	Yes
SLES 11.0 Power	Yes	No	Yes	Yes
SLES 10.0 x86-32	Yes	Yes	Yes	Yes
SLES 10.0 x86-64	Yes	Yes	Yes	Yes
SLES 10.0 System Z	Yes	Yes	Yes	Yes
SLES 10.0 Power	Yes	No	Yes	Yes

Virtual platform support

Interaction on top of means that IBM SmartCloud Cost Management may be deployed on top of the virtual system.

Product	Operating system	Interaction on top of	Interact
IBM PowerVM Hypervisor	AIX	Yes	Yes
IBM PR/SM™	Linux	Yes	No
IBM z/VM Hypervisor V5.4	Linux	Yes	Yes
IBM z/VM Hypervisor V6.1	Linux	Yes	Yes
RHEV-H/KVM 5.4	Windows	Yes	Yes
RHEV-H/KVM 5.4	Linux	Yes	Yes
VMware ESX 4.0	Windows	Yes	Yes (via vCenter)
VMware ESX 4.0	Linux	Yes	Yes (via vCenter)
VMware ESX 4.1	Windows	Yes	Yes (via vCenter)
VMware ESX 4.1	Linux	Yes	Yes (via vCenter)
VMware ESXi 4.0	Windows	Yes	Yes (via vCenter)
VMware ESXi 4.0	Linux	Yes	Yes (via vCenter)
VMware ESXi 4.1	Windows	Yes	Yes (via vCenter)
VMware ESXi 4.1	Linux	Yes	Yes (via vCenter)
VMware vCenter 2.5	Windows	No	Yes
VMware vCenter 4.0	Windows	No	Yes
VMware vCenter 4.1	Windows	No	Yes
VMware vCenter 5.0	Windows	No	Yes

Database support

Database	Component		
	Server	Client	Collector
DB2 V7.1	No	NA	Yes
DB2 V7.2	No	NA	Yes
DB2 V8.1	No	NA	Yes
DB2 V8.2	No	NA	Yes
DB2 V9.1	No	NA	Yes
DB2 V9.5	Yes	NA	Yes

DB2 V9.7	Yes	NA	Yes
DB2 V7.1 System z	No	NA	No
DB2 V8.1 System z	No	NA	No
DB2 V9.1 System z	Yes	NA	No
DB2 V9.5 System z	Yes	NA	No
DB2 V9.7 System z	Yes	NA	No
Informix 9.2	No	NA	No
Informix 9.3	No	NA	No
MS SQL Server 2000	No	NA	Yes
MS SQL Server 2005	Yes	NA	Yes
MS SQL Server 2008	Yes	NA	Yes
Oracle 8i	No	NA	Yes
Oracle 9i	No	NA	Yes
Oracle 9i v2	No	NA	Yes
Oracle 10g	Yes	NA	Yes
Oracle 11g	Yes	NA	Yes
Sybase 12	No	NA	No
Sybase 12.5	No	NA	No

Software requirements

Application server:

- Processor speed requirement - For best performance, processor speeds should be at least 1 GHz for RISC architectures and 2 GHz for Intel™ architectures. Choosing faster processors should result in improved response time, greater throughput, and lower CPU utilization.
- Minimum of 10 GB of hard disk; 50 GB recommended.
- Minimum 2 GB physical memory; 4 GB recommended.
- DVD-ROM drive.

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.

Limitations

For additional information, refer to **Usage restrictions** in the [Terms and conditions](#) section of this announcement, or to the License Information document that is available on the IBM Software License Agreement Web site

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

Planning information

Direct customer support

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

<http://www.ibm.com/support>

Security, auditability, and control

IBM SmartCloud Cost Management V2.1 uses the security and audibility 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.

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

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.

Install

Install is a unit of measure by which the program can be licensed. An Install is an installed copy of the program on a physical or virtual disk made available to be executed on a computer. Licensee must obtain an entitlement for each Install of the program.

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. 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.

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 for IBM SmartCloud Cost Management V2.1

License entitlement for both IBM SmartCloud Cost Management and IBM SmartCloud Cost Management Enterprise have a variable component. The Enterprise version in addition has a fixed component.

Fixed

An install license is required per environment being licensed for the IBM SmartCloud Cost Management Enterprise version.

Variable

The managed environment is the variable component and is priced per RVU. 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 (see 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 at

http://www.ibm.com/software/lotus/passportadvantage/Counting_Software_licenses_using_specific_virtualization_technologies.html

defines how many activated Processor Cores must be counted.

The RVU table for managed 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 one

As an example, a customer has purchased SmartCloud Provisioning and wants to apply cost management. In this case, the RVU count is identical for SmartCloud Provisioning and SmartCloud Cost Management.

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
- One z800 server with two uniprocessor IFLs running Linux (also known as Linux on System z)

The customer wants to manage the applicable distributed server environment:

Systems managed	Quantity in customer environment	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
z800 server with 2 uniprocessor IFLs (requires Linux on System z availability)	1	2
Total processors to be licensed		312

The customer wishes to purchase entitlements for IBM SmartCloud Cost Management for cost management of a cloud environment. For this environment, the customer would need to purchase the following entitlements:

Pricing metric	Quantity in customer environment	License entitlements required
IBM SmartCloud Cost Management - Resource Value Units	312	312
IBM SmartCloud Cost Management - Resource Value Units	312	312

Pricing example two

A customer wishes to license SmartCloud Cost Management Enterprise in the following core environment.

Servers with 45,000 managed cores

The following calculation is used to determine the number of RVUs required to license the 45,000 managed cores in the server environment:

Tier	Quantity of managed 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 managed cores at a factor of 1 per core or in the case above 2,500 RVUs $2,500 \times 1$. The second tier is used to calculate the managed cores example, 35,000 of the managed cores reside in tier 3 or $35,000 \times .6 = 21,000$. Adding the RVUs together for each tier, the customer requires 29,500 RVUs to license the 45,000 managed cores.

Therefore, a customer would need to order the following IBM Tivoli Usage and Accounting Manager entitlements:

Pricing metric	Quantity in customer environment	License entitlements required
IBM SmartCloud Cost Management Enterprise Install	1	1
IBM SmartCloud Cost Management Enterprise Resource Value Units	45,000	29,500

Ordering information

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

Product group: Configurations and Operations

Product identifier description: 5724-033

Product category: Tivoli Previous C & O Offerings

Passport Advantage customer: Media pack entitlement details

Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

Entitled maintenance offerings description

Media pack description	Part number
IBM SmartCloud Cost Management V2.1.0 Multiplatform Multilingual Media Pack	BJ11HML
IBM SmartCloud Cost Management Enterprise V2.1.0 Multiplatform Multilingual Media Pack	BJ11GML

Current licensees

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 Processor Value Units.

To order IBM SmartCloud Cost Management V2.1 in Passport Advantage , specify the desired part number and quantity.

Part number	Description
D0SZWLL	IBM SmartCloud Cost Management per Resource Value Unit Lic + SW S&S 12 Mo
E0EEKLL	IBM SmartCloud Cost Management per Resource Value Unit Annual SW S&S Rnw1
D0SZXLL	IBM SmartCloud Cost Management per Resource Value Unit SW S&S Reinstate 12 Mo
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E0EELL	IBM SmartCloud Cost Management for the zEnterprise and Linux on System z Resource Value Unit Annual SW S&S Rnw1
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Part number	Description
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E0BTPLL	IBM SmartCloud Cost Management Enterprise per Install Annual SW S&S Rnw1
D0IUTLL	IBM SmartCloud Cost Management Enterprise per Install SW S&S Reinstate 12 Mo
D0IUWLL	IBM SmartCloud Cost Management Enterprise for the zEnterprise and Linux on System z Install Lic + SW S&S 12 Mo
E0BTQLL	IBM SmartCloud Cost Management Enterprise for the zEnterprise and Linux on System z Install Annual SW S&S Rnw1
D0IUXLL	IBM SmartCloud Cost Management Enterprise for the zEnterprise and Linux on System z Install SW S&S Reinstate 12 Mo
D0I8BLL	IBM SmartCloud Cost Management Enterprise per Resource Value Unit Lic + SW S&S 12 Mo
E0BKILL	IBM SmartCloud Cost Management Enterprise per Resource Value Unit Annual SW S&S Rnw1
D0I8CLL	IBM SmartCloud Cost Management Enterprise per Resource Value Unit SW S&S Reinstate 12 Mo
D0I8DLL	IBM SmartCloud Cost Management Enterprise for the zEnterprise and Linux on System z Resource Value Unit Lic + SW S&S 12 Mo

E0BKJLL	IBM SmartCloud Cost Management Enterprise for the zEnterprise and Linux on System z Annual SW S&S Rnw1
D0I8ELL	IBM SmartCloud Cost Management Enterprise for the zEnterprise and Linux on System z SW S&S Reinstate 12 Mo

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Description	Part number
IBM SmartCloud Cost Management V2.1.0 Multiplatform Multilingual Media Pack	BJ11HML
IBM SmartCloud Cost Management Enterprise V2.1.0 Multiplatform Multilingual Media Pack	BJ11GML

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