



IBM Communications Server for Data Center Deployment delivers enriched support for SNA applications in a client-server environment

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At a glance

IBM® Communications Server for Data Center Deployment V7.0 addresses SNA modernization in networks with mobile and dynamic environments. The functions previously provided by Communications Server for AIX®, Communications Server for Linux™, and Communications Server for Linux on System z® are now incorporated into this new product.

The following new features are included:

- Ability to track SNA LU resources used by clients on a domain of servers
- Ability to map hard-coded LU aliases on client applications to LU aliases in a domain of servers
- Enhanced support for Enterprise Extender and Connection Networks in IPV6 environments

Overview

Communications Server for Data Center Deployment, a new member of the IBM Communications Server family, is supported on AIX, Linux, and Linux on System z platforms. These platforms were previously supported by three separate Communications Server products, each of which supported a single platform.

As a multiplatform product, Communications Server for Data Center Deployment continues to offer reliable and security-rich support for On Demand networks. It connects users to enterprise host applications and data over diverse networks -- whether SNA, TCP/IP, Intranet, extranet, or Internet. You choose applications based on your business needs, not on your network protocols.

Communications Servers can provide all-in-one communications services between workstations and host systems, as well as other workstations. Features include:

- Full-function SNA gateway
- TN3270E Server
- Telnet Redirector
- Rich set of SNA APIs, including LUA (SLI, RUI), APPC, and CPI-C
- Advanced Peer-to-Peer Networking (APPN) that includes end node and network node
- Branch extender

- Dependent LU requester (DLUR)
- High performance routing (HPR)
- Enterprise Extender (HPR over TCP/IP)
- Support for many types of LAN and WAN connections

Communications Server for Data Center Deployment replaces the following products:

- Communications Server for AIX (5765-E51)
- Communications Server for Linux (5723-I33)
- Communications Server for Linux on System z (5723-I34)

Note: Information about Communication Server for Windows™ (5639-F25) in this announcement is for information only. Communications Server for Windows was previously announced and continues to be available.

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

Key prerequisites

AIX

- IBM Power® System hardware system
- AIX 6.1 or AIX 7.1 operating system

Linux

- Intel™ architecture 'i686' or 'x86_64' hardware system
- IBM Power System hardware system
- System z hardware system

Planned availability date

December 13, 2012 (electronic download and media pack)

Description

Communications Server for Data Center Deployment helps connect employees, customers, and trading partners across multiprotocol networks. It also enhances business flexibility by extending existing host applications to the Internet.

New functions

- Ability to track SNA LU resources used by clients on a domain of servers
This new function dynamically updates the LU records on a server with the system name (DNS information) of the client for each transaction.

With this capability, the host can connect to the user regardless of the client to which the user is connected. This allows queries to display, in real time, who last used LUs. This capacity can assist in problem determination on connections from workstation to host applications.
- Ability to map hard-coded LU aliases on client applications to LU aliases in a domain of servers

Some applications are hard coded to specific LU aliases on a Remote API Client. This function maps these LU aliases to specific LUs on the server.

Applications migrating from full-SNA stack implementations can be configured for specific LU aliases on the server. This allows applications to take advantage of some of the redundant capabilities of the server domain implementation using all of the resources of the servers in that domain.

- Enhanced support for Enterprise Extender and Connection Networks in IPV6 environments

This provides the ability to define a Connection Network on IPV6 and have the connections use the IP address to connect, as opposed to using a DNS hostname.

- TN3270 Server enhancements
 - Higher encryption cypher support
 - z9® Crypto Adapter support on System z

For more details about features and functions, visit

<http://www.ibm.com/software/network/commserver/datacenter/features>

APIs

The following APIs are included:

- LUA API can enable application programmers to write applications that communicate with host applications at the request unit and response unit (RU) level. LUA supports LU0, 1, 2, or 3 communications with the host.
- Node Operator Facility (NOF) can be used to write applications that administer configuration and management resources.
- The CPI-C API provides CPI-C 2.0+ support and is binary compatible with existing CPI-C applications written for earlier versions of Communications Server for AIX .
- The APPC API supports LU 6.2 communications using either independent sessions for peer-to-peer communications or dependent sessions for host communications.
- The Common Service Verb (CSV) API provides utility verbs that enable an application program to perform functions such as character set conversion and trace file control.
- The Management Services API enables an application to communicate with other management services products in an APPN network.

The following APIs are not offered in Communications Server for Data Center Deployment:

- Generic SNA
- LU 0
- Operating system subroutines (LU types 1, 2, 3, and 6.2)
- Library subroutines for TP Conversations (LU types 1, 2, 3, and 6.2)
- Management services
- Library subroutines for Network Management (NMVTs)

Note: These APIs were available in some previous releases of some of the IBM Communication Servers. These APIs were provided "as-is" with no support. It is recommended that new applications be developed with the enhanced APIs that are included in Communications Server for Data Center Deployment.

Licensing and software maintenance renewal

After general availability on December 13, 2012, maintenance renewals for customers who are licensed for Communications Server for AIX , Communications Server for Linux , or Communications Server for Linux on System z , will be

based on entitlement to Communications Servers for Data Center Deployment. The new entitlement will be based on a one-for-one exchange. For example, a customer who is scheduled to renew maintenance for one concurrent user license of Communications Server for Linux will, instead, renew maintenance for one concurrent user license of Communications Server for Data Center Deployment.

There is one exception. Each server license of Communications Server for AIX will be entitled to 10 concurrent user licenses of Communications Server for Data Center Deployment.

Customers should renew maintenance on the exact number of concurrent user licenses required for compliance. The new licensing scheme should not impact the way that customers architect their solutions.

Customers who purchase licenses for Communications Server for Data Center Deployment and deploy the solution on AIX are no longer required to own server licenses.

Section 508 of the US Rehabilitation Act

Communications Server for Data Center Deployment is capable as of December 13, 2012, when used in accordance with associated IBM 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. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following website

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

Product positioning

IBM Communications Server family

The IBM Communications Server family of products provides an essential foundation for networked computing by supporting the most widely used networking technologies. This enables you and business partners to build client-server applications independent of networking protocol or hardware.

With Communications Servers, you can modernize your network without impacting your existing SNA application. You can also modernize your applications and take advantage of services-oriented architecture and Java™ without changing your host applications.

IBM experience with SNA, TCP/IP, and communications servers helps provide you with a high-performance, high-quality communications solution for enterprises with the potential to become an On Demand Business and to have virtualized environments.

Communications Server for Data Center Deployment, which supports AIX , Linux , and Linux on System z platforms, is most likely to be deployed in a central location. This product supports larger TN3270 Server, Remote API client-server, and distributed connections across the enterprise. The cost to manage and maintain in a central place can make Communications Server for Data Center Deployment cost effective by keeping SNA resources centralized.

Communications Server for Windows , a previously announced member of the IBM Communications Server family, can be deployed in distributed branches or at a central location. The branch environment often has Windows servers, and these make ideal platforms for Communications Server for Windows .

With the advent of more virtualized servers that are being deployed, Communications Server for Windows provides the performance needed for handling the resource allocation in these environments.

Licensing notes

The licensing options that are provided for Communications Servers are designed to optimally address the majority of our customers' needs. However, if the licensing options for either of the following two products do not support your architecture, contact your IBM representative or authorized IBM Business Partner to discuss alternative options.

- Communications Server for Data Center Deployment (AIX , Linux , and Linux on System z)

There are two options for licensing Communications Server for Data Center Deployment. Customers can purchase either concurrent user licenses or processor value units.

- Communications Server for Windows

Licenses of Communications Server for Windows consist of two components, server and user. A server license is required for each instance of an installed Communications Server. The server license must be accompanied by the number of user licenses for persons or machines that use the communications functions of the server. Conversely, every user license must be associated with a server license. Note that multiple user licenses can be associated with a single server license.

Any customer who does not have a license for at least one server, or has only server licenses with no user licenses, is considered noncompliant and is encouraged to contact their IBM representative or authorized IBM Business Partner to correct their entitlement.

SNA modernization

The goal for SNA modernization projects is to preserve and enhance SNA applications on the mainframe and in the branch environment, for as long as these SNA applications remain valuable business assets. At the same time, wide-area, application-level SNA traffic is transported over an IP wide area network. This can help consolidate SNA network-level traffic to the data center or ultimately the System z platform itself.

To implement this strategy in a widely distributed network of SNA nodes, the Remote API Client-Server feature provides a cloud-like solution for connectivity. The Remote API Client supports AIX , Linux , and Microsoft™ Windows applications in both 32-bit and 64-bit environments. This client code is supported by the Communications Servers for AIX , Linux , and Linux on System z , and is shipped in a separate media pack. With the Remote API Client deployed on the client, information can be shared between the client and the data center over IP, while SNA network communications are consolidated at the data center itself.

In a similar fashion, the Enterprise Extender (EE) feature of Communications Server for Data Center Deployment can be used for deployment between servers. With EE, information can be shared over IP by using the architecture of High Performance Routing (HPR) that enables non-disruptive, highly available sessions while optimizing IP network traffic.

Complementary products

Host Integration Solution

The Communications Servers for Windows , AIX , Linux , and Linux for System z are included in the Rational® Host Integration Solution (HIS). Customers who require a communications server in conjunction with the IBM Personal Communications, IBM Host On-Demand, or IBM Host Access Transformation Service, may choose to purchase HIS. The version-release of Communications Server that is included in HIS may not be the most recent version-release that is available as a stand-alone product. If your architecture demands the latest release, contact your IBM representative to discuss options.

CICS® Transaction Server and CICS Transaction Gateway

CICS Transaction Server (CICS TS) is an advanced mainframe transaction processing solution that provides powerful and flexible support for On Demand Businesses. CICS TS V5.1 satisfies over one hundred customer requirements that help solve the two most pressing challenges that companies face today: driving operational efficiencies and increasing service agility.

Driving operational efficiencies:

- Greater capacity: Achieve cost savings through consolidation.
- Managed operations: Control critical resource thresholds with policies.
- Increased availability: Reduce the need for planned downtime.
- Deeper insight: Extend performance and compliance information.

Increasing service agility:

- First-class applications: Create agile services from existing assets.
- First-class platforms: Create agile service delivery platforms.
- Modern interfaces: Build rich web experiences for critical applications.
- Foundational enhancements: Extend core capabilities.

CICS TS V5.1 delivers these capabilities in a way that positions users of CICS for the next transformational era in technology, moving them towards a service delivery platform for cloud computing.

For information about CICS TS V5.1, refer to Software Announcement [212-325](#), dated October 3, 2012.

CICS Transaction Gateway (CICS TG) is the market-leading IBM connector for CICS . It is production-proven in over a thousand customer environments, with successful deployments across every major industry.

CICS TG is the strategic, flexible, high-performing, security-rich, and scalable method of service-oriented architecture (SOA) access to CICS servers. A common use of Communications Servers is connecting CICS TG to a CICS database or application in a host environment to complete SNA transactions by using fixed records.

CICS TG V9.0 provides significant enhancements under the key themes of operational efficiency and increased service agility. In particular:

- Exploit the latest runtime environments for distributed applications that include Java 7.
- Reduce complexity and management costs for high volume users with increased vertical scaling on IBM z/OS® .
- Extend Secure Sockets Layer (SSL) connectivity to three-tier topologies for interoperation with high availability CICS TG features.
- Include connection-level time-out for users migrating from External CICS Interface (EXCI) to IP Interconnectivity (IPIC) connectivity.
- Allow support for 64-bit C distributed platform External Call Interface (ECI) applications that include asynchronous calls.
- Allow end-to-end transaction tracking with the WebSphere® Application Server V8.5 Cross Component Trace (XCT) facility.
- Full eXtended Architecture (XA) transaction meta-data for Dynamic Server Selection (DSS) algorithms, eliminating the need to dedicate Gateway daemons to single lines-of-business that need high availability and two-phase commit.
- Extend the recording of historical statistics to the CICS TG for Multiplatforms product.

For information about CICS TG V9.0, refer to Software Announcement [212-323](#), dated October 3, 2012.

Reference information

For information about Communications Server for Windows , refer to Software Announcement [209-138](#), dated May 12, 2009.

For information about the discontinuance of service of selected earlier versions-releases of Communications Servers, refer to Software Announcement [912-144](#), dated August 7, 2012.

Program number

Program number	VRM	Program name
5725-H32	7.0.0	IBM Communications Server for Data Center Deployment

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.

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 US) 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

For an AIX server or client

An IBM Power System machine supported by AIX 6.1 or AIX 7.1

For a Linux client

- A Pentium™ III, or higher, system; 64-bit AMD system; or Intel Xeon™ EM64T-based system supported by one of the Linux operating systems listed in the

[Software requirements](#) section. The "uname -m" command will report 'i686' or 'x86_64'.

- A 64-bit IBM Power System server supported by one of the 2.6 kernel Linux operating systems listed in the [Software requirements](#) section. The "uname -m" command will report 'ppc64'.
- A 31-bit or 64-bit System z9® or IBM eServer™ zSeries® server supported by one of the Linux operating systems listed in the [Software requirements](#) section. The "uname -m" command will report 's390' or 's390x'.

Note: "uname-m" command displays the platform architecture.

For a Linux server

For a System z server: A 31-bit or a 64-bit System z server supported by one of the Linux operating systems listed in the [Software requirements](#) section. Use the "uname -m" Linux command to verify the CPU class. It must report "s390" to indicate a 31-bit environment or "s390x" to indicate a 64-bit environment.

For an Intel Linux server (32-bit): A workstation with an Intel Pentium II, or higher, processor (32-bit) supported by one of the Linux operating systems listed in the [Software requirements](#) section. Use the "uname-m" command to verify the CPU class. It must report "i686" to indicate a Pentium II, or higher, system.

For a Linux server x86_64 (64-bit): A workstation with either AMD64 or Intel EM64T processors supported by one of the Linux operating systems listed in the [Software requirements](#) section. Use the "uname -m" command to verify the CPU class. It must report "x86_64" to indicate the proper type of system.

For an IBM Power System server or client: A 64-bit platform system supported by one of the Linux operating systems listed in the [Software requirements](#) section. Use the "uname -m" command to verify the CPU class indicates ppc64 for a Linux platform that supports a System p® server.

For a Windows 32-bit client

An Intel Pentium II, or higher, 32-bit system supported by one of the Microsoft operating systems listed in the [Software requirements](#) section.

For a Windows 64-bit client

An AMD64 or Intel EM64T system supported by one of the Microsoft Windows operating systems listed in the [Software requirements](#) section.

<http://www.ibm.com/software/network/commsserver/datacenter/sysreqs>

Software requirements

AIX

An AIX server or client requires AIX 6.1 or AIX 7.1.

For a current list of technical requirements, visit

<http://www.ibm.com/software/network/commsserver/datacenter/sysreqs>

Linux and Linux on System z

For a Linux server, one of the following operating systems:

- Red Hat Enterprise Linux 5 (RHEL 5)
- Red Hat Enterprise Linux 6 (RHEL 6)
- SUSE Linux Enterprise Server 10 (SLES 10) SP1, or later
- SUSE Linux Enterprise Server 11 (SLES 11) SP1, or later

The Linux server requires Linux Streams, LiS 2.19.0. The LiS package can be obtained from the following:

- <ftp://ftp.uk.metaswitch.com/pub/LiS/LiS-2.19.0.tgz>
- Or anonymous ftp to [ftp.uk.metaswitch.com](ftp://ftp.uk.metaswitch.com) and `cd pub/LiS`
Refer to the product "Readme" for instructions on how to install Linux Streams.

For a current, up-to-date status of technical requirements, visit

<http://www.ibm.com/software/network/commserver/datacenter/sysreqs>

Windows client

For a Microsoft Windows client, one of the following operating systems:

- Windows XP Professional
- Windows Server 2003 Standard Edition or Enterprise Edition
- Windows Server 2008
- Windows Server 2008 R2
- Windows Vista
- Windows 7
- Microsoft Windows XP Professional x64 Edition
- Microsoft Windows Server 2003 x64 Edition
- Microsoft Windows Server 2008 x64
- Microsoft Vista x64

For a current, up-to-date status of technical requirements, visit

<http://www.ibm.com/software/network/commserver/datacenter/sysreqs>

Software requirements for the AIX and Linux Remote API clients can be found at

<http://www-01.ibm.com/support/docview.wss?uid=swg27008231>

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 restriction](#) topic in the [Terms and conditions](#) section of this announcement, or to the license information document that is available on the IBM Software License Agreement website

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

Planning information

Installability

Customers are responsible for acquiring all prerequisite software and hardware associated with this program.

Packaging

Communications Server for Data Center Deployment is shipped with:

- Quick Start Guide
- Quick Start CD

- Two server DVDs (AIX , Linux)
- Remote API Client CD

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.

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/>

Ordering information

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

Product group: IBM Communications Manager

Product Identifier Description:

IBM Communications Manager for Data Center Deployment
(PID 5725H32)

Product category: Communications Server

Charge metric

Program name	Part number or PID number	Charge metric
Communications Server for Data Center Deployment	5725H32	PVU and Concurrent User

Concurrent User

Concurrent User is a unit of measure by which the program can be licensed. A Concurrent User is a person who is accessing the program at any particular point in time. Regardless of whether the person is simultaneously accessing the program multiple times, the person counts only as a single Concurrent User. The program may be installed on any number of computers or servers, but licensee must obtain entitlements for the maximum number of Concurrent Users simultaneously accessing the program. Licensee must obtain an entitlement for each simultaneous Concurrent User accessing the program in any manner directly or indirectly (for example, via a multiplexing program, device, or application server) through any means.

Note: Some programs may be licensed where devices are considered users. In that case, the following applies. Any computing device that requests the execution of or receives for execution a set of commands, procedures, or applications from the program or that is otherwise managed by the program is considered a separate user of the program and requires an entitlement as if that device were a person.

Processor Value Unit (PVU)

PVU is a unit of measure by which the program can be licensed. The number of PVU entitlements required is based on the processor technology (defined within the PVU table by processor value, brand, type, and model number at the website below) and the number of processors made available to the program. IBM continues to define a processor, for the purpose of PVU-based licensing, to be each processor core on a chip. A dual-core processor chip, for example, has two processor cores. The PVU table can be found at

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

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 web page below). If using Full Capacity licensing, Licensee must obtain PVU entitlements sufficient to cover all activated processor cores* in the physical hardware environment made available to or managed by the Program, except for those servers from which the Program has been permanently removed. If using Virtualization Capacity licensing, Licensee must obtain entitlements sufficient to cover all activated processor cores made available to or managed by the Program, as defined according to the Virtualization Capacity License Counting Rules at

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

* 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.

Notes

- Some programs may require licenses for the program **and** what is being managed. In that case, the following applies. In addition to the entitlements required for the program directly, licensee must obtain PVU entitlements for this program sufficient to cover the processor cores managed by the program.
- Some programs may be licensed on a managed basis only. In that case, the following applies. Instead of the entitlements required for the program directly, licensee must obtain PVU entitlements for this program sufficient to cover the processor cores managed by the program.
- A few programs on an exception basis may be licensed on a referenced basis. In that case, the following applies. Rather than obtaining entitlements for the activated processor cores available to the program, licensee must obtain PVU entitlements for this program sufficient to cover the environment made available to the referenced program as if the program itself were executing everywhere the referenced program was executing, independent of the basis on which the referenced program is licensed.

Passport Advantage

Program name/Description	Part number
Communications Server for Data Center Deployment V7.0 -	
Media Pack (multilingual)	BM05JML
Per Concurrent User Lic + SW S&S 12 Mo	D0THJLL
Per Concurrent User SW S&S Reinstate 12 Mo	D0THKLL
Per Concurrent User SW S&S Renewal 12 Mo	E0ELCLL
Per PVU Lic + SW S&S 12 Mo	D0THLLL
Per PVU SW S&S Reinstate 12 Mo	D0THMLL
Per PVU SW S&S Renewal 12 Mo	E0ELDLL

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 offering description	Media pack description	Part number
IBM Communications Server for AIX - Concurrent User	IBM Communications Server for Data Center Deployment V7.0 Multilingual Media Pack	BM05JML
IBM Communications Server for AIX - Server	IBM Communications Server for Data Center Deployment V7.0 Multilingual Media Pack	BM05JML
IBM Communications Server for Linux - Concurrent User	IBM Communications Server for Data Center Deployment V7.0 Multilingual Media Pack	BM05JML
IBM Communications Server for Linux on System z - Concurrent User	IBM Communications Server for Data Center Deployment V7.0 Multilingual Media Pack	BM05JML
IBM Communications Server for Linux on System z - PVU	IBM Communications Server for Data Center Deployment V7.0 Multilingual Media Pack	BM05JML

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.

This program is 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-JLSH-8WQSJB

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.

Volume orders (IVO)

No

Passport Advantage applies

Yes, and through the Passport Advantage website at

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

Usage restriction

Yes. For additional information, refer to the License Information document that is available on the IBM Software License Agreement website

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

Software Subscription and Support applies

Yes. Software Subscription and Support (also referred to as Software Maintenance) is included with licenses purchased through Passport Advantage and Passport Advantage Express® . Product upgrades and Technical Support are provided by the Software Subscription and Support offering as described in the Agreements. Product upgrades provide the latest versions and releases to entitled software and Technical Support provides voice and electronic access to IBM support organizations, worldwide.

IBM includes one year of Software Subscription and Support with each program license acquired. The initial period of Software Subscription and Support can be extended by the purchase of a renewal option, if available.

While your Software Subscription and Support is in effect, IBM provides you assistance for your routine, short duration installation and usage (how-to) questions, and code-related questions. IBM provides assistance via telephone and, if available, electronic access, only to your information systems (IS) technical support personnel during the normal business hours (published prime shift hours) of your IBM support center. (This assistance is not available to your end users.) IBM provides Severity 1 assistance 24 hours a day, 7 days a week. For additional details, consult your *IBM Software Support Handbook* at

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

Software Subscription and Support does not include assistance for the design and development of applications, your use of programs in other than their specified operating environment, or failures caused by products for which IBM is not responsible under the applicable agreements.

For additional information about the International Passport Advantage Agreement and the IBM International Passport Advantage Express Agreement, visit the Passport Advantage website at

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

IBM Operational Support Services - SoftwareXcel

No

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Not applicable.

Statement of good security practices

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