IBM WebSphere eXtreme Scale V8.6 for distributed platforms delivers expandable cache to help handle explosive growth in business activity for competitive advantage

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At a glance

IBM® WebSphere® eXtreme Scale delivers simple cache for enterprise applications that running on WebSphere Application Server that offers near linear scalability to a broad variety of business applications with minimal invasive changes. This can help you meet the growing needs of your business.

WebSphere eXtreme Scale V8.6 can offer these key benefits:

- Enterprise Data Grid capabilities that allow Java™ and .NET applications to access the grid
- A new eXtreme Data Format that can allow all clients (Java or .NET) to access and interact with the same data via a platform independent data interchange format
- A new built-in notification infrastructure that allows for client-side event notification, a continuous query cache, and near cache invalidation capabilities
- Enhanced grid re-balancing capabilities for regular hardware maintenance or unexpected failover events
- A new eXtreme Scale UI message center to aid in event notification and understanding of the current state of the grid
- WXS 8.6 that provides simple support for Java and non-Java environments through Representational State Transfer (REST) APIs
- Further integration enhancements with other WebSphere products including WebSphere Commerce, WebSphere Portal, IBM Mobile Foundation, IBM Worklight, and WebSphere Message Broker

Overview

WebSphere eXtreme Scale is an elastic, scalable, in-memory data grid designed to enable you to handle the exponential growth of transactions for everything from web commerce, to real-time financial interactions, to online social networking and gaming.

The data grid dynamically caches, partitions, replicates, and manages application data and business logic across multiple servers. WebSphere eXtreme Scale can perform massive volumes of transaction processing with high efficiency and linear scalability. With WebSphere eXtreme Scale, you can also get qualities of service such as transactional integrity, high availability, and predictable response times.

WebSphere eXtreme Scale can be used in different ways. You can use the product as a powerful cache, as an in-memory database processing space to manage application state, or to build eXtreme Transaction Processing (XTP) applications. These XTP capabilities include an application infrastructure to support your most demanding business-critical applications.

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

IBM AIX® , HP-UX, Linux™ , Linux on System z® , Solaris, or Microsoft™ Windows™

Planned availability date

- November 30, 2012: Electronic distribution
- December 14, 2012: Media pack

Description

Our planet is becoming increasingly interconnected, instrumented and intelligent. Around the world, more and more people now use mobile devices to access a range of services. The proliferation of mobile devices is driving the exponential growth of transactions for everything from web commerce, to real-time financial interactions, to online social networking and gaming. Not only are enterprise systems seeing higher levels of traffic than ever before, but these systems are also experiencing more spikes in usage. These spikes are caused by a combination of social media and mobile device alerts that prompt immediate access to these systems. Today's enterprises face the challenge of scaling their business-critical systems in a cost-effective manner to meet increase in demand while enhancing application performance to keep pace with rising customer expectations.

The IBM WebSphere portfolio of products can help you improve business agility by overcoming traditional IT performance limitations. The products can help you generate the levels of global scale, process efficiencies and business intelligence that you need for smarter business outcomes such as sustainable competitive advantage, higher revenues and avoidance of potential fines that could stem from inconsistent response and service-level agreement violations.

The IBM WebSphere family of caching products, including IBM WebSphere eXtreme Scale platform and the IBM WebSphere DataPower® XC10 appliance, can help enable your business applications process billions of transactions a day with efficiency and near-linear scalability. IBM caching products are designed to work in heterogeneous environments throughout application server platforms and virtualization environments.

The following describes the benefits of a WebSphere eXtreme Scale grid, consisting of distributed servers and clients (distributed or z/OS®), as a whole.

A WebSphere eXtreme Scale grid, with distributed servers and distributed or z/OS clients, can deliver extreme transaction processing capabilities that can help ensure you have a Smart service-oriented architecture (SOA)-based application infrastructure to support your most demanding business-critical applications. A WebSphere eXtreme Scale grid can help you to overcome traditional IT performance limitations to generate the levels of global scale, process efficiencies, and business intelligence needed for smarter business outcomes, such as sustainable competitive advantage and maximized revenues.

WebSphere eXtreme Scale is designed to work in heterogeneous environments across all leading platforms and server virtualization environments. It can process massive volumes of transactions with extreme efficiency and linear scalability. WebSphere eXtreme Scale V8.6 operates as an in-memory data grid that dynamically processes, partitions, replicates, and manages application data and business logic across hundreds of servers.

With WebSphere eXtreme Scale, you get capabilities that can extend the value of a linearly scalable elastic data store to a broad range of business applications that utilize the WebSphere Application Server dynamic cache service. WebSphere eXtreme Scale can ease the burden on the application developer by handling many of the common data store exception and retry tasks. In addition, WebSphere eXtreme Scale can be integrated into existing management tools.

WebSphere eXtreme Scale V8.6 for distributed platforms offers these new features:

- Enterprise Data Grid capabilities that allow Java and .NET applications to access the grid
- A new eXtreme Data Format that can allow all clients (Java or .NET) to access and interact with the same data via a platform-independent data interchange format
- A new built-in notification infrastructure that allows for client-side event notification, a continuous query cache, and near-cache invalidation capabilities
- Enhanced grid re-balancing capabilities for regular hardware maintenance or unexpected failover events
- A new eXtreme Scale UI message center to aid in event notification and understanding of the current state of the grid
- New, simple support for Java and non-Java environments through Representational State Transfer (REST) APIs. This is a way of integrating web-based and mobile access to the grid.

WebSphere eXtreme Scale can enhance applications to support growing business needs through the following innovative usage scenarios and configurations:

- **Simple data and database:** Applications can access data structures to improve performance and throughput using a WebSphere eXtreme Scale configuration as a local cache. WebSphere eXtreme Scale enhances this traditional data-caching scenario by offering fail-over capability.
- **Client or server:** A Java Virtual Machine (JVM) can have a local WebSphere eXtreme Scale grid, which sits in front of a remote grid serving as a "near cache" for a subset of the data. This can help you to leverage a large remote cache to offload back-end processing or to help speed up access to cached results. Applications can use the distributed locking services provided by the remote grid to coordinate access to shared data across clients.
- **Map and reduced support:** WebSphere eXtreme Scale client devices can invoke agents that run against massive amounts of data on multiple nodes in parallel. They can then aggregate the results stored in the grid in parallel.

Extreme scalability of application patterns and usage scenarios are facilitated by the use of a non-centralized, peering configuration, and dynamic deployment model, allowing WebSphere eXtreme Scale maps to span numerous JVMs and allowing extremely large datasets.

In addition, WebSphere eXtreme Scale lets you add more partitions to help increase capacity. It includes efficient, new algorithms to allow in-memory caches to grow elastically as the number of available JVMs or actual machines changes.

Traditionally distributed cache products use Map APIs as their primary programming model. WebSphere eXtreme Scale offers this, and allows graphs of objects to be easily pushed to the cache. Simple Java objects can be annotated, and a simpler API can transparently allow these graphs to be fetched from the grid, as well as to push any changes made by the application back to the grid. This can significantly simplify programming compared with traditional JCache or Map-based APIs.

WebSphere eXtreme Scale now gives you the flexibility to deploy caching technology that is accessible to both Java and .NET client applications, where it is most beneficial for your business and provides the administration and monitoring capabilities to manage and see the overall health and content of the grid. Additionally, .NET clients are also able to access the grid alongside Java clients, enabling Java-based applications to provide data to the grid which can then be read by a .NET client or vice versa. The data is stored in the grid in a common data format equally accessible to either Java or .NET clients.

Further, as the amount of data within the data grid grows, and usage scenarios become more ubiquitous, it is increasingly important to address challenges related to operational flexibility. A major challenge relates to managing a data grid that runs on thousands of servers.

The WebSphere eXtreme Scale Catalog Service automatically lays out data (primaries and replicas) across the set of online servers in a balanced fashion. As servers are started or stopped, it automatically adjusts and elastically moves data across the grid to help ensure that failed replica servers are replaced. It spreads the data across all servers in the grid, helping you to achieve optimum performance and continuous availability.

WebSphere eXtreme Scale offers a flexible approach to the deployment of grid components or an existing cluster packaging and deployment framework. This is accomplished via the introduction of a centralized coordinator service, called the Catalog Service, that can help:

- Achieve high availability by clustering, and uses synchronous memory replication among grid members to persist the run-time state of the data grid.
- Enable optimal performance by automatically balancing data and partitions over the set of servers hosting a grid.

The WebSphere Application Server console extensions allow administrators and deployers to enable eXtreme Scale session persistence, and to enable eXtreme Scale as a Dynacache provider directly from the WebSphere Application Server console. Administrators and deployers can monitor eXtreme Scale grids in a fashion that is already integrated into their current usage flows. The WebSphere eXtreme Scale V8.6 console can support AIX (32-bit), AIX (64-bit), Linux x86, Linux x86-64, and Windows (32-bit and 64-bit).

For complete product information, visit

http://www.ibm.com/software/webservers/appserv/extremescale

Accessibility by people with disabilities

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

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

Product positioning

WebSphere eXtreme Scale complements the WebSphere Application Server family of products by providing a distributed caching platform for WebSphere business applications and can run with many WebSphere stack products. WebSphere eXtreme Scale V8.6 goes beyond these simple network attached cache capabilities, providing a flexible and robust solution enabling more sophisticated caching scenarios where applications and data may be located on the same server.

Reference information

For unique information about WebSphere eXtreme Scale for z/OS , refer to Software announcement 212-367, dated October 2, 2012.

For information about IBM WebSphere DataPower XC10 Appliance, refer to Hardware announcement 112-075, dated April 24, 2012.

For information about DataPower Appliance Support Registration, refer to Hardware announcement 211-136, dated April 5, 2011.

For complete information about WebSphere application Server V8.5 Liberty Profile, refer to Software announcement 212-109, dated April 24, 2012, for distributed platforms, and Software announcement 212-106, dated April 24, 2012, for z/OS .

Program number

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Program                    Program
number          VRM        name

5724-X67        V8.6       IBM WebSphere eXtreme Scale
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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 product.

The following WebSphere eXtreme Scale user assistance is available:

- In the Product Overview, Administration Guide, and Programming Guide PDFs
- At the product forum for discussing WebSphere eXtreme Scale topics with the community
- At the information center
- Access to articles, podcasts, and tutorials in the WebSphere Developer's Community for Emerging Technologies in

  http://www.ibm.com/developerworks/spaces/emerge

All of the above are available from the WebSphere eXtreme Scale portal at

http://www.ibm.com/developerworks/wikis/display/extremescale

For optimal viewing of this documentation on the Internet, you need a web browser that supports HTML 4 and CSS. To view a downloaded version of the InfoCenter, you must have a copy of either the WebSphere Help System or Eclipse installed on your local machine. Terms and conditions for use of the machine readable files are shipped with the files.

Technical information

Specified operating environment

Hardware and software requirements for WebSphere eXtreme Scale
AIX platform

Hardware requirements

AIX (32-bit)

- IBM POWER® family of processors. For additional Information, visit
  http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
- Minimum 512 MB physical memory; 1 GB recommended
- CD-ROM drive

Note: 64-bit hardware is required to run AIX V6.1 (POWER4, POWER5, or POWER6® systems only).

Architecture models that use 604e processors are not 64-bit capable and will not run AIX V6.1.

AIX (64-bit)

- IBM POWER family of processors. For additional information, visit
  http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
- Minimum 1 GB physical memory recommended
- CD-ROM drive

Note: 64-bit hardware is required to run AIX V6.1 (POWER4, POWER5, or POWER6 systems only).

Architecture models that use 604e processors are not 64-bit capable and will not run AIX V6.1.

Operating systems

- 32-bit: AIX V6.1, with Recommended Maintenance package 6100-00-04

  64-bit:

  - AIX V7.1, with Recommended Maintenance package 7100-00-01
  - AIX V6.1, with Recommended Maintenance package 6100-00-04

  AIX product site

  http://www.ibm.com/systems/power/software/aix/index.html

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
  - WebSphere Application Server V7.0.0.19, or later
  - WebSphere Application Server V8.0.0.2, or later
  - WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes, visit
  http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP%20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.

- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3, or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 was tested with Service Pack 1. For more information, visit

  http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information about Open Data Protocol, visit

  http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli® Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later

HP-UX Intel™ Itanium™

Hardware requirements

- Intel Itanium 2 processor
- For disk space requirement, visit

  http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
- Minimum 1 GB physical memory recommended
- CD-ROM drive

Operating systems (64-bit)

- HP-UX 11iv2 Patch Bundle, dated December 2007 (64-bit kernel support)
- HP-UX 11iv3 Patch Bundle, dated December 2007 (64-bit kernel support)
- HP-UX 11i product site

  http://h71028.www7.hp.com/enterprise/w1/en/os/hpux11i-overview.html

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
  - WebSphere Application Server V7.0.0.19, or later
  - WebSphere Application Server V8.0.0.2, or later
  - WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes

  http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP%20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.
- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3, or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 was tested with Service Pack 1. For more information, visit

  http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information on Open Data Protocol, visit

  http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Linux on x86

Hardware requirements

- Intel Pentium™ processor at 500 MHz or faster
- Intel EM64T or AMD Opteron
- For related information, refer to technote #1237439
    http://www.ibm.com/support/docview.wss?uid=swg21237439
- Disk space requirements, visit
    http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
- Minimum 512 MB of physical memory; 1 GB recommended
- CD-ROM drive

Operating systems (32-bit)

Red Hat Enterprise Linux

- Red Hat Enterprise Linux , V5 with Update 6
- Red Hat Enterprise Linux , V6
- Red Hat Enterprise Linux product site
    http://www.redhat.com/rhel/

SUSE Linux Enterprise Server

- SUSE Linux Enterprise Server, V10 with SP 3
- SUSE Linux Enterprise Server, V11; refer to SLES11 technotes, by visiting
    http://www.ibm.com/support/search.wss?rs=180&tc=SSEQTP&q=SLES11_70
- SUSE Linux Enterprise Server product site
    http://www.novell.com/products/server/

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
    – WebSphere Application Server V7.0.0.19, or later
    – WebSphere Application Server V8.0.0.2, or later
    – WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes, visit
    http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP
    %20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.
- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3, or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 with the Service Pack 1 Update was tested. For more information, visit
    http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information on Open Data Protocol, visit
    http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Linux x86-64

Hardware requirements

- AMD Opteron and Intel EM64T (64-bit kernel support only)
- For disk space requirements, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
- Minimum 1 GB physical memory recommended
- CD-ROM drive

Operating systems (32-bit)

Red Hat Enterprise Linux

- Red Hat Enterprise Linux , V5 with Update 6
- Red Hat Enterprise Linux , V6
- Red Hat Enterprise Linux product site

    http://www.redhat.com/rhel/

SUSE Linux Enterprise Server

- SUSE Linux Enterprise Server, V10 with SP 3
- SUSE Linux Enterprise Server, V11; refer to technotes for SLES11 by visiting

    http://www.ibm.com/support/search.wss?rs=180&tc=SSEQTP&q=SLES11_70
- SUSE Linux Enterprise Server product site

    http://www.novell.com/products/server/

Operating systems (64-bit)

- Red Hat Enterprise Linux , V5 with Update 6
- Red Hat Enterprise Linux , V6
- Red Hat Enterprise Linux product site

    http://www.redhat.com/rhel/
- SUSE Linux Enterprise Server, V10 with SP 3
- SUSE Linux Enterprise Server, V11
- SUSE Linux Enterprise Server product site

    http://www.novell.com/products/server/

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
  - WebSphere Application Server V7.0.0.19, or later
  - WebSphere Application Server V8.0.0.2, or later
  - WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP
    %20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.
- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3 or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 with the Service Pack 1 Update was tested. For more information, visit

    http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22

- For more information on Open Data Protocol, visit

  http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Linux on IBM System z

Hardware requirements

- System z processors
- Minimum of 1,119 MB available disk space for installation
- Minimum of 512 MB memory; 1 GB recommended
- CD-ROM drive

Operating systems (32-bit)

- Red Hat Enterprise Linux , V5 with Update 6 (64-bit kernel support only)
- Red Hat Enterprise Linux , V6 (64-bit kernel support only)
- Red Hat Enterprise Linux product site

  http://www.redhat.com/rhel/
- SUSE Linux Enterprise Server, V9 with SP4 (64-bit kernel support only); refer to SUSE Linux Enterprise Server 9 product site by visiting

  http://www.novell.com/products/server9/
- SUSE Linux Enterprise Server, V10 with Update 1 (64-bit kernel support only)
- SUSE Linux Enterprise Server, V11 (64-bit kernal support only)
- SUSE Linux Enterprise Server product site

  http://www.novell.com/products/server/

Operating systems (64-bit)

- Red Hat Enterprise Linux , V5 with Update 1
- Red Hat Enterprise Linux , V6
- Red Hat Enterprise Linux product site

  http://www.redhat.com/rhel/
- SUSE Linux Enterprise Server, V10 with Update 1
- SUSE Linux Enterprise Server, V11; refer to technotes for SLES11, by visiting

  http://www.ibm.com/support/search.wss?rs=180&tc=SSEQTP&q=SLES11_70
- SUSE Linux Enterprise Server product site

  http://www.novell.com/products/server/

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
  - WebSphere Application Server V7.0.0.19, or later
  - WebSphere Application Server V8.0.0.2, or later
  - WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes

  http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP%20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.

- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3 or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 with the Service Pack 1 The update was tested. For more information, visit

  http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information on Open Data Protocol, visit

  http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Linux on POWER

Hardware requirements

IBM POWER family of processors or IBM BladeCenter® (32-bit and 64-bit)

- Minimum 1,231 MB available disk space for installation (32-bit); 1,262 MB recommended for 64-bit.
- Minimum 512 MB of physical memory for 32-bit (1 GB recommended)
- Minimum 1 GB of physical memory recommended for 64-bit
- CD-ROM drive

Operating systems (32-bit and 64-bit)

- Red Hat Enterprise Linux , V5 with Update 6
- Red Hat Enterprise Linux , V6
- Red Hat Enterprise Linux product site

  http://www.redhat.com/rhel/
- SUSE Linux Enterprise Server, V10 with Update 1
- SUSE Linux Enterprise Server, V11; refer to technotes for SLES11, by visiting

  http://www.ibm.com/support/search.wss?rs=180&tc=SSEQTP&q=SLES11_70
- SUSE Linux Enterprise Server product site

  http://www.novell.com/products/server/

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
  – WebSphere Application Server V7.0.0.19, or later
  – WebSphere Application Server V8.0.0.2, or later
  – WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes

  http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP%20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.
- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3, or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 with the Service Pack 1 Update was tested. For more information, visit

  http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information on Open Data Protocol, visit

  http://www.odata.org

- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Solaris SPARC

Hardware requirements

- Sun Solaris operating environment compatible SPARC workstation at 440 MHz, or faster
- For disk space requirements, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
- Minimum 512 MB physical memory; 1 GB recommended
- CD-ROM drive

Operating systems (32-bit)

- Sun Solaris operating environment, V9 with Patch Cluster, dated January 3, 2008, or later (32-bit and 64-bit kernel support)
- Sun Solaris operating environment, V10 with Patch Cluster dated January 7, 2008, or later (32-bit and 64-bit kernel support)
- Sun product site

    http://www.sun.com/products/index.jsp

Operating systems (64-bit)

- Sun Solaris operating environment, V10 with Patch Cluster, dated October 2009, or later (64-bit kernel support)

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
    - WebSphere Application Server V7.0.0.19, or later
    - WebSphere Application Server V8.0.0.2, or later
    - WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP%20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.
- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3, or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 was tested with Service Pack 1. For more information, visit

    http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information on Open Data Protocol

    http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Solaris x64

Hardware requirements

- AMD Opteron or Intel EM64T
- Minimum 512 MB physical memory; 1 GB recommended
- CD-ROM drive

Operating systems (64-bit)

- Sun Solaris operating environment, V10 with Patch Cluster, dated October 2009, or later (64-bit kernel support)
- Sun product site

    http://www.sun.com/products/index.jsp

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
  - WebSphere Application Server V7.0.0.19, or later
  - WebSphere Application Server V8.0.0.2, or later
  - WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP%20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.
- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3, or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 was tested with the Service Pack 1 For more information, visit

    http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information on Open Data Protocol, visit

    http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Windows

Hardware requirements

For Windows (32-bit)

- Intel Pentium processor at 500 MHz or faster
- Intel EM64T or AMD Opteron
- Minimum 512 MB physical memory; 1 GB recommended
- CD-ROM drive

For Windows (64-bit)

- AMD Opteron or Intel EM64T
- Minimum 1 GB of physical memory recommended
- CD-ROM drive

Operating systems

For Windows (32-bit)

Supported for application design, development, and testing; no support for production use:

- Microsoft Vista Business
- Microsoft Vista Enterprise
- Microsoft Vista Ultimate
- Microsoft Vista Ultimate SP1
- Windows Vista product site

  http://www.microsoft.com/windows/windows-vista/default.aspx
- Microsoft Windows 7 Professional
- Microsoft Windows 7 Enterprise
- Microsoft Windows 7 Ultimate
- Windows 7 product site

  http://www.microsoft.com/windows/windows-7/default.aspx
- Microsoft Windows XP Professional with SP2

Supported for production use include:

- Microsoft Windows Server 2003 x64 with SP2
- Microsoft Windows Server 2003, Datacenter with SP2
- Microsoft Windows Server 2003, Enterprise with SP2
- Microsoft Windows Server 2003, Standard with SP2
- Microsoft Windows Server 2003 R2
- Microsoft Windows Server 2003 x64 R2
- Windows Server 2003 product site

  http://www.microsoft.com/download/en/
- Microsoft Windows Server 2008 R2, Standard x64
- Microsoft Windows Server 2008 R2, Enterprise x64
- Microsoft Windows Server 2008 R2, Datacenter x64
- Windows Server 2008 R2 product site

  http://www.microsoft.com/en-us/server-cloud/windows-server/default.aspx
- Microsoft Windows Server 2008, Datacenter with SP1
- Microsoft Windows Server 2008 x64 Datacenter with SP1
- Microsoft Windows Server 2008, Enterprise with SP1
- Microsoft Windows Server 2008 x64 Enterprise with SP1
- Microsoft Windows Server 2008, Standard with SP1
- Microsoft Windows Server 2008 x64 Standard with SP1

For Windows (64-bit)

- Microsoft Windows Server 2003 x64 with SP2
- Microsoft Windows Server 2003 x64 R2
- Windows Server 2003 product site

  http://www.microsoft.com/download/en/
- Microsoft Windows Server 2008 Enterprise x64 with SP1
- Microsoft Windows Server 2008 Datacenter x64 with SP1
- Microsoft Windows Server 2008 Standard x64 with SP1
- Microsoft Windows Server 2008 R2, Standard x64

- Microsoft Windows Server 2008 R2, Enterprise x64
- Microsoft Windows Server 2008 R2, Datacenter x64
- Windows Server 2008 R2 product site

  http://www.microsoft.com/en-us/server-cloud/windows-server/default.aspx

Software requirements

- WebSphere eXtreme Scale running integrated with WebSphere Application Server requires one of the following:
  - WebSphere Application Server V7.0.0.19, or later
  - WebSphere Application Server V8.0.0.2, or later
  - WebSphere Application Server V8.5.0, or later
- For information on recommended WebSphere Application Server fixes, visit

  http://www-01.ibm.com/support/docview.wss?rs=180&context=SSEQTP%20&uid=swg27004980
- WebSphere eXtreme Scale running with Java Platform Standard Edition requires a compliant Java Virtual Machine V1.6, or later.
- The WebSphere eXtreme Scale REST data service requires a web server that implements the Java Servlet specification V2.3, or later.
- WebSphere eXtreme Scale REST data service client is compatible with Open Data Protocol V1.0. The client library Microsoft .NET Framework 3.5 was tested with Service Pack 1. For more information, visit

  http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=22
- For more information on Open Data Protocol, visit

  http://www.odata.org
- WebSphere eXtreme Scale agent for IBM Tivoli Monitoring requires IBM Tivoli Monitoring V6.2.1, or later.
- WebSphere eXtreme Scale agent for Hyperic HQ requires Hyperic HQ V4.0, or later.

Hardware and software requirements for WebSphere eXtreme Scale console

The following describes the unique hardware and software requirements for running the WebSphere eXtreme Scale console. The console can monitor WebSphere eXtreme Scale on supported platforms. This section describes the requirements for running the console run-time itself.

- **AIX (32-bit)**
  - IBM POWER family of processors
  - Minimum 512 MB physical memory; 1 GB recommended
  - CD-ROM drive

    Note: 64-bit hardware is required to run AIX V6.1 (POWER4, POWER5, or POWER6 systems only). Architecture models that use 604e processors are not 64-bit capable and will not run AIX V6.1.
  - Operating systems
    -- AIX V7.1, with Recommended Maintenance package 7100-00-01
    -- AIX V6.1, with Recommended Maintenance package 6100-00-04
- **AIX (64-bit)**
  - IBM POWER family of processors. For additional Information, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
  - Minimum 1 GB physical memory recommended
  - CD-ROM drive

    Note: 64-bit hardware is required to run AIX V6.1 (POWER4, POWER5, or POWER6 systems only). Architecture models that use 604e processors are not 64-bit capable and will not run AIX V6.1.

- Operating systems
  - -- AIX V7.1, with Recommended Maintenance package 7100-00-01
  - -- AIX V6.1, with Recommended Maintenance package 6100-00-04
- **Linux on x86**
  - Intel Pentium processor at 500 MHz or faster
  - Intel EM64T or AMD Opteron; For related information, refer to technote #1237439

    http://www.ibm.com/support/docview.wss?uid=swg21237439
  - Disk space requirements, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
  - Minimum 512 MB of physical memory; 1 GB recommended
  - CD-ROM drive
  - Operating systems
    - -- SUSE Linux Enterprise Server, V10 with Update 2, or later
    - -- Red Hat Enterprise Linux , V5 with Update 1, or later
- **Linux x86-64**
  - AMD Opteron and Intel EM64T (64-bit kernel support only)
  - For disk space requirements, visit

    http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921
  - Minimum 1 GB physical memory recommended
  - CD-ROM drive
  - Operating systems
    - -- SUSE Linux Enterprise Server, V10, with Update 2, or later
    - -- Red Hat Enterprise Linux , V5, with Update 1, or later
- **Windows (32-bit)**
  - Intel Pentium processor at 500 MHz or faster
  - Intel EM64T or AMD Opteron
  - Minimum 512 MB physical memory; 1 GB recommended
  - CD-ROM drive
  - Operating systems
    - -- Microsoft Windows Server 2003, with SP1
    - -- Microsoft Windows Server 2008, with SP1
- Windows (64-bit)
  - AMD Opteron or Intel EM64T
  - Minimum 1 GB of physical memory recommended
  - CD-ROM drive
  - Operating systems
    - -- Microsoft Windows Server 2003 x64, with SP1
    - -- Microsoft Windows Server 2008 x64, with SP1

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.

Companion products

The following products could be purchased with this product:

- WebSphere DataPower XC10 Appliance - Provides a purpose-built, easy-to-use appliance designed for simplified deployment and hardened security at the caching tier of your enterprise application infrastructure. The WebSphere eXtreme Scale client for z/OS is tested and certified to work with the WebSphere DataPower XC10 Appliance.
- WebSphere Adapters - Helps you integrate applications, technologies, and partner systems within and outside the enterprise. This extended range of adapters is integral to a scalable integration infrastructure for your On Demand business.
- WebSphere Integration Developer - The declarative visual drag-and-drop developer tool for WebSphere ESB as well as WebSphere Adapters and WebSphere DataPower . It supports integration in IBM Business Process Manager Advanced.
- IBM Business Process Manager V8 - A comprehensive and consumable business process management platform provides total visibility and management of your business processes. It includes tooling and run-time modules for process design, execution, monitoring, and optimization, and is specifically designed to make it easy for process owners and business users to engage directly in the improvement of their business processes. It provides a single IBM Business Process Manager platform with multiple configurations to match a company's desired entry point to IBM Business Process Manager.
- IBM Business Monitor - Helps you get real-time visibility of business processes and actively manage them.
- WebSphere MQ - Provides standards-based, reliable, and secure connectivity between applications and systems, giving access to more than 80 different platform configurations.
- WebSphere Message Broker - Running on top of WebSphere MQ, helps you extend your connectivity between applications with high-performance transformation and routing by integrating a wide range of applications and various data formats.
- WebSphere DataPower service-oriented architecture (SOA) Appliances - Easy-to-deploy network devices help simplify, help encrypt, and accelerate XML and web services deployments and extend core SOA infrastructure components such as WebSphere ESB, WebSphere MQ, WebSphere Message Broker, and WebSphere Process Server.
- PureApplication™ System - The IBM PureApplication System is a platform system designed and tuned specifically for transactional web and database applications. This workload-aware, flexible platform is designed to be easy to deploy, customize, safeguard and manage.
- IBM Workload Deployer - This hardware appliance provides access to IBM middleware virtual images and patterns to easily, quickly and repeatedly create application environments that can be securely deployed and managed in a private cloud.
- WebSphere Mobile Foundation and IBM Worklight - Applications geared for mobile devices can open up back-end systems to transaction loads not seen in the traditional corporate intranet. WebSphere eXtreme Scale can provide a buffer for back-end database systems by providing an in-line cache which can help to maintain high levels of performance and transaction rates to these systems.

Limitations

WebSphere Application Server client applications can access remote WebSphere eXtreme Scale grids and can locally cache data via the WebSphere eXtreme Scale "near cache" technology. Additionally, WebSphere eXtreme Scale can be used as a local cache.

Planning information

Installability

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 (Software Maintenance) 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 (also referred to as Software Maintenance) with each program license acquired. The initial period of Software Subscription and Support (Software Maintenance) can be extended by the purchase of a renewal option, if available.

Packaging

WebSphere eXtreme Scale V8.6 ships on DVDs.

Security, auditability, and control

WebSphere eXtreme Scale V8.6 uses the security and auditability features of the host operating system. 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/

Ordering information

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For more information about IBM Software Value Plus, visit

> http://http:www.ibm.com/partnerworld/softwarevalueplus

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

```
Product group: WebSphere

   Product Identifier Description      (PID)
   IBM WebSphere eXtreme Scale         5724-X67

Product category: Application Integration Middleware Other
```

Charge metric

```
                                     PID          Charge unit
Program name                         number       description

IBM WebSphere eXtreme Scale          5724-X67     Processor Value Unit

IBM WebSphere eXtreme Scale          5724-X67     Processor Value Unit
 for Linux on System z
```

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

```
Product description                 Product ID

IBM WebSphere eXtreme Scale         5724-X67
```

Passport Advantage

A complete listing of part numbers for IBM WebSphere eXtreme Scale V8.6:

```
Description                                    Part number
WebSphere eXtreme Scale V8.6

  Per Processor Value Unit
   License + Software S&S 12 months            D572PLL
   Annual Software S&S Renewal 12 months       E02E9LL
   Software S&S reinstatement 12 months        D572QLL
```

Passport Advantage trade up

Below is a list of precursor products for which you must have already acquired a license, in order to be eligible to acquire equivalent licenses using the trade-up part numbers.

```
Precursor product      Trade-up product        Trade-up part number

List description of    List description of     List the trade up part
the precursor (from)   the trade up (to)       number here
product here           product here

Qualified              WebSphere eXtreme Scale V8.6
competitor             Trade up from Qualified Competitor      D0A4NLL
                         Per Processor Value Unit
                         License + Software S&S 12 months

 Qualified             WebSphere eXtreme Scale V8.6
 competitor              for Linux on System z
                         Trade up from Qualified Competitor     D0A4PLL
                         Per Processor Value Unit
                         License + Software S&S 12 months
```

Consult your IBM representative if you have any questions.

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.

```
Media pack description                      Part number

IBM WebSphere eXtreme Scale                 BA159ML
   for Multiplatforms V8.6
   Multilingual Multimedia 128 Bit
   Encryption Media Pack
```

Cross-platform product for use on System z Integrated Facility for Linux (IFL) engines

Order the part numbers that follow when the product is intended to run on the Linux operating system on System z IFL engines. If the product is not intended to run on the Linux operating system on System z IFL engines, order from the other set of part numbers in this announcement. This set of part numbers provides the identical supply and authorization as the other set in this announcement.

```
                                       Part
Program name/Description               number

WebSphere eXtreme Scale V8.6 for Linux on System z

Per Processor Value Unit
License + Software S&S 12 months       D572MLL
Annual Software S&S Renewal 12 months  E02E8LL
Software S&S reinstatement 12 months   D572NLL

Trade up from Qualified Competitor     D0A4PLL
 Per Processor Value Unit
 License + Software S&S 12 months
```

On/Off Capacity on Demand (CoD)

```
IBM WebSphere eXtreme Scale       (5724-X67)

Part
number    Description

D60QWLL   WebSphere eXtreme Scale
          per processor day On/Off CoD
          temp use charge
```

Processor Value Unit (PVU) sub-capacity licensing

This software product is eligible for sub-capacity licensing. Customers must accept the terms of the IBM International Passport Advantage Agreement Attachment for Sub-Capacity Licensing Terms (Attachment), and must obtain PVU Proofs of Entitlement (PoEs) for the maximum processor core capacity available to an eligible sub-capacity product when deployed in an eligible virtualization environment. This is also referred to as sub-capacity or virtualization capacity licensing.

Customers must use the IBM License Metric Tool unless they meet the exceptions described in the Attachment.

For information regarding PVU sub-capacity licensing, that includes terms and IBM License Metric Tool ordering information, visit

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

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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

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This software license includes Software Subscription and Support (also referred to as Software Maintenance).

License Information form number

IBM WebSphere eXtreme Scale V8.6: L-CFIN-8XRRN7

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

Software Subscription and Support applies

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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.

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

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

Not applicable.

Sub-capacity pricing terms and conditions

To be eligible for sub-capacity pricing, the machine on which the eligible products are installed and running must be eligible for sub-capacity pricing terms and

conditions. Software pricing, at less than full machine capacity for eligible products, apply when running:

- AIX 5L™ V5.1, or later, on an IBM System p® 690 or equivalent partition-capable operating system and machine
- OS/400® V5R1, or later, running on an IBM System i®
- Linux running in an LPAR under AIX 5L V5.1, OS/400 V5R1, or in a partition on an equivalent partition-capable operating system and server

Sub-capacity pricing for eligible products is based on the current program pricing methodology, but the number of processors will be determined based on the sum of processors for all partitions where the program is defined (used). To obtain pricing at less than full machine capacity for eligible products, you are required to:

- Install and use, when available, IBM's license use management program, which installs with eligible IBM programs.
- Install available updates to the operating system and eligible products such that license use can be accurately managed.
- Determine if the use of sub-capacity pricing terms results in a reduced requirement for entitlements; you can reallocate the entitlement difference by distributing entitlements across a larger or different set of systems, or reserve them for future growth. There will be no refunds for these freed up entitlements. Subscription, Software Maintenance and support volumes, and entitlements for existing contracts will continue at the same levels as the acquired licenses.

On/Off Capacity on Demand (CoD)

To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Amendment for iSeries® and pSeries® Temporary Capacity On Demand - Software (Z125-6907), must be signed prior to use.

Statement of good security practices

IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered destroyed or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.

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IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

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To learn how Electronic Services can work for you, visit

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Prices

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Business Partner information

If you are an IBM Business Partner -- Distributor for Workstation Software acquiring products from IBM , you may link to Passport Advantage Online for resellers where you can obtain Business Partner pricing information. An IBM ID and password are required.

https://www.ibm.com/software/howtobuy/passportadvantage/paoreseller

Passport Advantage

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Passport Advantage

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