

IBM i5/OS V6R1 delivers the next step for efficient, resilient business processing

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At a glance

i5/OS V6R1 features:

- Virtualization of i5/OS storage
- Encryption of backups and data on disk
- IBM Systems Director management
- Enhanced Java performance
- Support for IBM BladeCenter servers
- Improved performance with IBM System Storage[™] devices
- Support for IBM High Availability Solutions Manager (HASM)

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Overview

The i5/OS™ integrated operating environment features a highly scalable and virus-resistant architecture with a proven reputation for exceptional business resiliency. Running applications based on the i5/OS integrated operating environment helps you focus on innovation and delivering new value to your business, not just on managing data center operations. i5/OS V6R1 delivers the next step for efficient, resilient business processing.

i5/OS virtualization support on POWER6™ processor-based systems is enhanced with new features; including:

- i5/OS V6R1 partition that can host storage of another i5/OS V6R1 partition, reducing costs and simplifying creation of i5/OS test and development environments
- Support as a client of the Virtual I/O Server (VIOS), enabling access to virtualized and network storage
- Support for shared processor pools that can decrease software licensing costs by capping the number of processors a group of partitions can use
- Use of a VIOS partition with Integrated Virtualization Manager (IVM) to manage i5/OS partitions and consolidate hardware service at the serving VIOS partition

New storage space snapshots can improve system availability by backing up virtual i5/OS, AIX®, Linux™, and Windows® environments while they are active.

i5/OS V6R1 security enhancements include:

- Encrypted backups to tape or virtual tape device
- · Encryption of data stored on disk

These new options can help you meet regulatory requirements while protecting your critical business information.

i5/OS V6R1 includes a new Web-based interface for managing i5/OS, IBM Systems Director Navigator for i5/OS. This new interface, which uses the integrated Web application server in the i5/OS operating system, is ready to run. Navigator for i5/OS includes more than 300 management tasks as well as support for HASM and Performance Data Investigator.

i5/OS V6R1 delivers enhanced performance for Java[™] and WebSphere® applications by supporting more transactions per second as compared to i5/OS V5R4 on the same POWER5[™], POWER5+[™], or POWER6 processor-based system.

In addition, i5/OS V6R1 supports the BladeCenter® JS22 server in the BladeCenter H chassis.

With support for a new fiber channel adapter, i5/OS V6R1 and POWER6 processor-based systems deliver enhanced integration and performance enhancements with IBM Systems Storage solutions.

i5/OS V6R1 supports the new HASM offering to help you reduce the impact of planned and unplanned outages. You can deploy and manage Independent Auxiliary Storage Pools (IASP)-based, high availability cluster solutions including i5/OS Geographic Mirroring and DS8000™ Metro Mirror or Global Mirror.¹

This function is planned to be available in September 2008.

For more information refer to Software Announcement 208-015, dated January 29, 2008.

Planned availability date

March 21, 2008

Description

IBM DB2® for i5/OS: DB2 for i5/OS delivers an open, autonomic database with the performance and stability to run your business. V6R1 continues to add support consistent with the SQL standard and the rest of the DB2 family while maintaining the highly integrated, reliable, and secure environment the system is known for.

• Performance:

- Overall performance is improved across the various client interfaces (JDBC, ODBC, .NET, CLI, and OLE DB) with a particular focus on improvements for applications using JDBC and stored procedures.
- Ability of SQL Query Engine (SQE) to support user-defined table functions (UDTFs), national language sort sequence (NLSS), and other translate functions in a statement have shown significant performance improvements in applications that take advantage of location-specific sorting capabilities.
- You can create indexes with derived values via SQL; this can be useful, for example, when
 you specify an UPPER() or LOWER() on an index and achieve index only access when
 doing a case-insensitive search that matches the index.
- New SQL support (including CUBE, ROLLUP, and Grouping Sets) includes powerful new tools for applications that require efficient summarization of data, perfect for a warehousing environment.
- Decimal float (IEEE 754R) is a new numeric data type with attributes of both decimal and floating point that deliver extended accuracy and performance.
- Additional capabilities include:
 - NCHAR, NVARCHAR, NCLOB
 - VALUES in FROM
 - INSERT in FROM

- FULL OUTER JOIN
- ALTER FUNCTION
- BX literals
- INSTEAD OF Trigger ... FOR EACH STATEMENT
- Additional datetime and string scalar functions
- Improved encryption capabilities with the AES encryption functions
- Auto-generated timestamp support

To enable simpler porting of applications, SQL syntax that is irrelevant on DB2 for i5/OS (tablespaces, for example) is now ignored.

· Administration and tuning:

- Additions to the OnDemand Performance Center and Health Center include a view of database-specific application limits as well as how close a given application is to reaching those limits. This can help an application developer or an administrator understand when an application may have an error (number of open handles growing, increases in the number of open cursors, and so on).
- Improvements to the plan cache and the database monitor greatly reduce the effort it takes to understand the database workload on the system. Starting in V5R4, the "always-on" monitoring capabilities of the plan cache produced index advice that told you the indexes that the query optimizer required (or in some cases created for you) while running the workload. In V6R1, this advice is easier to use and act upon; the index advice condenser takes the various pieces of advice and compacts them into the most beneficial subset.
- Additional improvements include:
 - -- DB2 statistics are now readily available using newly created views.
 - -- Client special registers enable you to track both the application and the user.
 - You can reset index and MQT statistics, easily show object locks, and generate SQL at a folder level.
 - -- Run SQL Statements, Visual Explain, and DBMON analysis are improved.

• Limits:

- DB2 for i5/OS limits are increased with longer cursor and statement names and the number of columns that can be used in a GROUP BY. In addition, the number of schemas and dependent logicals is increased along with the number of dependents supported for both a save and an ALTER table.
- Restoring a logical file before a physical file gives you more flexibility and less chance of error when restoring critical data.

• Application development:

- ILE precompilers enable source code to be in a stream file, giving you more flexibility with how source code is organized and stored.
- With the support of variable scoping in the ILE RPG precompiler, RPG applications can more easily integrate SQL with their current native database access. The ILE COBOL precompiler adds support for the NATIONAL type variable for more ease of use with variables and Unicode data. The C precompiler adds host variable support for the new _Decimal32, _Decimal64, and _Decimal128 variable types that can be used for the new DECFLOAT database type.
- RUNSQLSTM processes scripts that are in IFS files. Run SQL Statements on the GUI can save the scripts to file members, giving users more tools to choose from to do their work.

In addition to the SQL features already listed, improvements in the various standard application interfaces into DB2 for i5/OS include:

• CLI:

- Wide APIs
- Row-wise array INSERT
- Complete ISO timestamp support

- JDBC:
 - JDBC 4.0
 - Returning DEFAULT
 - Return update counts
- .NET:
 - Distributed transaction support
 - Multi-row INSERT
 - Visual Studio integration
 - Exploit ADO.NET 2.0

Program conversion: With i5/OS V6R1, IBM uses machine interface (MI) architecture to significantly improve programs. Both new and previously existing programs can take advantage of the latest system enhancements, including even stronger system integrity, improved performance, and a range of new operating system and processor capabilities. To make these improvements, all MI programs created for previous releases must be converted in order to run on i5/OS V6R1. MI programs include Integrated Language Environment® (ILE) and original program model (OPM) programs.

To convert a program, its creation data (a subset of observability) must be available. MI programs retain creation data by default, so most programs can be converted, going all the way back to programs originally created for System/38™. Even if an option was taken to remove creation data from external access, Licensed Internal Code (LIC) can still access the creation data if the target releases of the program and its constituent modules are V5R1, or later. So, a program may lack sufficient creation data for conversion when the program or at least one of its modules was created for OS/400® V4R5, or an earlier release, and creation data was explicitly removed. Clients and ISVs are responsible for ensuring that programs have creation data for the conversion process.

To help plan for your i5/OS V6R1 implementation, a new command, ANZOBJCVN, is available for i5/OS V5R4 or V5R3 to check your programs. First, download the appropriate ANZOBJCVN PTFs from IBM. ANZOBJCVN identifies programs that do not convert to run on V6R1, if any, and estimates the times required for program conversions. It also includes information about two other types of conversions: integrated file system names and spooled files. For more information, refer to the IBM Redpaper REDP-4293, "i5/OS Program Conversion: Getting ready for i5/OS V6R1," from

http://www.redbooks.ibm.com

This document includes PTF numbers and much more information about conversions and ANZOBJCVN.

Journaling enhancements for i5/OS V6R1

Disaster recovery technologies are enhanced.

To help ensure that all critical objects can be recovered from the journal entries, logical files are journaled if the underlying physical file is journaled. Additionally, you can now start journaling for a library and specify what objects created in the library are to automatically start journaling. Using this new capability, and also specifying the library on the Apply Journaled Changes (APYJRNCHG) command, enables you to recover all the objects within the library.

· Remote journaling is enhanced.

To meet the requirements for timely notification of a transmission failure, you can specify a timeout value when using synchronous remote journaling. To help ensure that data is not being corrupted during transmission, you can specify a validity checking option for most remote journal connections. Additionally, new remote journaling statistics are now available for each active remote journal connection.

To minimize the potential for losing journal entries when journal caching is used and the
system fails, you can specify a cache wait time to limit the amount of time entries can linger in
the cache. An exit point is added for the Change Journal (CHGJRN) command to allow for
timely saving of detached journal receivers. To allow for easier rebalancing of journaled

objects across different journals, you can end journaling while an object is in use as long as the object does not have uncommitted changes. The end and start journal functions now enable easier object specification when multiple objects are involved.

- Performance of the journal synchronization step is significantly improved to ensure timely IPL recovery and independent auxiliary storage pool (IASP) switchover.
- You can change a data queue so that IBM data queue operations enforce locks from the Allocate Object (ALCOBJ) CL command. This helps ensure that data queues on a target system in a replication environment are not accidentally changed by user applications.

IASPs: Enhancements to IASPs include:

- Target side tracking is fully supported. In a geographic mirroring implementation, if the target side IASP is detached with tracking, a full synchronization is no longer required when the IASP is reattached.
- Job queues are now supported within an IASP. Although submitted jobs will not transfer to the backup node if an IASP is switched over, enabling the job queue to exist in the IASP allows applications to run in an IASP with fewer changes.
- Both a command and an API support quiescing an IASP. This is useful before performing a FlashCopy®, as well as before suspending or detaching the backup copy of the IASP.
- An API restricts access to an IASP, which could be used before saving of the IASP or reclaiming storage.
- You can open a commitment control transaction against SYSBASE in a job with an IASP in the namespace.

In addition to independent disk pool devices, i5/OS cluster resource services supports the ability to switch other devices, such as Ethernet lines and network servers, that are defined in a device cluster resource group (CRG). With this support, you can create highly available devices. Cluster administrative domain now supports single and compound attributes for monitored resources, offers more detailed status messages on both monitored resources and cluster administrative domains, and synchronizes information regarding switchable devices.

Cluster resource services supports the creation of cluster-level messages, in addition to the CRG-level messages already supported, to aid in managing and controlling failover situations within a high availability environment. Users can define a cluster message queue so that they receive and respond to messages that give details on failover events in the cluster.

To diminish the impact on a high availability environment when administrators perform common work management functions such as cancelling jobs, critical cluster jobs are moved into system jobs, where they cannot be cancelled.

IBM Toolbox for Java: IBM Toolbox for Java is a set of Java classes that enable you to use Java programs to access data on your system. Enhancements for i5/OS V6R1 include:

- Set of classes that simplifies JDBC connection pool maintenance by eliminating the need for user applications to implement their own management code
- Class for retrieving messages in a history log
- · Class to retrieve and set attributes for an object
- Class that represents the set of information about integrated file system references on an
 object that can be retrieved through the Retrieve Object References (QP0LROR) API
- · Class representing a user-defined file system on the system
- Updated JDBC driver that supports generated keys and DECFLOAT data types

Transform Services for i5/OS: Transform Services for i5/OS include the following:

- i5/OS V6R1 delivers Adobe PDF output support to i5/OS applications:
 - Document format controlled by existing printer file parameters and DDS keywords
 - Text data preserved in standard encodings
 - PDF output written to IFS to make it readily accessible to client applications

- Additional output options to i5/OS include:
 - Write AFP™ output data to stream files in IFS instead of spooled files
 - Output formats supported by the Host Print Transform (HPT):
 - -- TIFF
 - -- GIF

Networking: New functions in i5/OS V6R1 networking include the following:

- Additional IPv6 functions make i5/OS IPv6 production ready and meet the current requirements for an IPv6 host. These enhancements include:
 - Virtual Private Networks (VPNs) over IPv6
 - Enablement of key server applications over IPv6, including Telnet, FTP, HTTP, and host servers
 - Ability to configure IPv6 via command line interfaces
- Support for the Open Shortest Path First (OSPF) dynamic routing protocol enables advanced load balancing and high availability options for the i5/OS operating system when operating in larger networks and satisfies a key requirement of many larger System i[™] clients.
- Domain Name Server (DNS) is upgraded to DNS BIND 9 level and supports IPv6 networks.
- Enhancements to the e-mail function include:
 - Secure e-mail (S/MIME) support and SSL enablement of Simple Mail Transfer Protocol (SMTP) and Post Office Protocol (POP) servers, which enable secure authentication and secure download of e-mail.
 - New API, QtmsCreateSendEmail(), builds a MIME document, signs and encrypts it as a S/MIME document, and sends it.
 - Mailhub option enables mail to be forwarded to a single server to assist with the setup of outgoing transactions.
- FTP client and server support the Extended Passive (EPSV) and Extended Port (EPRT) FTP commands for both IPv4 and IPv6 networks, enabling FTP to communicate more seamlessly over a Network Address Translator (NAT) when using a secure SSL control connection.
- Security is improved for the TCP/IP service stack used by the LAN console.
- Controller and device descriptions are enhanced with a last activity date that reflects the most
 recent date that the device or controller was used for a communications session. This is in
 addition to the existing last used date that reflects the last time the device or controller was
 varied on.

IFS and Net Server

- Improved performance of open and close
- Additional characters allowed in file names

Enhanced IBM Extended Integrated Server Support for i5/OS: VMware ESX Server 3 running on an iSCSI attached integrated server now supports shared storage. Shared storage enables the support of VMware VMotion, VMware HA, and VMware DRS.

The following 64-bit Linux operating systems are now supported on iSCSI attached integrated servers:

- SUSE Enterprise Linux Server 10 for AMD64 and Intel® EM64T
- Red Hat Enterprise Linux 5 for x86-64

File-level backup and save while active support are added for the following servers:

 SUSE Enterprise Linux Server 10 for AMD64 and Intel EM64T running on an iSCSI attached integrated server

- SUSE Enterprise Linux Server 10 for IBM POWER™ running in a System i logical partition
- Red Hat Enterprise Linux 5 for x86-64 running on an iSCSI attached integrated server
- Red Hat Enterprise Linux 5 for ppc64 running in a System i logical partition

Systems management: Management consoles

i5/OS V6R1 includes IBM Systems Director Navigator for i5/OS, a new Web browser-based management console for managing i5/OS partitions. IBM Systems Director Navigator for i5/OS takes advantage of the i5/OS integrated Web application server and the Integrated Solutions Console technology included with i5/OS V6R1 to make intuitive, comprehensive management of the i5/OS operating system available with the accessibility and ease of a Web browser.

i5/OS V6R1 supports over 300 tasks in this new Web console. Because it is very similar in navigation and format to the System i Navigator client-based console, transition from the client-based System i Navigator to the Web browser-based IBM Systems Director Navigator for i5/OS V6R1 is intuitive and natural. IBM continues to expand and extend the capability of cross-system, heterogeneous management through the IBM Systems Director family. IBM Director V5.20 enables broader functional support for the System i platform and is available with i5/OS V6R1. System i Navigator and Management Central continue to be available with System i Access for Windows.

Instrumentation of i5/OS resources to be managed

Because there are many management solutions for you to choose from, i5/OS management includes instrumentation of resources to industry standard models and interfaces. This enables i5/OS V6R1 to be managed by many industry management solutions. The Common Information Model (CIM) standard allows seamless systems management across platform and domain. CIM, adopted and evolved by the Distributed Management Task Force (DMTF), is a published systems management standard. CIM defines management information between differing management applications, running in many different operating environments. This interchange takes place through the CIM Object Manager (CIMOM), an object management engine that exists between the managed system and the management application.

i5/OS V6R1 includes CIM functionality with the operating system, now included as part of the IBM Universal Manageability Enablement for i5/OS (5722-UME). 5722-UME is installed by default with the i5/OS V6R1 operating system. Secure connections are supported, IPv6 is enabled, and many additional i5/OS resources have been instrumented for management. The breadth and scope of CIM instrumentation continues to be a focus of System i and i5/OS technology.

To more completely leverage the system management capabilities of products in the IBM Systems Director family, the full IBM Director agent services continue to be available on the i5/OS operating system.

Service Location Protocol (SLP) is a framework that enables networking applications to discover the existence, location, and configuration of networked services in enterprise networks. SLP is included in i5/OS V6R1 for automatic discovery of services, such as the CIM server.

Taken in total, the ability to discover and manage i5/OS resources via the CIM and agent services capabilities allows i5/OS V6R1 to be managed by a large number of IBM and industry solutions.

Control Language (CL) enhancements

- New CLOSE command allows a database file to be read more than one time using the Receive File (RCVF) command in the CL program or procedure.
- New INCLUDE command allows additional CL source members to be imbedded during compilation of the CL source code.
- You can specify creation options in the CL source code instead of on the CRTCLPGM, CRTCLMOD, or CRTBNDCL command.
- You can specify CMD creation options in the command definition source code instead of on the CRTCMD command.
- Single copy of a *CMD supports multiple national languages.

i5/OS performance tools: V6R1 includes enhancements to performance data collection provided by the i5/OS operating system, and enhancements for the visualization of performance

data.

With i5/OS V6R1, you can collect Job Watcher and Disk Watcher performance data as part of the operating system.

Investigating performance data is a major new feature of the IBM Systems Director Navigator for i5/OS. You can view performance data from Collection Services, Job Watcher, and Disk Watcher collections. The Collection Services analysis feature is a no-charge feature of V6R1. Also part of IBM Systems Director Navigator for i5/OS is the ability to manage performance data collections. Disk Watcher and Job Watcher (part of the Manager feature of Performance Tools) graphical capabilities are optional features of Performance Tools 5761-PT1.

i5/OS support for BladeCenter servers: i5/OS V6R1 is supported on the BladeCenter JS22 server in the BladeCenter H chassis.

With BladeCenter and POWER6 processor-based blades, you can:

- Realize innovation with proven sixth-generation POWER technology for enhanced performance, efficiency, and reliability
- · Cut costs and consolidate workloads with leadership virtualization as a built-in feature
- Go green with better energy management by using EnergyScale technology
- Manage growth, complexity, and risk with the flexibility of BladeCenter technology

With blade servers you can consolidate your System i and Intel processor-based servers into a single chassis, leveraging the management, space, and power savings provided by BladeCenter solutions.

The BladeCenter JS22 blade is a four core, 4.0 GHz POWER6 processor-based blade. The blade supports from 2 to 32 GB of memory, has two 1 Gb Ethernet ports, supports two expansion cards, and has one disk drive. The JS22 blade supports the following operating systems:

- i5/OS V6R1
- · AIX 5.3, or later
- SUSE Linux Enterprise Server 10 for POWER, or later
- · Red Hat Enterprise Linux for POWER V4.6, or later

For more information, visit

http://www-03.ibm.com/systems/bladecenter/js22e/index.html

The BladeCenter H chassis has 14 blade bays for up to 14 POWER6 and x86 blade servers. For more information, visit

http://www-03.ibm.com/systems/bladecenter/bladeh/index.html

i5/OS on the JS22 server uses Advanced Power Virtualization Standard Edition, which includes POWER Hypervisor, Micro-Partitioning™, Virtual I/O Server (VIOS) with Integrated Virtualization Manager, and Virtual LAN features. The i5/OS operating system uses the VIOS partition for access to BladeCenter resources and attached storage devices. The VIOS partition owns the fiber, Ethernet, and SAS adapters on the blade and virtualizes the resources to the i5/OS partition.

- The QLogic Ethernet and 4 GB Fiber Channel Expansion Card (#8252) daughter card on the JS22 blade, owned by the VIOS partition, connects to the fiber switch in the BladeCenter H chassis. For i5/OS storage, the IBM System Storage DS4700, DS4800, and DS8000 products connected via the VIOS partition are supported.
- The two 1 GB Ethernet ports on the JS22 are connected to the Ethernet switch in the BladeCenter H chassis.
- The SAS Expansion Card for BladeCenter (#8250) on the JS22 blade, owned by the VIOS
 partition, connects to the SAS switch in the BladeCenter H chassis. For backup of i5/OS data
 to tape, the external SAS tape drive TS2230 H3S with the Virtual Media Library capability in
 the VIOS partition is supported.

The 73 GB or 146 GB disk drive on the JS22 blade is used for the installation of VIOS.

For use with the i5/OS operating system, the blade can be deployed with one VIOS partition and one i5/OS partition, with one VIOS partition and multiple i5/OS partitions, or with one VIOS partition and a combination of i5/OS, AIX, and Linux partitions. Integrated Virtualization Manager (IVM), a function of VIOS, is used to set up and the manage the partitions. With the JS22 implementation, i5/OS does not provide storage virtualization for other partitions on the blade or to iSCSI attached System x^{TM} or BladeCenter servers.

For backup of the i5/OS V6R1 partition, the Virtual Media Library capability in the VIOS partition is used. The Virtual Media images are file-backed devices in the VIOS partition and are accessible to i5/OS as standard read/write optical devices. The files are then saved by VIOS to an external SAS tape drive TS2230 H3S via the SAS adapter in the VIOS partition. Another backup option is downloading the Virtual Media image files to a different server with an attached tape drive through the browser-based IVM interface. The files are then saved locally to the tape drive attached to that server.

i5/OS V6R1 (5761-SS1) includes per processor and per user entitlements. When you select i5/OS on a BladeCenter JS22 blade, you must purchase at least one processor entitlement and 10 user entitlements. You may purchase additional i5/OS processor entitlements up to a maximum of four, and additional i5/OS user entitlements in blocks of 10 users. You may also purchase unlimited user, external user, and unlimited collaboration user options.

Shared dedicated processors and multiple shared processor pools: Shared dedicated processors, a new configuration option, enable a system administrator to donate some of the unused processing capacity of a dedicated processor LPAR to a shared processor pool. When the workload in a dedicated processor LPAR drops below a threshold, some of the processors can temporarily serve workloads running in LPARs that are served by a shared processor pool. This new capability can increase overall system utilization and efficiency.

Multiple shared processor pools, a POWER6 virtualization feature. enable a system administrator to group micro-partitions into separate pools and set limits on the amount of processor capacity each pool can consume. This gives a system administrator more granular management of how CPU capacity is consumed by uncapped micro-partitions. Using multiple shared processor pools, a system administrator can implement tiered quality-of-service policies for different micro-partitions on a system.

Integrated Web Application Server: i5/OS V6R1 is the first release to include an integrated Web application server, an easy-to-configure and use Web container that does not require the installation of any other components. In concert with the 32-bit IBM Technology for Java JVM (used by default), this server gives you a consumable and efficient on-ramp to the Web. This support is also available via a PTF SF 99114 on i5/OS V5R4.

- OSGI-based Web servlet container
- Replacement for IBM-supported ASF-Tomcat, previously shipped with HTTP Server for i5/OS
- Support for JDK 1.5 run by default on IBM technology for Java (32-bit)
- Support for DB2 for i5 using Toolkit for Java or Java native implementations
- GUI to manage all aspects of the integrated Web application server:
 - Wizards to create a new server instance and to deploy applications to the instance of choice
 - Interface to manage applications, server properties, and database connection information
 - Ability to view all servers on the System i platform; start, stop, or delete servers in one easy-to-use display

IXS/IXA support: Functional enhancements for V6R1 include:

- Support for Storage Space Snapshots enables a concurrent save of Windows data without requiring the system to be shut down or applications ended.
- VMware ESX Server 3 running on an iSCSI attached integrated server is enhanced to support shared storage. Shared storage enables the support of VMware VMotion, VMware HA, and VMware DRS.
- Support for iSCSI direct connect eliminates the requirement for a switch between the System i iSCSI target HBA and the System x iSCSI initiator HBA.

- · File-level backup for Linux iSCSI attached or partitions) is supported.
- Integrated server configuration objects are replicated using Cluster Administrative Domain.
- Enhanced user administration function specifies that user profiles are not disabled on the Windows operating system when they are disabled on the i5/OS operating system.
- Integrated server functions are supported within IBM Systems Director Navigator for i5/OS (Web console).
- · Initiator CHAP is supported for iSCSI attached integrated servers,

Intrusion Detection Support (IDS): IDS enhancements include:

- GUI interface to the IDS policy file that works on both V6R1 and V5R4 IDS policy files (IDS V5R4 required editing the policy file from a green screen)
- API (QtoqIDSControl, QTOQIDSC) to activate, deactivate, and retrieve status of IDS
- · Hook into the RMVTCPTBL command to deactivate IDS from a command line
- Separation from the TCP/IP quality-of-service server (IDS V5R4 was activated by starting the *QOS server)
- Support against attacks such as smurf, fraggle, TCP ACK storm, ping-of-death, address poisoning (ARP poisoning (IPv4) and Neighbor Discovery poisoning (IPv6))
- Ignoring ICMP redirect messages
- · Support for extrusions
- · Support for service stack (alternate/short) as well as continued support for production stack
- Support for IPv6
- · GUI for viewing intrusions logged to the audit journal
- Notification program that can send e-mail to as many as three addresses and messages to a predefined message queue
- Prevention technique called Variable Dynamic Throttling, a way of influencing and modifying network behavior

Cryptographic enhancements:

- · Cryptographic key management is enhanced.
 - Users can now manage master keys and keystore files containing user keys through new functions in System i Navigator and in Systems Director Navigator for i5/OS.
 - Users can also manage master keys and keystore files containing user keys via new CL commands.
 - Support for exit programs on the master key function is now available to further customize master key management.
 - Backup and recovery for master keys is now available through the save system operation.
- Support for cryptographic hardware through JCE is now available. IBMJCECCAISOS JCE
 provider improves the performance of RSA operations by routing the requests to the
 cryptographic coprocessor.
- New modes of operation (CCM and CTR) for AES encryption are supported.

IBM System Storage DS4700 AND DS4800 ON POWER6 systems: i5/OS V6R1, through the enhanced capability of VIOS, supports the attachment of the IBM System Storage DS4700 and DS4800 products to POWER6 systems.

The IBM System Storage DS4700/DS4800 products enable users to take advantage of all the benefits of SAN storage at a lower price than the DS6800, DS8100, or DS8300 enterprise-level products. For more information on the DS4700/DS4800 products, visit

http://www.ibm.com/systems/storage/disk

An i5/OS partition is supported as a client of the VIOS, enabling access to DS4700/DS4800 storage products. This attachment through VIOS is fully transparent to the i5/OS operating system and supports all types of objects, including databases.

The DS4700/DS4800 is connected to VIOS using Fibre Channel adapters.

For best performance and reliability, the DS4700/DS4800 Fibre Channel disk drive features are strongly recommended over the SATA disk drive features. Users should consider SATA drive configurations when the products are being configured as near-line or archive storage appliances and price is a deciding factor.

Accessibility by people with disabilities

You can request a U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance at

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

Product positioning

i5/OS V6R1 is the newest version of the IBM operating system that is designed to deliver efficient, resilient business processing. Enhancements in i5/OS V6R1 include:

- Support for your regulatory requirements with encryption of backups and data on disk
- Introduction of a high availability solution from IBM, High Availability Solutions Manager for i5/OS
- Improved performance for Java and WebSphere applications on i5/OS
- Virtualization enhancements that support virtual i5/OS partitions, reducing costs to create test and development environments
- Enhanced performance for i5/OS environments that connect to IBM System Storage solutions
- Support for IBM Systems Director, delivering a comprehensive tool to manage IBM systems
- Support for i5/OS on a blade, enabling you to consolidate i5/OS and Intel servers with BladeCenter technology

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld ID and password are required (use IBM ID).

BP Attachment for Announcement Letter 208-014

https://www.ibm.com/partnerworld/mem/sla.jsp?num=208-014

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Linux is a trademark of Linus Torvalds in the United States, other countries or both.

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Additional information

The following products are also shipped with the i5/OS™ operating system:

- IBM Business Solutions
- IBM HTTP Server for i5/OS
- IBM Toolbox for Java™
- IBM Developer Kit for Java
- IBM Extended Integrated Server Support for i5/OS
- IBM Network Authentication Enablement for i5/OS
- IBM Portable Utilities for i5/OS
- IBM TCP/IP Connectivity Utilities for i5/OS
- IBM Transform Services for i5/OS
- IBM Universal Manageability Enablement for i5/OS
- IBM System i[™] Access for Windows®
- IBM System i Access for Wireless

Offering Information

Product information is available via the Offering Information Web site

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

Publications

No publications are shipped with this programs.

With the IBM Systems Information Center, users can use a single information center to access product documentation for IBM Systems hardware, operating systems, and server software. Through a consistent framework, users can efficiently find information and personalize their access to that information. The IBM Systems Information Center is at

http://publib.boulder.ibm.com/infocenter/systems

Technical information

Specified operating environment

Hardware requirements: i5/OS V6R1 is supported on the following System i models: 515, 520, 525, 550, 570, 595, 800, 810, 825, 870, 890, and MMA.

It is also supported on BladeCenter® model 7998-61X.

Planning information

Planning statements provide insight into IBM's current plans, directions, and intent, and are subject to change or withdrawal without notice. Any reliance on these planning statements is at the relying party's sole risk and will not create liability or obligation for IBM.

IBM plans for i5/OS V6R1 to be the final release to support IBM System i Access for Wireless (5722-XP1).

IBM plans for i5/OS V6R1 to be the final release to support the Operations Console local console

directly attached configuration. This connectivity attaches the console to the system using a serial port on the PC to an asynchronous communications adapter on the system. The Operations Console is included in the IBM System i Access for Windows product, 5761-XE1. After the V6R1 release, Operations Console will only support the local console on a network (LAN) configuration. The local console on a network configuration, commonly referred to as LAN console, connects the PC and system using a network adapter on the PC and system.

i5/OS support of selected System i models

IBM plans for i5/OS V6R1 to be the final release supported on iSeries[™] models 800, 810, 825, 870, and 890. The release following i5/OS V6R1 is planned to be supported on System i POWER5[™] models 515, 520, 525, 550, 570, and 595, and on POWER6[™] model 570.

Direct customer support: For technical support or assistance, contact your IBM representative or visit

http://www.ibm.com/support

Packaging: i5/OS is available on DVD.

Security, auditability, and control

i5/OS uses the security and auditability features of the i5/OS.

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 unmatched portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support any critical business need.

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

Charge metric

Program name	Part number or PID number	Charge metric
i5/0S Additional i5/0S	5761-SS1	Per Processor and Per User
Processors i5/OS Application	5761-SSA	Per Processor
Server	5761-SSB	Per Processor
i5/0S Users	5761-SSC	Per User

Processor

A processor (commonly called a CPU or core) is a functional unit within a computing device that interprets and executes instructions. A processor consists of at least an instruction control unit and one or more arithmetic or logic unit. With multicore technology, each core is considered a processor. With full capacity licensing, a proof of entitlement (PoE) must be acquired for all activated processors available for use on the server.

Registered user

A registered user is one and only one named individual within or outside your enterprise which is recorded in a registry (for example, table, directory, file) maintained by you. A PoE must be

obtained for each individual user accessing the program in any manner. A program licensed under an registered user PoE may be installed on a single computer or server, and accessed by multiple users, provided that a PoE has been obtained for each individual user accessing the program either directly or indirectly (via a multiplexing program, device, or application server) through any means on behalf of the user.

i5/OS (5761-SS1) is priced and licensed per processor and per server.

When you select i5/OS on a POWER6 processor-based blade (7998-61X), you must purchase at least one processor entitlement and 10 user entitlements. You can purchase additional i5/OS processor entitlements to a maximum of four. You can purchase additional i5/OS users in blocks of 10 users. You can also purchase unlimited user, i5/OS external user, and unlimited collaboration user entitlements for use on a POWER6 processor-based blade.

i5/OS orders for V5R4: If you place an initial or upgrade order for i5/OS, the following software products are defaulted onto your configuration when ordered for hardware models 9406-570, 9406-MMA, and 9406-595.

- 5722-DR1 IBM Director for i5/OS, V5.20 Supply Feature 5809
- 5722-WE2 IBM Web Enablement for i5/OS, V5.3 WebSphere® Express 6.0, Supply Feature 5902

These products will no longer be defaulted onto the i5/OS configuration when ordered for hardware models 9406-520, 9406-525, 9406-550, 9407-515. If you need these software products, you must explicitly order them in the initial or upgrade order.

5722-DR1 and 5722-WE2 will continue to be included with the 9405-520 Express Editions.

i5/OS order for V6R1: If you place an initial or upgrade order for i5/OS, the following software product is defaulted onto your configuration when ordered for hardware models 9406-570, 9406-MMA, and 9406-595.

- 5722-DR1 IBM Director for i5/OS, V5.20 Supply Feature 5809
- 5722-WE2 IBM Web Enablement for i5/OS, V5.3 WebSphere Express 6.1 DVD, Supply Feature 5904

The following products will no longer be defaulted onto the i5/OS configuration when ordering an i5/OS upgrade from V5 to V6R1, for hardware models 9406-520, 9406-525, 9406-550, 9407-515. If you need these software products, you must explicitly order them in the upgrade software order.

- 5722-DR1 IBM Director for i5/OS, V5.20 Supply Feature 5809
- 5722-WE2 IBM Web Enablement for i5/OS, V5.3 WebSphere Express 6.1 DVD, Supply Feature 5904

5722-DR1 and 5722-WE2 will continue to be included with the 9405-520 Express Editions.

IBM i5/OS (5761-SS1)

Charge features: Initial order

IBM i 5/0S (5761-SS1)	Per Processor
Per Proc w/o SWMA 515	1309
Per Proc Chrg/HW 515	1310
Per Proc Reg Addl Lic 515	1311
Per Proc w/o SWMA 520	1312
Per Proc Chrg/HW 520	1314
Per Proc Reg Addl Lic 520	1315
Per Proc w/o SWMA 525	1316
Per Proc Chrg/HW 525	1317
Per Proc Reg Addl Lic 525	1318
Per Proc w/o SWMA 550	1319
Per Proc Chrg/HW 550	1320
Per Proc Reg Addl Lic 550	1321
Per Proc w/o SWMA 570	1322
Per Proc Chrg/HW 570	1323
_	

Per Proc Reg Addl Lic 570 Per Proc w/o SWMA 595 Per Proc Chrg/HW 595 Per Proc Reg Addl Lic 595 Per Proc W/o SWMA MMA Per Proc Chrg/HW MMA Per Proc Reg Addl Lic MMA Per Proc Reg Addl Lic MMA Per Proc PWR6 Blade 61X OTC Keyed Stamped Media OTC Non-Keyed Stamped Media Per Proc Addl Lic 825 Per Proc Addl Lic 870 Per Proc Addl Lic 890	1324 1325 1326 1327 1328 1329 1330 1347 1348 1349 1299 1301 1302
i5/OS (5761-SS1) Media Charge	Per Server
Keyed Product Media Charge Non-keyed Product Media Charge	1348 1349
IBM Media and Storage Extensions	Per Processor
Per Proc OTC M&S Ext Per Proc Chrg/HW M&S Ext Per Proc w/SW Pkg M&S Ext	1303 1304 1305
DB2(R) Multisystem	Per Server
Per Serv DB2 Multisystem	0706
DB2 Symmetric Multiprocessing O	TC
P05 DB2 Symm Multiproc P10 DB2 Symm Multiprod P20 DB2 Symm Multiproc P30 DB2 Symm Multiproc P40 DB2 Symm Multiproc P50 DB2 Symm Multiproc P60 DB2 Symm Multiproc P60 DB2 Symm Multiproc P60 DB2 Symm Multiproc P05 DB2 Symm Multiproc P05 DB2 Symm Multiproc P05 DB2 Symm Mult Reg Chrg/HW P10 DB2 Symm Mult Reg Chrg/HW P20 DB2 Symm Mult Reg Chrg/HW P30 DB2 Symm Mult Reg Chrg/HW P40 DB2 Symm Mult Reg Chrg/HW P50 DB2 Symm Mult Reg Chrg/HW P60 DB2 Symm Mult Reg W/SW Pkg P10 DB2 Symm Mul Reg w/SW Pkg P10 DB2 Symm Mul Reg w/SW Pkg P20 DB2 Symm Mul Reg w/SW Pkg P30 DB2 Symm Mul Reg w/SW Pkg P30 DB2 Symm Mul Reg w/SW Pkg P30 DB2 Symm Mul Reg w/SW Pkg P40 DB2 Symm Mul Reg w/SW Pkg P50 DB2 Symm Mul Reg w/SW Pkg P50 DB2 Symm Mul Reg w/SW Pkg P60 DB2 Symm Mul Reg w/SW Pkg P60 DB2 Symm Mul Reg w/SW Pkg P60 DB2 Symm Mul Reg w/SW Pkg	1243 1244 1246 1249 1253 1258 1264 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284
Printer Support	0751
Per Server PSF 1-55 IPM	0751
IBM PSF for i5/0S 1-100 IPM Printer Support	Per Server
Per Server PSF 1-100 IPM	0754
IBM PSF for i5/OS AnySpeed Printer Support	Per Server
Per Server PSF AnySpeed	0814
HA Switchable Resource	ОТС
P05 HA Switchable Resource P10 HA Switchable Resource	0709 0710

P20 HA Switchable Resource	0711
P30 HA Switchable Resource	0712
P40 HA Switchable Resource	0712
P50 HA Switchable Resource	0714
P60 HA Switchable Resource	0715
PO5 HA Switchable Res Chrg/HW	0737
P10 HA Switchable Res Chrg/HW	0738
P20 HA Switchable Res Chrg/HW	0739
P30 HA Switchable Res Chrg/HW	0740
P40 HA Switchable Res Chrg/HW	0741
P50 HA Switchable Res Chrg/HW	0742
P60 HA Switchable Res Chrg/HW	0743
HA Journal Perf	OTC
	010
PO5 HA Journal Perf	0671
P10 HA Journal Perf	0672
P20 HA Journal Perf	0673
P30 HA Journal Perf	0674
P40 HA Journal Perf	0675
P50 HA Journal Perf	0676
P60 HA Journal Perf	0677
5761-SS1	OTC
PO5 OTC SW Accommodation	0648
P10 OTC SW Accommodation	0649
P20 OTC SW Accommodation	0650
P30 OTC SW Accommodation	0651
P40 OTC SW Accommodation	0652
5761-SS1	OTC
5761-SS1	OTC
P05 OptiConnect	0620
P05 OptiConnect P10 OptiConnect	0620 0621
P05 OptiConnect P10 OptiConnect P20 OptiConnect	0620 0621 0622
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect	0620 0621 0622 0623
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect	0620 0621 0622 0623 0624
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect	0620 0621 0622 0623 0624 0625
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect	0620 0621 0622 0623 0624
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect	0620 0621 0622 0623 0624 0625
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect	0620 0621 0622 0623 0624 0625
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect P60 OptiConnect	0620 0621 0622 0623 0624 0625 0626
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect P60 OptiConnect	0620 0621 0622 0623 0624 0625 0626
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect P60 OptiConnect P60 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect P60 OptiConnect P60 Tence P60 OptiConnect P705 Encrypted Backup Enable P10 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect P60 OptiConnect P60 Tencrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC
P05 OptiConnect P10 OptiConnect P20 OptiConnect P30 OptiConnect P40 OptiConnect P50 OptiConnect P60 OptiConnect P60 OptiConnect P60 OptiConnect P61-SS1 P05 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P70 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P70 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P70 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P70 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P60 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect F761-SS1 P05 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect F761-SS1 P05 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P761-SS1 P05 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764 0TC
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P10 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted ASP Enablement P10 Encrypted ASP Enablement	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764 0TC
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P60 Opti Connect P10 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted ASP Enablement P10 Encrypted ASP Enablement P20 Encrypted ASP Enablement P30 Encrypted ASP Enablement	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764 0TC
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P61 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted ASP Enablement	0620 0621 0622 0623 0624 0625 0626 OTC 0758 0759 0760 0761 0762 0763 0764 OTC
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P61 Encrypted Backup Enable P62 Encrypted Backup Enable P63 Encrypted Backup Enable P64 Encrypted Backup Enable P65 Encrypted Backup Enable P66 Encrypted Backup Enable P67 Encrypted Backup Enable P68 Encrypted Backup Enable P69 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted ASP Enablement	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764 0TC
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P61 Encrypted Backup Enable P10 Encrypted Backup Enable P20 Encrypted Backup Enable P30 Encrypted Backup Enable P40 Encrypted Backup Enable P50 Encrypted Backup Enable P50 Encrypted Backup Enable P60 Encrypted ASP Enablement	0620 0621 0622 0623 0624 0625 0626 OTC 0758 0759 0760 0761 0762 0763 0764 OTC
P05 Opti Connect P10 Opti Connect P20 Opti Connect P30 Opti Connect P40 Opti Connect P50 Opti Connect P60 Opti Connect P61 Encrypted Backup Enable P62 Encrypted Backup Enable P63 Encrypted Backup Enable P64 Encrypted Backup Enable P65 Encrypted Backup Enable P66 Encrypted Backup Enable P67 Encrypted Backup Enable P68 Encrypted Backup Enable P69 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted Backup Enable P60 Encrypted ASP Enablement	0620 0621 0622 0623 0624 0625 0626 0TC 0758 0759 0760 0761 0762 0763 0764 0TC

Upgrade order

Upgrades	То:	5761	- SS 1	l		Per Processor
Upg Per Upg Per Upg Per Upg Per Upg Per Upg Per	Proc Proc Proc Proc	from from from from	550 570 8xx 8xx	 	MMA MMA 550 570	1331 1332 1333 1363 1364 1365

From: 5761-SS1 To: 5761-SS1 Per Server

```
Upg PSF 1-55 to PSF 1-100
Upg PSF 1-55 to PSF Anyspeed 0815
Upg PSF 1-100 to PSF Anyspeed 0817
From: 5769-SS1 To: 5761-SS1 OTC
P05 Upg OptiConnect 5769-SS1
P10 Upg OptiConnect 5769-SS1
P20 Upg OptiConnect 5769-SS1
P30 Upg OptiConnect 5769-SS1
                              0615
P40 Upg OptiConnect 5769-SS1
P50 Upg OptiConnect 5769-SS1
                              0617
P60 Upg OptiConnect 5769-SS1
                              0618
From: 5769-SS1 To: 5761-SS1 OTC
P05 Upg DB2 Symm 5769-SS1
                               1285
P10 Upg DB2 Symm 5769-SS1
                               1286
P20 Upg DB2 Symm 5769-SS1
                               1287
P30 Upg DB2 Symm 5769-SS1
                               1288
P40 Upg DB2 Symm 5769-SS1
                               1289
P50 Upg DB2 Symm 5769-SS1
                               1290
P60 Upg DB2 Symm 5769-SS1
                               1291
From: 5769-SS1 To: 5761-SS1
                              Per Server
Per Serv DB2 Multi 5769-SS1
                              0707
From: 5769-SS1 To: 5761-SS1
                              Per Server
Upg Per Serv M&S (5769-SS1)
                              1307
Per Serv PSF 1-55 (5769-SS1)
                              0753
Per Serv PSF 1-100 (5769-SS1) 0756
Per Serv AnySpeed (5769-SS1)
                              0818
From: 5722-SS1 To: 5761-SS1 OTC
P05 Upg OptiConnect 5722-SS1
P10 Upg OptiConnect 5722-SS1
                              0606
P20 Upg OptiConnect 5722-SS1
P30 Upg OptiConnect 5722-SS1
P40 Upg OptiConnect 5722-SS1
                              0609
P50 Upg OptiConnect 5722-SS1
                              0610
P60 Upg OptiConnect 5722-SS1
                              0611
From: 5722-SS1 To: 5761-SS1
                              1292
P05 Upg DB2 Symm 5722-SS1
P10 Upg DB2 Symm 5722-SS1
                               1293
P20 Upg DB2 Symm 5722-SS1
                              1294
P30 Upg DB2 Symm 5722-SS1
                               1295
P40 Upg DB2 Symm 5722-SS1
                               1296
P50 Upg DB2 Symm 5722-SS1
                               1297
P60 Upg DB2 Symm 5722-SS1
                               1298
From: 5722-SS1 To: 5761-SS1
                              OTC
P05 Upg HA Switch 5722-SS1
                              0744
P10 Upg HA Switch 5722-SS1
                              0745
P20 Upg HA Switch 5722-SS1
                              0746
P30 Upg HA Switch 5722-SS1
                              0747
P40 Upg HA Switch 5722-SS1
                              0748
P50 Upg HA Switch 5722-SS1
                              0749
P60 Upg HA Switch 5722-SS1
                              0750
From: 5722-SS1 To: 5761-SS1
                              0TC
P05 Upg HA Journal 5722-SS1
                              0699
                              0700
P10 Upg HA Journal 5722-SS1
P20 Upg HA Journal 5722-SS1
                              0701
P30 Upg HA Journal 5722-SS1
                              0702
P40 Upg HA Journal 5722-SS1
                              0703
```

P50 Upg HA Journal 5722-SS1

0704

P60 Upg HA Journal 5722-SS1 0705

From: 5722-SS1 To: 5761-SS1 Per Server

Per Serv DB2 Multi 5722-SS1 0708

From: 5722-SS1 To: 5761-SS1 Per Server

Upg Per Serv M&S (5722-SS1) 1306 Per Serv PSF 1-55 (5722-SS1) 0752 Per Serv PSF 1-100 (5722-SS1) 0757 Per Serv AnySpeed (5722-SS1) 0816

From: 5799-BJC To: 5761-SS1 OTC

 P05
 Upg
 HA
 Journal
 5799-BJC
 0663

 P10
 Upg
 HA
 Journal
 5799-BJC
 0664

 P20
 Upg
 HA
 Journal
 5799-BJC
 0665

 P30
 Upg
 HA
 Journal
 5799-BJC
 0666

 P40
 Upg
 HA
 Journal
 5799-BJC
 0667

 P50
 Upg
 HA
 Journal
 5799-BJC
 0668

 P60
 Upg
 HA
 Journal
 5799-BJC
 0669

Group-to-group upgrades

Upgrade	Description	OTC
P05-P10	OTC SW Accomm	0653
P05-P20	OTC SW Accomm	0654
P05-P30	OTC SW Accomm	0655
P05-P40	OTC SW Accomm	0656
P10-P20	OTC SW Accomm	0657
P10-P30	OTC SW Accomm	0658
P10-P40	OTC SW Accomm	0659
P20-P30	OTC SW Accomm	0660
P20-P40	OTC SW Accomm	0661
P30-P40	OTC SW Accomm	0662
Upgrade	Description	OTC
P05-P10	Opti Connect	0627
P05-P20	Opti Connect	0628
P05-P30	Opti Connect	0629
P05-P40	Opti Connect	0630
P05-P50	Opti Connect	0631
P05-P60	Opti Connect	0632
P10-P20	Opti Connect	0633
P10-P30	Opti Connect	0634
P10-P40	Opti Connect	0635
P10- P50	Opti Connect	0636
P10-P60	Opti Connect	0637
P20- P30	Opti Connect	0638
P20- P40	Opti Connect	0639
P20- P50	Opti Connect	0640
P20- P60	Opti Connect	0641
P30- P40	Opti Connect	0642
P30- P50	Opti Connect	0643
P30- P60	Opti Connect	0644
P40- P50	Opti Connect	0645
P40- P60	Opti Connect	0646
P50-P60	Opti Connect	0647
Upgrade	Description	OTC
P05-P10	OTC DB2 Symm Multi	1245
P05-P20	OTC DB2 Symm Multi	1247
P05-P30	OTC DB2 Symm Multi	1250
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Per Proc	Appl Srv ePoE Reg 7 Appl Srv ePoE Reg 8 Appl Srv ePoE Reg 9 Appl Srv ePoE Reg 10 Appl Srv ePoE Reg 11 Appl Srv ePoE Reg 11 Appl Srv ePoE Reg 12 Appl Srv ePoE Reg 13 Appl Srv ePoE Reg 14 Appl Srv ePoE Reg 15 Appl Srv ePoE Reg 16 Appl Srv ePoE Reg 17 Appl Srv ePoE Reg 18 Appl Srv ePoE Reg 19 Appl Srv ePoE Reg 20 Appl Srv ePoE Reg 21 Appl Srv ePoE Reg 22 Appl Srv ePoE Reg 23 Appl Srv ePoE Reg 23 Appl Srv ePoE Reg 24 Appl Srv ePoE Reg 25	6207 6208 6209 6210 6211 6212 6213 6214 6215 6216 6217 6218 6220 6221 6222 6223 6224 6225
Per Proc	Appl Srv ePoE Reg 7 Appl Srv ePoE Reg 8 Appl Srv ePoE Reg 9 Appl Srv ePoE Reg 10 Appl Srv ePoE Reg 11 Appl Srv ePoE Reg 12 Appl Srv ePoE Reg 13 Appl Srv ePoE Reg 14 Appl Srv ePoE Reg 15 Appl Srv ePoE Reg 16 Appl Srv ePoE Reg 17 Appl Srv ePoE Reg 17 Appl Srv ePoE Reg 19 Appl Srv ePoE Reg 19 Appl Srv ePoE Reg 20 Appl Srv ePoE Reg 21 Appl Srv ePoE Reg 22 Appl Srv ePoE Reg 23 Appl Srv ePoE Reg 23 Appl Srv ePoE Reg 24 Appl Srv ePoE Reg 25	6207 6208 6209 6210 6211 6212 6213 6214 6215 6216 6217 6218 6220 6221 6222 6223 6224 6225 6226
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Per Proc Appl Srv ePoE Reg 32
                                                     6232
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  Per Proc Appl Srv ePoE Reg 50
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  Per Proc Appl Srv ePoE Reg 61
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  Per Proc Appl Srv ePoE Reg 62
                                                     6262
  Per Proc Appl Srv ePoE Reg 63
                                                     6263
  Per Proc Appl Srv ePoE Reg 64
                                                     6264
  Key/ePoe Reg Unlimited Users
                                                     6398
  Key/ePoe Reg Ext Access User
                                                     6399
Supply features
  V6R1 Supply -- i 5/0S
                                                     5819
  V6R1 Supply -- HA Journal
                                                     5910
  V6R1 Supply -- M&S Extension
                                                     5911
  V6R1 Supply -- OptiConnect
                                                     5912
 V6R1 Supply -- DB2 Symm
V6R1 Supply -- DB2 Multisyste
V6R1 Supply -- Encrypted Back
                                                     5913
                                                     5914
                                                     5915
  V6R1 Supply -- PSF 1-55 IPM
                                                     5916
  V6R1 Supply -- PSF 1-100 IPM
                                                     5917
  V6R1 Supply -- PSF AnySpeed
                                                     5918
  V6R1 Supply -- HA Switchable
                                                     5919
  V6R1 Supply -- Encrypted ASP
                                                     5920
  Physical Delivered Materials
                                                     5945
  Lic Documents -- i5/0S
                                                     5950
Other features
  SW Key 1st MT Digit V6
                                                     4001
  SW Key 2nd MT Digit V6
                                                     4002
  SW Key 3rd MT Digit V6
                                                     4003
  SW Key 4th MT Digit V6
                                                     4004
  SW Key 1st CPU Digit V6
                                                     4005
  SW Key 2nd CPU Digit V6
                                                     4006
  SW Key 3rd CPU Digit V6
                                                     4007
  SW Key 4th CPU Digit V6
                                                     4008
  SW Key 5th CPU Digit V6
                                                     4009
  Sw Key 6th CPU Digit V6
                                                     4010
  SW Key 7th CPU Digit V6
                                                     4011
i5/OS License (5761-SSA)
```

Charge features

Initial order

```
i 5/0S Li cense
                                Per Processor
(5761-SSA)
Per Proc w/1yr SWMA -- 515
                                 1453
Per Proc w/1yr SWMA -- 520
                                 1454
Per Proc w/1yr SWMA -- 525
                                 1455
Per Proc w/1yr SWMA -- 550
                                 1456
Per Proc w/1yr SWMA -- 570
                                 1458
Per Proc w/1yr SWMA -- 595
                                 1460
Per Proc w/1yr SWMA -- MMA
                                 1462
Per Proc w/1yr SWMA -- 61x
                                 1463
```

i5/OS Application Server (5761-SSB)

Charge features

Initial order

```
i 5/OS Application Server -- Per Processor (5761-SSB)

Per Proc w/1Yr SWMA -- 550 0819
Per Proc w/1Yr SWMA -- 570 0820
Per Proc w/1Yr SWMA -- 595 0821
Per Proc w/1Yr SWMA -- MMA 0822
```

i5/OS User Billing (5761-SSC)

Charge features

Initial order

```
i5/OS User Billing
                               Per Usage
(5761-SSC)
5 Users Chrg/HW -- 515
                                1464
5 Users -- 515
                                1465
Unlimited Users -- 515
                                1466
Unlimited Users Chrg/HW -- 515
                                1467
10 Users Chrg/HW -- 525
                                1468
10 Users -- 525
                                1469
10 Users CBU/Upg -- 525
                                1470
Unlimited Users -- 525
                                1471
Unlimit Users CBU/Upg -- 525
                                1472
Unlimit Users Chrg/HW -- 525
                                1473
Unlim Ext Access Users -- 515
                                1474
Unlim Ext Access Users -- 525
                                1475
Unlimit Collab Users -- 515
                                1476
Unlimit Collab Users -- 525
                                1477
10 Users -- PWR6-61X
                                1478
Unlimit Users -- PWR6-61X
                                1479
Unlim Ext Access -- PWR6-61X
                                1480
Unlim Collab User -- PWR6-61X
                                1481
```

i5/OS V5R4 (5722-SS1)

No-charge features

Feature number

Universal Manageability Enablement for i5/0S Refresh for V5R4

Temporary License for System i (5733-ITL)

No-charge features

Feature number

2645

Asset registration features

V6R1 5060

Remove Keys/ePoEs for Transferred Software (5733-NKY)

No-charge features

Feature number

ePoE features

Encry Bckup Enable (5761-SS1) 2602 Encry ASP Enable (5761-SS1) 2603

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Extending coverage for a total of three years from the date of acquisition may be elected. Order the program number, feature number, and quantity to extend coverage for your software licenses. If maintenance has expired, specify the after license feature number.

Software license includes 1 year Software Maintenance 5761-SS1 is 5/0S

5733-SPP Maintenance no charge 1 year registration + 1 year renewal

Feature description

Per user

5733-SP3 Maintenance 3 year registration (2 year uplift)

5733-SP3 Maintenance 3 year renewal

5733-MAL Software Maintenance After License, 1 year

Software Maintenance After License

 $5733\text{-}\,\mathrm{MAL}$ Software Maintenance After License, 3 year Terms and conditions

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System i Software Maintenance applies: Yes

Variable charges apply: No

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Prices

IBM i5/OS (5761-SS1)

Charge features

Initial order

IBM i 5/0S (5761-SS1)	Per Processor	OTC
Per Proc w/o SWMA 515 Per Proc Chrg/HW 515	1309 1310	\$ 1,795 0
Per Proc Reg Addl Lic 515	1311	0
Per Proc w/o SWMA 520	1312	21, 000
Per Proc Chrg/HW 520	1314	0
Per Proc Reg Addl Lic 520	1315	0
Per Proc w/o SWMA 525	1316	5, 995
Per Proc Chrg/HW 525	1317	0
Per Proc Reg Addl Lic 525	1318	0
Per Proc w/o SWMA 550	1319	40, 000
Per Proc Chrg/HW 550	1320	0
Per Proc Reg Addl Lic 550	1321	0
Per Proc w/o SWMA 570	1322	53, 000
Per Proc Chrg/HW 570	1323	0
Per Proc Reg Addl Lic 570	1324	0
Per Proc w/o SWMA 595	1325	53, 000
Per Proc Chrg/HW 595	1326	0
Per Proc Reg Addl Lic 595	1327	0
Per Proc w/o SWMA MMA	1328	53, 000
Per Proc Chrg/HW MMA	1329	0
Per Proc Reg Addl Lic MMA	1330	0
Per Proc PWR6 Blade 61X	1347	10, 995

Per Proc Addl Lic 825 Per Proc Addl Lic 870 Per Proc Addl Lic 890	1299 1301 1302	45, 000 45, 000 45, 000
i5/OS (5761-SS1) Media Charge	Per Server	OTC
Keyed Product Media Charge Non-keyed Product Media Charg	1348 e 1349	\$0 0
IBM Media and Storage Extensions	Per Server	ОТС
Per Serv OTC M&S Ext	1303	\$995
Per Serv Chrg/HW M&S Ext	1304	0
Per Serv w/SW Pkg M&S Ext	1305	0
IBM DB2 Multisystem	Per Server	OTC
Per Serv DB2 Multisystem	0706	\$25,000
DB2 Symmetric Multiprocessing	ОТС	
	Feature	OTC
PO5 DB2 Symm Multiproc	1243	\$ 1,000
P10 DB2 Symm Multiproc	1244	2, 000
P20 DB2 Symm Multiproc	1246	6, 000
P30 DB2 Symm Multiproc P40 DB2 Symm Multiproc	1249 1253	12, 000 18, 000
P50 DB2 Symm Multiproc	1258	24, 000
P60 DB2 Symm Multiproc	1264	30, 000
PO5 DB2 Symm Mult Reg Chrg/HW		0
P10 DB2 Symm Mult Reg Chrg/HW		0
P20 DB2 Symm Mult Reg Chrg/HW P30 DB2 Symm Mult Reg Chrg/HW	1273	0
P40 DB2 Symm Mult Reg Chrg/HW	1275	0
P50 DB2 Symm Mult Reg Chrg/HW	1276	0
P60 DB2 Symm Mult Reg Chrg/HW		0
P05 DB2 Symm Mul Reg w/SW Pkg P10 DB2 Symm Mul Reg w/SW Pkg		0
P20 DB2 Symm Mul Reg w/SW Pkg		0
P30 DB2 Symm Mul Reg w/SW Pkg		Ö
P40 DB2 Symm Mul Reg w/SW Pkg		0
P50 DB2 Symm Mul Reg w/SW Pkg		0
P60 DB2 Symm Mul Reg w/SW Pkg	1284	0
IBM PSF for i5/0S 1-55 IPM Printer Support	Per Server	отс
Per Server PSF 1-55 IPM	0751	\$2, 495
IBM PSF for i5/OS 1-100 IPM Printer Support	Per Server	ОТС
Per Server PSF 1-100 IPM	0754	\$4, 500
IBM PSF for i5/OS AnySpeed Printer Support	Per Server	ОТС
Per Server PSF AnySpeed	0814	\$6, 995
HA Switchable Resource	OTC	
	Feature	OTC
PO5 HA Switchable Resource	0709	\$ 2,085
P10 HA Switchable Resource	0710	
P20 HA Switchable Resource	0711	4, 170
P30 HA Switchable Resource P40 HA Switchable Resource	0712 0713	12, 500 25, 000
P50 HA Switchable Resource	0713	37, 500
P60 HA Switchable Resource	0715	50, 000
PO5 HA Switchable Res Chrg/HW	0737	62, 500
P10 HA Switchable Res Chrg/HW	0738	0

P20 HA Switchable Res Chrg/HW	0739	0
P30 HA Switchable Res Chrg/HW		0
P40 HA Switchable Res Chrg/HW		0
P50 HA Switchable Res Chrg/HW	0742	0
P60 HA Switchable Res Chrg/HW	0743	0
HA Journal Perf	OTC	
in Journal Terr	Feature	OTC
	1000010	010
P05 HA Journal Perf	0671	\$ 500
P10 HA Journal Perf	0672	1, 000
P20 HA Journal Perf	0673	3, 000
P30 HA Journal Perf	0674	6,000
P40 HA Journal Perf	0675	9, 000
P50 HA Journal Perf	0676	12, 000
P60 HA Journal Perf	0677	15, 000
5761-SS1	OTC	
	Feature	OTC
PO5 OTC SW Accommodation	0648	\$ 2,550
P10 OTC SW Accommodation	0649	9, 000
P20 OTC SW Accommodation	0650	26, 000
P30 OTC SW Accommodation	0651	70, 000
P40 OTC SW Accommodation	0652	160, 000
****	ота	
5761-SS1	OTC	OTTG
	Feature	OTC
DOS Onti Connect	0630	¢ 420
P05 OptiConnect	0620	\$ 420
P10 OptiConnect P20 OptiConnect	0621 0622	840
P30 OptiConnect	0623	2, 520 5, 040
P40 Opti Connect	0624	7, 560
P50 Opti Connect	0625	10, 080
P60 OptiConnect	0626	12, 600
100 operconnect	0020	12, 000
5761-SS1	OTC	
	Feature	OTC
PO5 Encrypted Backup Enable	0758	\$ 1,000
P10 Encrypted Backup Enable	0759	2,000
P20 Encrypted Backup Enable	0760	6, 000
P30 Encrypted Backup Enable	0761	12,000
P40 Encrypted Backup Enable	0762	18, 000
P50 Encrypted Backup Enable	0763	24, 000
P60 Encrypted Backup Enable	0764	30, 000
5761-SS1	OTC	077.0
	Feature	OTC
DOE Engage and ACD Enghlament	0796	ė 1 000
P05 Encrypted ASP Enablement	0786	\$ 1,000
P10 Encrypted ASP Enablement	0787	2, 000
P20 Encrypted ASP Enablement	0788	6, 000
P30 Encrypted ASP Enablement	0789	12, 000
P40 Encrypted ASP Enablement P50 Encrypted ASP Enablement	0790 0791	18, 000 24, 000
P60 Encrypted ASP Enablement	0792	30, 000
100 Encrypted ASI Enabrement	0732	30, 000
Upgrade order		
-18		
Upgrades To: 5761-SS1	Per Processor	OTC
Upg Per Proc from 8xx MMA	1331	\$0
Upg Per Proc from 550 MMA	1332	0
Upg Per Proc from 570 MMA	1333	0
Upg Per Proc from 8xx 550	1363	0
Upg Per Proc from 8xx 570	1364	0
Upg Per Proc from 8xx 595	1365	0
From: 5761-SS1 To: 5761-SS1	Per Server	OTC
Upg PSF 1-55 to PSF 1-100	0755	\$2,005

Upg PSF 1-55 to PSF Anyspeed	0815	4, 500
Upg PSF 1-100 to PSF Anyspeed		2, 495
3.1		,
From: 5769-SS1 To: 5761-SS1	OTC	
	Feature	OTC
P05 Upg OptiConnect 5769-SS1	0612	\$0
P10 Upg OptiConnect 5769-SS1	0613	0
P20 Upg OptiConnect 5769-SS1	0614	0
P30 Upg OptiConnect 5769-SS1	0615	0
P40 Upg OptiConnect 5769-SS1	0616	0
P50 Upg OptiConnect 5769-SS1	0617	0
P60 Upg OptiConnect 5769-SS1	0618	0
F	OTTG	
From: 5769-SS1 To: 5761-SS1	OTC	OTC
	Feature	OTC
P05 Upg DB2 Symm 5769-SS1	1285	\$0
P10 Upg DB2 Symm 5769-SS1	1286	0
P20 Upg DB2 Symm 5769-SS1	1287	0
P30 Upg DB2 Symm 5769-SS1	1288	0
P40 Upg DB2 Symm 5769-SS1	1289	0
P50 Upg DB2 Symm 5769-SS1	1290	0
P60 Upg DB2 Symm 5769-SS1	1291	0
		_
From: 5769-SS1 To: 5761-SS1	Per Server	
	Feature	OTC
Per Serv DB2 Multi 5769-SS1	0707	\$0
From: 5769-SS1 To: 5761-SS1	Per Server	
	Feature	OTC
Upg Per Serv M&S (5769-SS1)	1307	\$0
Per Serv PSF 1-55 (5769-SS1)	0753	0
Per Serv PSF 1-100 (5769-SS1)		0
Per Serv AnySpeed (5769-SS1)	0818	0
Enom: 5799 CC1 To: 5701 CC1	OTC	
From: 5722-SS1 To: 5761-SS1	OTC	OTC
	Feature	OTC
P05 Upg OptiConnect 5722-SS1	0605	\$0
P10 Upg Opti Connect 5722-SS1	0606	0
P20 Upg Opti Connect 5722-SS1	0607	0
P30 Upg Opti Connect 5722-SS1	0608	0
P40 Upg Opti Connect 5722-SS1	0609	0
	0610	0
P60 Upg OptiConnect 5722-SS1		0
10 1		
From: 5722-SS1 To: 5761-SS1	OTC	
	Feature	OTC
P05 Upg DB2 Symm 5722-SS1	1292	\$0
P10 Upg DB2 Symm 5722-SS1	1293	0
P20 Upg DB2 Symm 5722-SS1	1294	0
P30 Upg DB2 Symm 5722-SS1	1295	0
P40 Upg DB2 Symm 5722-SS1	1296	0
P50 Upg DB2 Symm 5722-SS1	1297	0
P60 Upg DB2 Symm 5722-SS1	1298	0
From: 5722-SS1 To: 5761-SS1	OTC	
110111. 3722-331 10. 3701-331	Feature	OTC
	1 cacar c	010
PO5 Upg HA Switch 5722-SS1	0744	\$0
P10 Upg HA Switch 5722-SS1	0745	0
P20 Upg HA Switch 5722-SS1	0746	0
P30 Upg HA Switch 5722-SS1	0747	0
P40 Upg HA Switch 5722-SS1		0
P50 Upg HA Switch 5722-SS1	0748	0
130 opg IIA Switch 3722-331	0748 0749	0
P60 Upg HA Switch 5722-SS1		
	0749	0
	0749	0
P60 Upg HA Switch 5722-SS1	0749 0750	0

P05 Upg HA Journal 5722-SS1 P10 Upg HA Journal 5722-SS1 P20 Upg HA Journal 5722-SS1 P30 Upg HA Journal 5722-SS1 P40 Upg HA Journal 5722-SS1 P50 Upg HA Journal 5722-SS1 P60 Upg HA Journal 5722-SS1	0702 0703 0704	\$0 0 0 0 0 0
From: 5722-SS1 To: 5761-SS1	Per Server Feature	отс
Per Serv DB2 Multi 5722-SS1	0708	\$0
From: 5722-SS1 To: 5761-SS1	Per Server Feature	ОТС
Upg Per Serv M&S (5722-SS1) Per Serv PSF 1-55 (5722-SS1) Per Serv PSF 1-100 (5722-SS1) Per Serv AnySpeed (5722-SS1)	0752	\$0 0 0 0
From: 5799-BJC To: 5761-SS1	OTC Feature	отс
P05 Upg HA Journal 5799-BJC P10 Upg HA Journal 5799-BJC P20 Upg HA Journal 5799-BJC P30 Upg HA Journal 5799-BJC P40 Upg HA Journal 5799-BJC P50 Upg HA Journal 5799-BJC P60 Upg HA Journal 5799-BJC	0663 0664 0665 0666 0667 0668 0669	\$ 100 200 600 1, 200 1, 800 2, 400 3, 000

Group-to-group upgrades

Upgrade Description	OTC Feature	ОТС
PO5-P10 OTC SW Accomm	0653	\$ 6,450
P05-P20 OTC SW Accomm	0654	23, 450
PO5-P30 OTC SW Accomm	0655	67, 450
PO5-P40 OTC SW Accomm	0656	157, 450
P10-P20 OTC SW Accomm	0657	17, 000
P10-P30 OTC SW Accomm	0658	61, 000
P10-P40 OTC SW Accomm	0659	151, 000
P20-P30 OTC SW Accomm	0660	44, 000
P20-P40 OTC SW Accomm	0661	134, 000
P30-P40 OTC SW Accomm	0662	90, 000
Upgrade Description	OTC	
	Feature	OTC
P05-P10 OptiConnect	0627	\$ 420
P05-P20 OptiConnect	0628	2, 100
P05-P30 OptiConnect	0629	4, 620
P05-P40 OptiConnect	0630	7, 140
P05-P50 OptiConnect	0631	9, 660
P05-P60 OptiConnect	0632	12, 180
P10-P20 OptiConnect	0633	1, 680
P10-P30 OptiConnect	0634	4, 200
P10-P40 OptiConnect	0635	6, 720
P10-P50 OptiConnect	0636	9, 240
P10-P60 OptiConnect	0637	11, 760
P20-P30 OptiConnect	0638	2, 520
P20-P40 OptiConnect	0639	5, 040
P20-P50 OptiConnect	0640	7, 560
P20-P60 OptiConnect	0641	10, 080
P30-P40 OptiConnect	0642	2, 520
P30-P50 OptiConnect	0643	5, 040
P30-P60 OptiConnect	0644	7, 560
P40-P50 OptiConnect	0645	2, 520
P40-P60 OptiConnect	0646	5, 040
P50-P60 OptiConnect	0647	2, 520

Upgrade Description	ОТС	
10	Feature	OTC
PO5-P10 OTC DB2 Symm Multi	1245	\$ 1,000
P05-P20 OTC DB2 Symm Multi	1247	5, 000
P05-P30 OTC DB2 Symm Multi	1250	11, 000
P05-P40 OTC DB2 Symm Multi	1254	17, 000
P05-P50 OTC DB2 Symm Multi	1259	23, 000
P05-P60 OTC DB2 Symm Multi	1265	29, 000
P10-P20 OTC DB2 Symm Multi	1248	4, 000
P10-P30 OTC DB2 Symm Multi	1251	10, 000
P10-P40 OTC DB2 Symm Multi	1255	16, 000
P10-P50 OTC DB2 Symm Multi	1260	22, 000
P10-P60 OTC DB2 Symm Multi	1266	28, 000
P20-P30 OTC DB2 Symm Multi	1252	6, 000
P20-P40 OTC DB2 Symm Multi	1256	12, 000
P20-P50 OTC DB2 Symm Multi	1261	18, 000
P20-P60 OTC DB2 Symm Multi	1267	24, 000
P30-P40 OTC DB2 Symm Multi	1257	6, 000
P30-P50 OTC DB2 Symm Multi	1262	12, 000
P30-P60 OTC DB2 Symm Multi	1268	18, 000
P40-P50 OTC DB2 Symm Multi		
	1263	6, 000
3	1269	12, 000
P50-P60 OTC DB2 Symm Multi	1270	6, 000
Upgrade Description	OTC	OTC
	Feature	OTC
PO5-P10 OTC HA Switchable	0716	\$ 2,085
PO5-P20 OTC HA Switchable	0717	10, 415
PO5-P30 OTC HA Switchable	0718	22, 915
PO5-P40 OTC HA Switchable	0719	35, 145
PO5-P50 OTC HA Switchable	0720	47, 915
PO5-P60 OTC HA Switchable	0721	60, 415
P10-P20 OTC HA Switchable	0722	8, 330
P10-P30 OTC HA Switchable	0723	20, 830
P10-P40 OTC HA Switchable	0724	33, 330
P10-P50 OTC HA Switchable	0725	45, 830
P10-P60 OTC HA Switchable	0726	58, 330
P20-P30 OTC HA Switchable	0727	12, 500
P20-P40 OTC HA Switchable	0728	25, 000
P20-P50 OTC HA Switchable	0729	37, 500
P20-P60 OTC HA Switchable	0730	50, 000
P30-P40 OTC HA Switchable	0731	12, 500
P30-P50 OTC HA Switchable	0732	25, 000
P30-P60 OTC HA Switchable	0733	37, 500
P40-P50 OTC HA Switchable	0734	12, 500
P40-P60 OTC HA Switchable	0735	25, 000
P50-P60 OTC HA Switchable	0736	12, 500
		,
Upgrade Description	0TC Feature	OTC
PO5-P10 OTC HA Journ Perf	0678	\$ 500
P05-P20 OTC HA Journ Perf	0679	2, 500
PO5-P30 OTC HA Journ Perf	0680	5, 500
P05-P40 OTC HA Journ Perf	0681	8, 500
P05-P50 OTC HA Journ Perf	0682	11, 500
P05-P60 OTC HA Journ Perf	0683	14, 500
P10-P20 OTC HA Journ Perf	0684	2, 000
P10-P30 OTC HA Journ Perf	0685	5, 000
P10-P40 OTC HA Journ Perf	0686	8, 000
P10-P50 OTC HA Journ Perf	0687	11, 000
P10-P60 OTC HA Journ Perf	0688	14, 000
P20-P30 OTC HA Journ Perf	0689	3, 000
P20-P40 OTC HA Journ Perf	0690	6, 000
P20-P50 OTC HA Journ Perf	0691	9, 000
P20-P60 OTC HA Journ Perf	0692	12, 000
P30-P40 OTC HA Journ Perf	0693	3, 000
P30-P50 OTC HA Journ Perf	0694	6, 000
P30-P60 OTC HA Journ Perf	0695	9, 000
P40-P50 OTC HA Journ Perf	0696	3, 000
P40-P60 OTC HA Journ Perf	0697	6, 000

P50-P60	OTC HA	Journ Perf	0698	3, 000
Upgrade	Docoria	otion	ОТС	
upgi aue	Descri	001	Feature	OTC
			reacure	OIC
P05-P10	Encryp	Bkup Enablemen	0765	\$ 1,000
		Bkup Enablemen		5, 000
		Bkup Enablemen		11, 000
		Bkup Enabl emen		17, 000
P05-P50	Encryp	Bkup Enabl emen	0769	23, 000
P05-P60	Encryp	Bkup Enabl emen	0770	29, 000
		Bkup Enabl emen		4, 000
		Bkup Enabl emen		10, 000
P10-P40	Encryp	Bkup Enabl emen	0773	16, 000
P10-P50	Encryp	Bkup Enabl emen	0774	22, 000
P10-P60	Encryp	Bkup Enabl emen	0775	28, 000
P20-P30	Encryp	Bkup Enablemen	0776	6, 000
P20-P40	Encryp	Bkup Enabl emen	0777	12, 000
P20-P50	Encryp	Bkup Enabl emen	0778	18, 000
P20-P60	Encryp	Bkup Enabl emen	0779	24, 000
		Bkup Enabl emen		6, 000
		Bkup Enabl emen		12, 000
P30-P60	Encryp	Bkup Enabl emen	0782	18, 000
		Bkup Enabl emen		6, 000
P40-P60	Encryp	Bkup Enabl emen	0784	12, 000
P50-P60	Encryp	Bkup Enablemen	0785	6, 000
Unanada	Dogonir	nti on	ОТС	
Upgrade	Descrip	001	Feature	OTC
			reacure	010
P05-P10	Encryp	ASP Enablement	0793	\$ 1,000
		ASP Enablement	0794	5, 000
		ASP Enablement	0795	11, 000
		ASP Enablement	0796	17, 000
P05-P50	Encryp	ASP Enablement	0797	23, 000
P05-P60	Encryp	ASP Enablement	0798	29, 000
		ASP Enablement	0799	4, 000
P10-P30	Encryp	ASP Enablement	0800	10, 000
P10-P40	Encryp	ASP Enablement	0801	16, 000
		ASP Enablement	0802	22, 000
P10-P60	Encryp	ASP Enablement	0803	28, 000
P20-P30	Encryp	ASP Enablement	0804	6, 000
		ASP Enablement	0805	12, 000
P20-P50	Encryp	ASP Enablement	0806	18, 000
		ASP Enabl ement	0807	24, 000
		ASP Enabl ement	0808	6, 000
		ASP Enabl ement	0809	12, 000
		ASP Enablement	0810	18, 000
		ASP Enabl ement	0811	6, 000
		ASP Enablement	0812	12, 000
P50-P60	Encryp	ASP Enablement	0813	6, 000

Other chargeable features

	Feature number	ОТС	
Special delivery features			
Expedite Customer Expense	3446	\$30	
Publication features			
i5/0S & Key Media Bkup	8001	85	
i5/OS License (5761-SSA)			

Charge features

Initial order

i 5/0S Li cense			Per Processor	
			Feature	OTC
Per Proc w/1yr	SWMA	515	1453	\$ 2,995
Per Proc w/1yr	SWMA	520	1454	25, 000
Per Proc w/1yr	SWMA	525	1455	8, 995
Per Proc w/1yr	SWMA	550	1456	44, 000
Per Proc w/1yr	SWMA	570	1458	59, 000
Per Proc w/1yr	SWMA	595	1460	59, 000
Per Proc w/1yr	SWMA	MMA	1462	59, 000
Per Proc w/1yr	SWMA	61x	1463	14, 995

i5/OS Application Server (5761-SSB)

Charge features

Initial order

i 5/OS Applicati (5761-SSB)	on Server	Per Pr Featur	ocessor e OTC
Per Proc w/1Yr	SWMA 55	0 0819	\$14,000
Per Proc w/1Yr	SWMA 57	0 0820	19, 000
Per Proc w/1Yr	SWMA 59	5 0821	19, 000
Per Proc w/1Yr	SWMA MN	A 0822	19, 000

i5/OS User Billing (5761-SSC)

Charge features

Initial Order

i5/OS User Billing	Per Usage	
(5761-SSC)	Feature	OTC
5 Users Chrg/HW 515	1464	\$ 0
5 Users 515	1465	1, 250
Unlimited Users 515	1466	18, 750
Unlimited Users Chrg/HW 515	1467	0
10 Users Chrg/HW 525	1468	0
Per 10 Users 525	1469	2, 500
Per 10 Users CBU/Upg 525	1470	1, 000
Unlimited Users 525	1471	50, 000
Unlimit Users CBU/Upg 525	1472	15, 000
Unlimit Users Chrg/HW 525	1473	0
Unlim Ext Access Users 515		3, 995
Unlim Ext Access Users 525	1475	3, 995
Unlimit Collab Users 515	1476	3, 995
Unlimit Collab Users 525	1477	5, 995
10 Users PWR6-61X	1478	2, 500
Unlimit Users PWR6-61X	1479	50, 000
Unlim Ext Access PWR6-61X	1480	3, 995
Unlim Collab User PWR6-61X		5, 995
		ŕ

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