



# Reseller Option Kit for the Microsoft Windows Server 2012 operating system includes Datacenter, Standard, Storage Server, Foundation, and Essentials editions for IBM System x , BladeCenter , and PureFlex System servers

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## At a glance

IBM® is announcing additional IBM OEM licenses of Microsoft™ Windows™ Server products to the IBM Reseller Option Kit (ROK) program for qualifying IBM Distributor participation.

## Overview

IBM is adding IBM OEM licenses of Microsoft Windows Server products to the IBM Reseller Option Kit (ROK) program for qualifying IBM Distributor participation. This addition to the IBM ROK program authorizes qualifying IBM Distributors to buy IBM OEM licenses of selected Windows Server 2012 operating systems for sale to IBM Business Partners (Resellers) for installation on IBM System x® , BladeCenter® , and PureFlex™ System servers.

Distributors can also install the ROK themselves if requested by the Reseller or if they want to act as a Reseller in order to sell IBM System x , BladeCenter , and PureFlex System servers installed with the ROK directly to customers. (If a Distributor wants to act as a Reseller, they must agree and adhere to all the applicable Reseller ROK licensing terms.) This program delivers one-stop shopping and flexibility to our Distributors, allowing them to buy selected Windows Server operating systems and IBM System x , BladeCenter , and PureFlex System servers from one source.

The Windows Server 2012 product line-up has been streamlined and simplified, making it easier for customers to choose the edition that is right for their needs. The Windows Server 2012 product family will now include Windows Server 2012 Essentials (formerly branded as Small Business Server Essentials) which is ideal for a cloud-connected first server. Windows Server Enterprise, Windows Server Web, and Windows Storage Server Enterprise editions will not be offered as Windows Server 2012 editions.

Windows Server 2012 Datacenter and Standard editions will have a consistent licensing model (per processor based + CALs) and each license grants rights to run on up to two processors.

- Differentiation between Datacenter and Standard editions is based on virtualization. (There are no technical controls in software; the Virtual Machine (VM) usage rights are governed via the end user license terms.)
- Windows Server 2012 Standard edition (2 CPU) includes two VMs per license and Windows Server Datacenter edition (2 CPU) includes unlimited VMs. The Datacenter and Standard edition code base and features are identical.
- Windows Server 2012 Standard and Datacenter editions will continue to require Windows Server CALs (Client Access Licenses) for every user or device accessing a server. Some additional or advanced functionality will continue to require the purchase of an additive CAL. These are CALs that you need in addition to the Windows Server CAL to access functionality, such as Remote Desktop Services or Active Directory Rights Management Services.

Windows Storage Server 2012 Standard edition will have a per processor based licensing model (similar to Windows Server 2012 Standard and Datacenter editions), with each license granting the rights to run on up to two processors; however, CALs are not required and unlimited external connections are allowed.

Windows Server 2012 Essentials edition licensing and Windows Server 2012 Foundation edition licensing remain unchanged and have the following licensing model:

- Licensing is server-based: Foundation is for single-processor servers and Essentials is for either one- or two-processor servers.
- CALs are not required for access: Foundation comes with 15 user accounts and Essentials comes with 25 user accounts.

IBM OEM licenses are available for the following Windows Server 2012 operating system editions at a competitive price:

- Microsoft Windows Server 2012 Datacenter edition: For highly virtualized private cloud environments
- Microsoft Windows Server 2012 Standard edition: For non-virtualized or lightly virtualized environments
- Microsoft Windows Storage Server 2012 Standard edition: For Stand-alone NAS (Network Attached Storage), Highly Available NAS, and NAS Gateways
- Microsoft Windows Server 2012 Essentials edition: For small businesses with up to 25 users running on servers with up to two processors
- Microsoft Windows Server 2012 Foundation edition: For small businesses with up to 15 users running on single-processor servers

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## Key prerequisites

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The Reseller Option Kit (ROK) for Microsoft Windows Server Operating Systems has the following prerequisites:

- The ROK must be ordered with or for usage on System x , BladeCenter , and PureFlex System servers.
- The ROK is supported on System x , BladeCenter , and PureFlex System servers.
- The Simplified Chinese and Traditional Chinese media kit contains DVD optical media. It is recommended that an optical DVD drive be configured with the server.
- The Multilingual media kit contains dual-layer DVD optical media. It is recommended that a dual-layer-capable DVD drive be configured with the server.

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## Planned availability date

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September 14, 2012

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## Description

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### **Windows Server 2012 simplified editions**

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The Windows Server 2012 product line-up has been streamlined and simplified, making it easier for customers to choose the edition that is right for their needs. The Windows Server 2012 product family will now include Windows Server 2012 Essentials (formerly branded as Small Business Server Essentials) which is ideal for a cloud-connected first server. Windows Server Enterprise, Windows Server Web, and Windows Storage Server Enterprise editions will not be offered as Windows Server 2012 editions.

Windows Server 2012 Datacenter edition with unlimited virtualization rights provides the benefits of cloud-level scale with predictable, lower costs. Windows Server 2012 Standard edition now offers all of the same enterprise-class features as Datacenter and is differentiated only by virtualization rights.

Now your customers can choose from just five editions of Windows Server 2012, based on the size of their organization and your requirements for virtualization and cloud computing.

- Microsoft Windows Server 2012 Datacenter edition
  - Ideal for highly virtualized private cloud environments
  - Full Windows Server functionality with unlimited virtual instances
  - Processor + CAL licensing model
- Microsoft Windows Server 2012 Standard edition
  - Ideal for low-density or non-virtualized environments
  - Full Windows Server functionality with two virtual instances
  - Processor + CAL licensing model
- Microsoft Windows Storage Server 2012 Standard edition
  - Stand-alone NAS (Network Attached Storage)
  - Highly Available NAS
  - NAS Gateways
- Microsoft Windows Server 2012 Essentials edition
  - Ideal for small business environments
  - Simpler interface, preconfigured connectivity to cloud-based services; no virtualization rights
  - Server licensing model (25 User Account Limit)
- Microsoft Windows Server 2012 Foundation edition
  - Ideal for economical general-purpose server
  - General-purpose server functionality with no virtualization rights
  - Server licensing model (15 User Account Limit)
  - Available only from Microsoft OEMs like IBM

### **Windows Server 2012 increased scalability and performance**

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Windows Server 2012 has increased scalability and performance over Windows Server 2008 R2. Following are the Windows Server 2012 maximum system resource numbers:

- Host
  - 320 logical processors on hardware
  - 4 TB physical memory
  - 2,040 virtual processors per host

- Virtual machine
  - 64 virtual processors per VM
  - 1 TB memory per virtual machine
  - 1,024 active virtual machines
- Cluster
  - 64 nodes
  - 4,000 virtual machines

## **Windows Server 2012 business value features**

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### ***Server manager:***

Simplified, single-UI management of multiple servers.

The expanded capabilities of Server Manager in Windows Server 2012 can help facilitate multiserver tasks such as remote role and feature deployment to both physical and virtual servers and custom server group creation.

IT professionals can provision servers and offline virtual hard disks from their desktops without requiring physical access to the system or Remote Desktop Protocol connections to each server. Administrators can manage groups of servers collectively from within a single, integrated console, which enables them to respond to business-critical problems with greater speed and agility.

Capabilities provided by the new Server Manager include:

- Multiserver experience
- Efficient deployment of workloads to remote servers and offline virtual hard disks
- Installing roles and features on a remote server/offline virtual hard disk
- Streamlined server configuration and deployment
- Batch deployment
- Integration with other management tools

### ***Storage spaces:***

New virtualized storage by turning commodity hardware into virtual storage.

Storage Spaces is a storage virtualization technology which succeeds Logical Disk Manager and allows the organization of physical disks into logical volumes similar to Logical Volume Manager ( Linux<sup>™</sup> ), RAID1 or RAID5, but on a higher level.

A storage space will behave like a physical disk to the user, with thin provisioning of available disk space. The spaces are organized within a storage pool (a collection of physical disks), which can span multiple disks of different sizes and different interfaces (USB, SATA, SAS). The process of adding new disks or replacing failed or older disks is fully automatic, but can be controlled with PowerShell commands. The same storage pool can host multiple storage spaces. Storage spaces have built-in resiliency from disk failures, which is achieved by either mirroring or striping with parity across the physical disks. Each storage pool on the ReFS filesystem is limited to 4 PB (4096 TB), but there are no limits on the total number of storage pools or the number of storage spaces within a pool.

- Storage Spaces technology automatically restores data redundancy if a disk fails.
- Ability to thin-provision storage.
- You can use PowerShell to manage storage spaces.

### ***Storage live migration:***

More VHDs with minimal downtime risk and cost.

Hyper-V live migration moves running virtual machines from one physical server to another with no impact on virtual machine availability to users. By pre-copying the memory of the migrating virtual machine to the destination server, live migration minimizes the transfer time of the virtual machine. A live migration is deterministic, which means that the administrator, or script, that initiates the live migration determines which computer is used as the destination for the live migration. The guest operating system of the migrating virtual machine is not aware that the migration is happening, so no special configuration for the guest operating system is needed.

***Expanded device support:***

More choice across a variety of devices.

Access to a centralized desktop is enabled from the following types of devices: PCs, laptops, mobile tablets, (RemoteFX-based), and thin clients (support for additional client devices is provided by Microsoft partners like Citrix).

***Simplified DirectAccess:***

Easy deployment and use of remote access capabilities.

DirectAccess allows remote users to securely access enterprise shares, websites, and applications without connecting to a virtual private network (VPN). DirectAccess establishes bi-directional connectivity with a user's enterprise network every time a user's DirectAccess-enabled portable computer connects to the Internet, even before the user logs on. Users never have to think about connecting to the enterprise network and IT administrators can manage remote computers outside the office, even when the computers are not connected to the VPN.

***Load Balance Failover (LBFO):***

Higher throughput and reliability through failover.

***BranchCache:***

Simplified deployment and performance.

BranchCache simplifies the deployment by removing the need for having a certificate on the hosted cache. It improves performance by reducing the average block size of the cache, and allows the administrator to configure a set of servers to work together to act like a single hosted cache. In addition, BranchCache can be managed and configured using known tools like WMI and PowerShell; this allows third-party management solutions to extend the solution using standardized tools.

***PowerShell templates:***

Simplified, consistent scripting and configuration.

Windows PowerShell 3.0 provides a comprehensive platform to help you manage server roles and automate management tasks. Sessions to remote servers are resilient and can withstand various types of interruptions. In addition, learning Windows PowerShell is now easier than ever through improved cmdlet discovery and simplified, consistent syntax across all cmdlets.

Capabilities provided by Windows PowerShell 3.0 include:

- Robust session connectivity
- Disconnected sessions
- Job scheduling
- New Windows PowerShell ISE features
- Windows PowerShell workflows
- Syntax simplification

- Script sharing
- Windows PowerShell Web Access
- Updatable help
- RunAs capability
- Default parameter values
- New cmdlets

***Network virtualization:***

Flexibility to place VMs anywhere, whether on-premise or hosted.

Any VM can be placed on any node irrespective of the IP address, and multiple VMs can have their own IP addresses. This makes the transition to hosters' private clouds easier for customers with existing on-premise VMs/physical servers.

***Windows NIC teaming:***

Improved network availability, performance, and load balancing.

Network adapter teaming, also known as LBFO, allows multiple network adapters on a computer to be placed into a team for the following purposes:

- Bandwidth aggregation
- Traffic failover to prevent connectivity loss in the event of a network component failure

***De-duplication:***

Reduce storage capacity requirements by only storing unique data blocks.

De-duplication is an in-box feature that delivers capacity optimization, scale and performance, reliability, and data integrity at no additional cost.

**Product positioning**

***Distributor and Reseller benefits***

- Great pricing: Take advantage of a great price to lower your product acquisition costs and increase margins.
- Convenience and flexibility: Enjoy convenience in ordering and stock flexibility.
- Add-on sales: Sell Software Assurance within 90 days and get more opportunities to sell value-added services.

***Client benefits***

- Price advantage: Buying the System x , BladeCenter , and PureFlex System server and Windows operating system together with the ROK offers your customers better pricing than buying them separately.
- Convenient deployment: Ordering the ROK through a System x , BladeCenter , and PureFlex System server Reseller is the fastest and easiest way for your customers to deploy server software.
- Easy ordering: Ordering Microsoft Windows Server 2012 ROK together with the System x , BladeCenter , and PureFlex System server offers your customers simple, one-stop shopping convenience.

***Windows Server 2012: benefits of upgrading***

Windows Server 2012 benefits that impact the day-to-day IT operations of a company and the benefits of upgrading:

- Simplified management: By upgrading to Windows Server 2012 your customers will experience an integrated, highly available, and easy to manage multi-server platform with breakthrough efficiency and ubiquitous automation.

- Affordable storage: Reduce storage costs by using SMB based file storage instead of SAN storage. For pooled virtual machine deployment, storage requirements can be lowered for a set of users by using a combination of SMB and local DAS.
- Continuous availability: Cost-effective, highest IT service uptime is designed to protect against a wide range of failure scenarios and help both prevent downtime and speed recovery when needed.

### **Windows Server 2012: Advantages of virtualizing of infrastructure**

- Manage multiple servers across cloud and on-premise: Windows Server 2012 is a scalable and elastic server platform that gives you the flexibility to build and deploy applications and websites on your own servers, in the cloud and in a hybrid environment using a consistent set of tools and frameworks.
- Affordable storage for VMs: Cost efficiency is provided by leveraging commodity storage, networking and server infrastructure, as well as increased power efficiency for superior acquisition and operating economics of the platform.
- Access almost anywhere, any device: Seamless, on-demand access to a virtualized work environment from virtually anywhere, including branch locations and public connectivity services, all while maintaining enhanced data security and compliance.

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## **Program number**

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Program number	V.R.M	Program name
5731-WRC	1.0.0	windows Server 2012 R0K

### **Business Partner information**

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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).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=212-317>

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## **Offering Information**

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Product information is available via the Offering Information website

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

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## **Publications**

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No hardcopy publications from IBM are shipped with this program.

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## **Technical information**

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### **Specified operating environment**

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#### **Hardware requirements**

Supported eServer™ xSeries®, System x , BladeCenter , or PureFlex System servers.

For the most up-to-date information regarding compatibility, visit

<http://www-03.ibm.com/servers/eserver/serverproven/compat/us/>

## **Software requirements**

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.

## **Planning information**

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**Solution Provider's responsibilities:** Responsibilities assigned to the customer will be assumed by the Solution Providers for their end users, where appropriate.

## **Packaging**

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

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## **Software Services**

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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/>

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## **Ordering information**

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### **Charge metric**

Program name	PID number	Charge metric
Windows Server 2012 ROK	5731-WRC	Per 1 Processor Server Per 2 Processor Server

### **Program delivery**

License orders for the program numbers associated with the operating systems in this announcement can only be placed using the appropriate CSEO number. The operating systems in this announcement cannot be configured at time of order. Contractually authorized IBM Business Partners (Resellers) that order and take delivery of any of these offerings must ship the operating system preinstalled on an eligible hardware system unit to the client. Additionally, the operating systems in this announcement are NOT ELIGIBLE for return by the Distributor except under the terms of the IBM ROK Distributor agreement.

Billing for the operating system will occur against the CSEO number for the licensed program order number contained in this announcement.

To order the programs described in this announcement, specify the appropriate CSEO number from the table below with the corresponding machine type model number, order type description, one-time charge (OTC) feature number, and supply feature number.

Feature description	OTC feature number	Lang feat number	Supply feat number	CSEO number
5731-WRC Windows Server 2012 ROK Standard Per 2 Processor Server English	0651	2924	5809	00Y6264
Datacenter Per 2 Processor Server English	0653	2924	5819	00Y6283
Foundation Per 1 Processor Server English	0655	2924	5829	00Y6245
Storage Server Per 2 Processor Server English	0652	2924	5839	00Y6302
Standard Add'l License Per 2 Processor Server	0654	2924	5849	00Y6321
Datacenter Add'l License Per 2 Processor Server	0656	2924	5859	00Y6325
StorageSrv Add'l License Per 2 Processor Server	0650	2924	5869	00Y6329

### **Customization options**

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Select the appropriate feature numbers to customize your order with delivery options desired. These features can be specified on the initial or MES orders.

#### ***Expedite shipments***

Feature	Description
3445	Expedite

Expedite shipments will be processed to receive 72-hour delivery from the time IBM Software Delivery and Fulfillment (SDF) receives the order.

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### **Terms and conditions**

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

#### ***Licensing***

Supplier's license terms apply.

#### ***Limited warranty***

Not warranted by IBM . Warranty, if any, provided by supplier.

#### ***Volume orders***

Not applicable

#### ***Educational allowance***

Yes. 15% to qualified educational institutions.

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## Statement of good security practices

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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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## Prices

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For current prices, contact IBM at 888-Shop-IBM (746-7426) or visit

<http://www-03.ibm.com/systems/x/>

To locate the web price, search on the feature number in the Search field.

Feature description	OTC feature number
5731-WRC Windows Server 2012 ROK Standard Per 2 Processor Server English	0651
Datacenter Per 2 Processor Server English	0653
Foundation Per 1 Processor Server English	0655
Storage Server Per 2 Processor Server English	0652
Standard Add'l License Per 2 Processor Server	0654
Datacenter Add'l License Per 2 Processor Server	0656
StorageSrv Add'l License Per 2 Processor Server	0650

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## IBM Global Financing

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