



# Windows Server 2012 R2 Preview The Essentials Experience

Product Overview





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# Meeting Business Needs

## The small business challenge

Today's small business owners face daily challenges in running their businesses, and one of the more difficult challenges can include managing an IT infrastructure. However, the primary focus for most business owners is on their core business competencies, not on becoming technology experts. Because investments in technology directly impact the bottom line, there is a constant need to achieve real business benefits and mitigate costs against a backdrop of time pressures and limited technical skills. In addition to this pressure, many small businesses are now looking toward cloud services and what they may offer—which can add even more apprehension in adopting new technology.

Windows Server 2012 R2 Essentials is designed to help small businesses operate at the same technology level as much larger organizations, without the added costs and complexities of managing a complicated IT infrastructure. Windows Server 2012 R2 Essentials also provides a high degree of flexibility and choice that enables small businesses to leverage a combination of cloud-based or traditional on-premises applications and services.

There are three primary capability areas of Windows Server 2012 R2 Essentials that meet many of the most pressing needs of small businesses: 1) helping protect your data, 2) providing secure remote access, and 3) integrating cloud services. In addition, there are two key new deployment options available. The first is the ability to run as a Hyper-V host for the purposes of running Windows Server 2012 R2 Essentials as a virtual machine—it is no longer necessary to obtain Hyper-V separately. The second is the implementation of the Windows Server Essentials feature set as a role in the Standard and Datacenter editions of Windows Server. We'll take a closer look at these new capabilities in the sections below.

# Windows Server 2012 R2 Essentials

Windows Server 2012 R2 Essentials is the latest version of Windows Server that is designed for small and medium businesses. It enables cross-premise functionality, providing small businesses with on-premises file and print, security, backup, remote access, and identity management services, combined with optional off-premise services.

## A cloud-enabled solution for small business

Windows Server 2012 R2 Essentials incorporates best-of-breed capabilities to deliver a server environment well suited for the vast majority of small businesses, including:

- **Protect your data:** Windows Server 2012 R2 Essentials leverages several new features available in Windows Server 2012 R2 to provide greatly improved data protection capabilities. The new Storage Spaces (<http://technet.microsoft.com/en-us/library/hh831739.aspx>) feature allows you to aggregate the physical storage capacity of disparate hard drives, dynamically add hard drives, and to create data volumes with specified levels of resilience. Windows Server 2012 R2 Essentials can perform complete system backups and bare-metal restores of the server itself as well as the client computers connected to the network—now with support for volumes larger than 2 terabytes. The Windows Azure Backup service (<http://technet.microsoft.com/en-us/library/hh831419.aspx>) can also be used to protect your Windows Server files and folders in a cloud-based storage service that is managed by Microsoft. Windows Server 2012 R2 Essentials also centrally manages and configures the new File History feature of Windows 8 and Windows 8.1 clients, helping users to recover from accidentally deleted or overwritten files without requiring administrator assistance.
- **Provide secure remote access:** Remote Web Access provides a stream-lined, touch-friendly browser experience for accessing applications and data from virtually anywhere you have an Internet connection and using almost any device. Windows Server 2012 R2 Essentials also provides an updated Windows Phone app and a new modern app for Windows 8 and Windows 8.1 clients, allowing users to intuitively connect to, search across, and access files and folders on the server; files are also automatically cached for offline access and synchronized when a connection to the server becomes available. Windows Server 2012 R2 Essentials turns setting up virtual private networking (VPN) into a painless wizard-driven process of just a few clicks, and simplifies the management of VPN access for users. Client computers can leverage a VPN connection to remotely join the Windows Server 2012 R2 Essentials environment without the need to come into the office.
- **Integrate cloud services:** Windows Server 2012 R2 Essentials has been designed to allow customers the flexibility to choose which applications and services run on-premises and which run in the cloud. In previous versions, Windows Small Business Server Standard included Exchange Server as a component product, which added expense and complexity for customers who wished

to leverage cloud-based messaging and collaboration services. With Windows Server 2012 R2 Essentials, customers can take advantage of the same type of integrated management experience whether they choose to run an on-premises copy of Exchange Server, subscribe to a hosted Exchange service, or subscribe to Office 365.

- **Health monitoring:** Windows Server 2012 R2 Essentials monitors its own health status and the status of client computers running Windows 7, Windows 8, Windows 8.1, and Mac OS X version 10.5 and above. Health status notifies you of issues or problems related to computer backups, server storage, low disk space, and more. Health reports can be automatically generated on a scheduled basis and emailed directly to local administrators or external partners.
- **Extensibility:** Windows Server 2012 R2 Essentials builds on the extensibility model of Windows SBS 2011 Essentials, which allows other software vendors to add capabilities and features to the core product, and adds a new set of Web Services APIs. It also maintains compatibility with the existing [software development kit](#) (SDK) and [add-Ins](#) created for Windows SBS 2011 Essentials.

## Protect Your Data

Windows Server 2012 R2 Essentials automatically backs up your client computers to the server and can help you easily restore the entire computer or individual files and folders from its backup. This solution uses an innovative method to back up only the data that has not already been backed up before. Even if you have several copies of the same data on different computers, the data is backed up only once on your server, and your server keeps track of what data was stored on each computer on each day. Backups complete quickly and efficiently, and use less space on your server.

**Automated daily backup and Windows 8 and 8.1 File History support.** Computer backups are automatically configured when you install the Windows Server 2012 R2 Essentials Connector software on your client computers. Backup is performed on a daily basis for every configured computer. You can customize the schedule for when backups occur as well as the retention policy for backup data. Windows Server 2012 R2 Essentials also centrally manages and configures the new File History feature of Windows 8 and Windows 8.1 clients, helping users to recover from accidentally deleted or overwritten files without requiring administrator assistance.

**Restore an entire computer.** Restoring a computer from a backup is easy. If you want to restore your computer to a previous point in time, you boot the computer from the Computer Restore CD. The computer connects to your server, which provides a simple wizard for restoring a single hard drive or multiple hard drives from a backup of that computer that is stored on your server.

**Restore individual files and folders.** Windows Server 2012 R2 Essentials can help you restore individual files or folders by selecting a computer and a specific backup of that computer from the Dashboard. The Restore Wizard initiates and displays the files and folders that were backed up for that computer on that day. You can easily select individual files or entire folders from this Restore Window and then restore them to any location on your computer.

**Server backup and restore.** Windows Server 2012 R2 Essentials makes it easy to back up your data. You can add a hard disk drive to the server, either internally or externally, and designate it as a backup destination as opposed to server storage. Windows Server 2012 R2 Essentials will then use this drive to back up all the data stored on the server, including both the operating system files and your business

data. Using multiple external drives provides for improved business continuity, making it easy to rotate your backup data offsite to maximize its availability for restoring the server in case of theft, fire, flood, or other disasters. Also, the Windows Azure Backup service (<http://technet.microsoft.com/en-us/library/hh831419.aspx>) can optionally be used to protect files and folders in a cloud-based storage service that is managed by Microsoft.

**Storage Spaces.** Leveraging the new Storage Spaces features of Windows Server 2012 R2 enables you to create flexible, low-cost, resilient, and dynamically expandable data volumes. Storage Spaces includes the following features:

- **Storage pools.** Storage pools are the fundamental building blocks for Storage Spaces. You can flexibly create storage pools based on the needs of your deployment. For example, given a set of physical disks, you can create one pool (by using all the available physical disks) or multiple pools (by dividing the physical disks as required). Furthermore, to maximize the value from storage hardware, you can map a storage pool to combinations of hard disks as well as solid-state drives (SSDs). Pools can be expanded dynamically by simply adding additional drives, thereby seamlessly scaling to cope with data growth.
- **Resilient storage.** Storage Spaces support two optional resiliency modes: mirroring and parity. Per-pool support for disks that are reserved for replacing failed disks (hot spares), background scrubbing, and intelligent error correction allow continuous service availability despite storage component failures.
- **Thin provisioning.** Storage Spaces support thin provisioning, which allows the creation of virtual disks which are larger than the underlying storage pool's physical capacity. As the data stored on the virtual disk reaches the size of the physical capacity, additional drives can be dynamically added to the storage pool without impacting the virtual disk or any data volumes active on it.

**Computer backup archiving.** If you are replacing an old computer with a new computer and you'd like to keep the old computer's backups, Windows Server 2012 R2 Essentials provides an archiving feature. When removing the Windows Small Business Server Connector software from the old PC, you will be asked if you'd like to keep the backups for this computer on the server. Computers that are archived are not part of the 25 device limit.

## Provide Secure Remote Access

Remote Web Access<sup>1</sup> is a dynamically updated website that uses encrypted connections to provide a single, simple, secure and consolidated entry point into a small business network. It provides a streamlined, touch-friendly browser experience for accessing applications and data from virtually anywhere you have an Internet connection and using almost any device. Authorized users can connect to Remote Web Access using any Internet-connected computer or mobile device with a supported browser. Compared to

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<sup>1</sup> Use of the Remote Web Access feature may require additional services from your broadband provider, such as access to certain "ports" that some providers may block for customers on some service plans. Contact your broadband provider if you have questions about their services or service terms.



the remote access feature in older versions of Windows Small Business Server, Remote Web Access has a higher degree of extensibility in the software development kit (SDK), allowing for more customization, gadgets, add-in extensions, mobile rendering and an improved shared folder experience.

**Remote access to Shared Folders.** Users can download files and folders, and upload one or more files to the shared folders on their server while away from the network. Users can also search through the Shared Folders to locate a specific file or files. Providing easy remote access to files encourages users to keep data stored on the server where only authorized users have access and the data is protected.

**Remote access to computers.** Connect remotely to the computers in your network and run applications as if you were sitting in front of your computer. To connect to one of your computers, on the **Computers** tab, simply click the **Connect** button next to the computer. You can only connect to a computer that is **Available** for connection and that is running one of the following operating systems:

- Windows 8.1 Pro, Windows 8.1 Enterprise
- Windows 8 Pro, Windows 8 Enterprise
- Windows 7 Ultimate, Windows 7 Enterprise, Windows 7 Professional

**Remotely connect to the Windows Server 2012 R2 Essentials Dashboard.** If the need arises, you can access the Windows Server 2012 R2 Essentials Dashboard while working remotely to add new users, add new shared folders, check the health of your network, or perform other administrative tasks.

**Expanded device support.** Windows Server 2012 R2 Essentials also provides an updated Windows Phone app and a new app for Windows 8 and 8.1 clients, allowing users to intuitively connect to, search across, and access files and folders on the server; files are also automatically cached for offline access and synchronized when a connection to the server becomes available.

**Remote Domain Join.** Windows Server 2012 R2 Essentials turns setting up virtual private networking (VPN) into a painless wizard-driven process of just a few clicks, and simplifies the management of VPN access for users. Client computers can leverage a VPN connection to remotely join the Windows Server 2012 R2 Essentials environment without the need to come into the office.

## Integrate Cloud Services

Windows Server 2012 R2 Essentials has been designed to allow customers the flexibility to choose which applications and services run on-premises and which run in the cloud. In previous versions, Windows Small Business Server Standard included Exchange Server as a component product, which added expense and complexity for customers who wished to leverage cloud-based messaging and collaboration services. With Windows Server 2012 R2 Essentials, customers can take advantage of the same type of integrated management experience whether they choose to run an on-premises copy of Exchange Server, subscribe to a hosted Exchange service, or subscribe to Office 365.

**Messaging and collaboration with Office 365.** Office 365 is an online subscription service that provides email, shared calendars, the ability to create and edit documents online, instant messaging, web conferencing, a public website for your business, and internal team sites—all accessible from virtually anywhere from nearly any device. Windows Server 2012 R2 Essentials includes an integration module that can be used to easily manage your user accounts across both the local Windows Server 2012 R2 Essentials and online Office 365 environments from within the Dashboard. In addition, customers with Office 2010 installed on their client computers can quickly configure it to work with Office 365. Users can then easily

retrieve, edit and save Office docs in the Office 365 cloud, co-author docs in real-time with others, quickly initiate PC-to-PC calls, instant messages and web conferences with others.

**Hosted Exchange.** Many small businesses have taken advantage of cloud-based messaging services based on hosted Exchange offerings. Windows Server 2012 R2 Essentials will provide a framework that service providers can easily build a custom add-in on top of to work with their specific hosted Exchange environment. This will allow you to manage your user accounts across both the local Windows Server 2012 R2 Essentials and hosted Exchange environments from within the Dashboard.

**On-premises Exchange Server.** Microsoft Exchange Server is a flexible and reliable messaging platform that millions of users rely on every day to stay connected and be productive. While no longer a core product component in Windows Server 2012 R2 Essentials, Exchange Server running on a separate server remains a fully supported choice for providing your small business with email services. As with Office 365, an integration module can be used to easily manage your user accounts across both the Windows Server 2012 R2 Essentials and Exchange Server from within the Dashboard.

**Other cloud-based applications and services.** Messaging and collaboration are two of the first cloud-based services that many small businesses embrace, but a variety of other applications and services are available as well. Windows Server 2012 R2 Essentials and its rich extensibility model allows you to cloud-enable your IT and take advantage of a growing number of online offerings from Microsoft and other third parties to boost your productivity. Microsoft Dynamics CRM Online, Windows Azure, and Windows Intune are just a few examples.

## The Dashboard and Launchpad

The Dashboard is the command and control center for Windows Server 2012 R2 Essentials, while the Launchpad is a quick jumping-off point that runs on client computers. Redesigned with a streamlined look and feel and enhanced with improved functionality, the Dashboard is used to perform all the management and maintenance tasks you need to control how your server behaves on your network, including who can access it, what information can be stored and retrieved, how it is organized, protected, and made available remotely. The Dashboard itself can be accessed remotely by users who have appropriate permissions.

The Dashboard is organized around tasks, with different activities presented on different tabs. Each tab in the Dashboard contains specific action items, giving you better control, while still making changes simple to understand and perform.

- The redesigned **Home** tab has been enhanced to quickly and easily expose a broader set of administrative actions. It provides shortcuts to tasks for setting up and managing the server environment, for connecting to various messaging services (either cloud-based or on-premises), for installing Add-ins that extend the functionality of your server, for getting a quick snapshot of the server's status, and for locating and accessing help and support resources.
- The **Users** tab allows you to add and manage up to 25 user accounts. Several actions can be performed on individual user accounts, such as changing the shared folders they have access to and defining what level of remote access they have. Other tasks are used to manage all user accounts, such as defining a password policy.

- The **Devices** tab allows you to view the health and backup status of computers on the network, as well as configure backups for the server and client computers. You can also apply group policies to Windows 7 and Windows 8 client computers to help make them more secure.
- The **Storage** tab allows you to manage the server's shared folders and physical hard drives. The **Server Folders** sub-tab is used to create, modify, remove, and relocate shared folders. The **Hard Drives** sub-tab is used to view, add, and remove hard drives, as well as to manage Storage Spaces, which allows you to aggregate the physical storage capacity of disparate hard drives, dynamically add hard drives, and to create data volumes with specified levels of resilience.
- The **Applications** tab allows you to discover and manage Add-ins which can be used to extend the function of Windows Server 2012 R2 Essentials. The **Add-ins** sub-tab is used to view, manage, and remove software components developed by Microsoft and other third parties. The **Microsoft Pinpoint** sub-tab dynamically queries the Microsoft Pinpoint web site to display a list of highly-rated applications and other solutions that help solve specific business needs.
- The Dashboard also provides links to:
  - **Alerts**, which opens the Alert Center to show any active error, warning, or informational messages.
  - **Settings**, which can be used to configure the server's date and time, the Windows Update properties, media streaming properties, and Anywhere Access settings, including the configuration of Remote Web Access properties.
  - **Help**, which displays product information.

**Easy client setup.** For each computer you want to fully participate in your network, the Connector software can be installed from a web browser interface, which enables it to be run either locally or from a remote location outside of your office network. The client setup installs the Launchpad, which runs on each client PC in your network and provides a simple way to access Shared Folders, initiate a backup, connect to your Remote Web Access page, open the Dashboard, and interact with any installed Add-ins which provide client-side extensions.

## New Deployment Options

In addition to the feature improvements which are available with Windows Server 2012 R2 Essentials, there are two new deployment options that can greatly expand the ways in which the product and its features can be leveraged.

**The Windows Server Essentials Experience role.** The value-added features which were previously only found in the Essentials edition of Windows Server have been encapsulated into a new server role, the Windows Server Essentials Experience (WSEE). This role is now available with the Standard and Datacenter editions of Windows Server. The greatly increases the deployment scenarios that can now take advantage of these features, including in larger organizations and those with branch locations. When deploying the role on Standard or Datacenter, the server is able to join a pre-existing Active Directory environment for more scalable management. Also, because Standard and Datacenter utilize the Windows Server Client Access License (CAL) model, it is possible to have more than 25 users with access to the Essentials feature set. It is also possible to have more than one Standard or Datacenter server in your network with the

WSEE role turn on; for example, this could be done to increase the scalability of client PC backups for your environment.

**Windows Server 2012 R2 Essentials as its own Hyper-V host.** With previous versions of the Windows Server Essentials edition, it was necessary to obtain a hypervisor separately in order to run as a virtual machine—options included the free Microsoft Hyper-V Server or using Windows Server Standard edition to run Hyper-V. With Windows Server 2012 R2 Essentials, the product licensing terms have been expanded to enable you to run one operating system instance on the physical server in order to run Hyper-V, plus a second instance on that server in order to run Essentials as a virtual machine. Installation wizards have also been created to simplify the process of deploying as a virtual machine by automating the steps necessary to set up and configure the host server environment. This makes it easier than ever before to take advantage of Hyper-V and its features, such as Live Migration and Hyper-V Replica.

## Extensibility and Add-ins

Windows Server 2012 R2 Essentials is based on Windows Server 2012 R2 and is designed to be a platform upon which other solutions can be developed and run. The Software Development Kit (SDK) provides a robust environment for creating Add-ins which can be used to extend the core functionality of the server. A new set of Web Service APIs have been added to provide even more extensibility options. Some of the SDK capabilities include:

- Dashboard Extensibility
  - Add Dashboard Tab
    - High level tabs can optionally contain sub tabs
  - List View and Custom Tabs / Sub tabs can be created
  - Default Tabs are extensible with sub tabs, tasks, columns, and details
  - Extensible Home page allows adding common tasks and community links
- Launchpad Extensibility
  - Add categories and tasks to the Launchpad
- Remote Web Access site extensibility
  - You can add your own online services link and create new items in the menu bar
- Cloud Service Interoperability
  - Samples, guidance and tools are provided to build cloud service interoperability
- A new framework called the “Provider Framework” is an architectural layer that performs all the business data processing and holds state for each feature.
- An expanded collection of Web Service APIs to allow communication and interaction between remote devices and PCs and the server over an authenticated, encrypted Internet connection
- Samples and templates are included to help add-in developers
- A helpful “How-to” section provides walkthroughs of several common extensibility scenarios

**Large Ecosystem of Software and Hardware Partners.** Microsoft has partners throughout the world that have built and are continuing to build new software and hardware solutions that work with Microsoft Windows software. As these partners become familiar with Windows Server 2012 R2 Essentials, we will see solutions delivered that will enhance the core features and functionality of your server.

# The Windows Server Solution for SMB

Technology has always promised to solve problems, not create them. Windows Server 2012 R2 Essentials and the Windows Server Essentials Experience role deliver on that promise by simplifying business technology, providing easier setup, installation, and migration experiences, a simplified management experience, and better network-wide security features for the small business customer. It incorporates the latest Microsoft technologies for management, networking, data storage and backup, security, and document and printer sharing. Windows Server Essentials provides integration capabilities for cloud-based applications and services, allowing small business customers the flexibility to choose the best environment for their line-of-business and collaboration solutions.

Windows Server 2012 R2 Essentials allows small businesses to retain core infrastructure and security features on their local networks, and also includes technologies to enable robust integration with cloud-based services. This allows end-users to work in ways that are familiar to them, while at the same time making it easier for small businesses to take advantage of the growing set of offerings available in the cloud through platforms such as Microsoft Office 365 and Windows Azure.

Working with Microsoft Partners is also a great way to reduce complexity for businesses. Windows Server 2012 R2 Essentials makes it easier for partners to deliver value to customers through simplified installation, administration and mitigated costs.

# Next Steps

For more information on Windows Server 2012 R2 Essentials, as well as the rest of the Windows Server family, please visit:

- Refer to additional Windows Server 2012 R2 resources  
<http://www.microsoft.com/en-us/server-cloud/windows-server/windows-server-2012-r2.aspx> and  
<http://www.microsoft.com/en-us/server-cloud/windows-server-essentials/windows-server-2012-r2-essentials.aspx>
- Windows Server 2012 R2 on TechNet  
<http://www.microsoft.com/technet>
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