Microsoft

Cloud optimize your business

with Windows Server 2012 R2

Windows Server 2012 R2 offers businesses an enterprise-class, multi-tenant datacenter and cloud infrastructure that simplifies the deployment of IT services. With Windows Server 2012 R2, you can achieve affordable, multi-node business continuity scenarios with high service uptime and at-scale disaster recovery.

As an open application and web platform, Windows Server 2012 R2 helps you build, deploy, and scale modern applications and high-density websites for the datacenter and the cloud.

Windows Server 2012 R2 also enables IT to empower users by providing them with flexible, policy-based resources while protecting corporate information.

Whether your company is a large enterprise, a service provider, or a small or medium-sized business, Windows Server 2012 R2 can help you cloud optimize your business.

With the world of information technology (IT) changing rapidly, traditional approaches to solving infrastructure problems are inadequate. The Microsoft vision for this new era of IT is to provide one consistent platform for infrastructure, apps, and data: the Cloud OS. The Cloud OS spans customer datacenters, service provider datacenters, and the Microsoft public cloud. At the heart of the solution is Windows Server 2012 R2. With Windows Server 2012 R2, you gain an enterprise-grade platform to cost-effectively cloud optimize your business.

Enterprise-class datacenter and cloud platform

Simply implementing a virtualized solution within your infrastructure is not enough to provide the agility today's IT challenges require. Windows Server 2012 R2 changes the virtualization equation by enabling you to deploy and manage a multi-tenant cloud infrastructure within a flexible IT environment that adapts to your changing business needs.

New and enhanced features in Windows Server 2012 R2 empower you to efficiently utilize the capacity of your datacenter, while delivering best-in-class performance for your Microsoft workloads. Access to corporate resources such as workloads, storage, and networks help increase the agility of your business while protecting corporate information.

Offering a proven, enterprise-class cloud and datacenter platform, Windows Server 2012 R2 can easily scale to continuously run the largest workloads with support for up to 64 processors and 1 terabyte of memory for Hyper-V guests, and VHDX virtual hard disks up to 64 terabytes. In addition, powerful availability features protect against service outages. And with automated protection and recovery for cost-effective business continuity on-premises and across clouds, you can improve your workload SLAs while reducing downtime risks.

To help you protect your investments in existing cross-platform technologies, Windows Server 2012 R2 also offers expanded support for a heterogeneous datacenter, including rich Linux support.

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Simple and cost effective

Windows Server 2012 R2 enables you to blend your on-premises solutions with the cloud without having to re-engineer infrastructure, systems management, or applications.

System	Resource	Maximum number		Improvement factor
		Windows 2008 R2	Windows Server 2012 R2	
Host	Logical processors on hardware	64	**320**	5×
	Physical memory	1 TB	**4 TB**	4×
	Virtual processors per host	512	**2,048**	4×
Virtual machine	Virtual processors per virtual machine	4	**64**	16×
	Memory per virtual machine	64 GB	**1 TB**	16×
	Virtual disk capacity	2 TB	**64 TB**	32x
	Active virtual machines	384	**1,024**	2.7×
Cluster	Nodes	16	**64**	4×
	Virtual machines	1,000	**8,000**	8×

Windows Server 2012 R2 offers industry-leading scalability for server virtualization.

With Windows Server 2012 R2, you can achieve enterprise-class storage for a wide range of workloads at a fraction of the cost of standalone storage solutions. Scale-out file-based storage clusters, virtual storage pooling, and automatic tiering deliver high-performance storage and availability coupled with efficient capacity utilization using industry-standard hardware.

In addition, features such as increased virtual machine density and improved virtual machine performance help you grow your capacity at a lower cost than premium-priced converged infrastructure solutions. And with Hyper-V Network Virtualization, the Hyper-V Extensible Switch, and a multi-tenant edge gateway built-in, Windows Server 2012 R2 offers a seamless and cost-effective software-defined networking solution in-box.

Application focused

Windows Server 2012 R2 enables you to build and deploy applications in your datacenter that utilize higher-level, cloud-based application services and APIs that are compatible with service provider clouds and Windows Azure. This functionality provides improved application portability between on-premises, public, and partner hosted clouds, increasing the flexibility and elasticity of your IT services.

Windows Server 2012 R2 also provides frameworks, services, and tools to increase scalability and elasticity for multi-tenant aware applications and websites. Features such as NUMA-aware scalability, centralized SSL certificate support, and application initialization help improve site density, site scalability, and performance.

The best platform for the .NET framework, Windows Server 2012 R2 also offers enhanced support for open frameworks, open source applications, and various development languages.

User centric

Windows Server 2012 R2 empowers end users by helping provide them access to information and data regardless of the infrastructure, network, device, or application. Your IT staff can provide consistent access to corporate resources by managing and federating user identities and credentials across the organization and into the cloud, while providing secure, always-available access to your corporate network. Windows Server 2012 R2 also makes it easier to deploy a virtual desktop infrastructure (VDI) and lowers costs by supporting a range of storage options and storage de-duplication for VDI.

In addition, Windows Server 2012 R2 helps you better protect information and manage risk by validating user identities, verifying their devices, and taking advantage of data classification.

Windows Server 2012 R2 editions

- **Windows Server 2012 R2 Datacenter:** for highly virtualized datacenter and cloud environments.
- **Windows Server 2012 R2 Standard:** for physical or minimally virtualized environments.
- **Windows Server 2012 R2 Essentials:** for small businesses with up to 25 users and 50 devices.

Find out more

For more information about Windows Server 2012 R2, visit http://www.microsoft.com/en-us/server-cloud/products/windows-server-2012-r2

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