

Windows Server 2019 Licensing Guide

Licensing Windows Server 2019

The operating system that bridges on-premises and Azure services

Overview of Windows Server 2019

Windows Server 2019 is the operating system that bridges on-premises environments with Azure services, enabling hybrid scenarios that maximize existing investments. Increase security and reduce business risk with multiple layers of protection built into the operating system. Evolve your datacenter infrastructure to achieve greater efficiency and scale with Hyper-converged Infrastructure. Enable developers and IT pros to create cloud native applications and modernize their traditional apps using containers and micro-services.

| | | | |
|---------------------------------------|-------------------------------|------------------------------------|-------------------------------|
| Unique hybrid capabilities with Azure | Advanced multi-layer security | Faster innovation for applications | Unprecedented Hyper-Converged |
|---------------------------------------|-------------------------------|------------------------------------|-------------------------------|

Windows Server 2019 editions

The right edition for your organization size, datacenter, and virtualization requirements.

| Editions | Description | Licensing model | CAL requirements | Pricing |
|--------------------------------|---|------------------|------------------|---------|
| Windows Server 2019 Datacenter | For highly virtualized datacenters and cloud environments | Core based | WS CAL | \$6,155 |
| Windows Server 2019 Standard | For physical or minimally virtualized environments | Core based | WS CAL | \$972 |
| Windows Server 2019 Essentials | For small businesses with up to 25 users and 50 devices | Specialty server | No CAL required | \$501 |
| Microsoft Hyper-V Server 2019 | Free hypervisor download. | N/A | N/A | N/A |

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Windows Server 2019 Licensing Guide

Windows Server 2019 is a powerful and flexible server operating system designed for various enterprise environments. Understanding the licensing options available is crucial for businesses to ensure compliance, optimize costs, and effectively manage their IT resources. This comprehensive guide will explore the different licensing models, editions, and key considerations for Windows Server 2019.

Overview of Windows Server 2019 Editions

Windows Server 2019 is available in three primary editions, each designed to cater to different organizational needs:

1. Standard Edition

The Standard edition is geared towards businesses that require basic virtualization and storage capabilities. Key features include:

- Support for up to two Operating System Environments (OSEs) or Hyper-V containers.
- Ideal for physical or minimally virtualized environments.
- Includes features like Windows Defender, Storage Spaces Direct, and Software Defined Networking (SDN).

2. Datacenter Edition

The Datacenter edition is designed for highly virtualized datacenter environments. It includes all features of the Standard edition, with additional capabilities:

- Unlimited OSEs and Hyper-V containers.
- Advanced features like Shielded Virtual Machines and software-defined storage.
- Ideal for organizations with extensive virtualization needs.

3. Essentials Edition

The Essentials edition is targeted at small businesses with up to 25 users and 50 devices. Key points include:

- Simplified management and configuration.
- No virtualization rights.
- Includes essential features like file and print services, remote access, and data protection.

Windows Server 2019 Licensing Models

Understanding the licensing models is essential for businesses to comply with Microsoft's terms while optimizing their investments in Windows Server 2019.

Core-Based Licensing

Windows Server 2019 employs a core-based licensing model. Here's how it works:

- License Requirements: A minimum of 8 core licenses is required for each physical processor. For hosts with processors that have more than 8 cores, additional core licenses (in packs of 2) are required.
- Virtualization Rights: The number of virtual machines (VMs) you can run depends on the edition:
 - Standard Edition: Up to two VMs when fully licensed.
 - Datacenter Edition: Unlimited VMs when fully licensed.

Client Access Licenses (CALs)

In addition to core licenses, businesses must acquire Client Access Licenses (CALs) for users or devices accessing the server. There are two types of CALs:

- User CALs: Allow a specific user to access the server from any device.

- Device CALs: Allow multiple users to access the server from a single device.

Choosing between User CALs and Device CALs depends on the organization's structure and how employees access the server.

License Mobility and Software Assurance

License mobility and Software Assurance (SA) are essential concepts to understand when it comes to Windows Server licensing.

License Mobility

License mobility allows organizations to move their Windows Server licenses between different physical servers or cloud environments. This is particularly beneficial for businesses that utilize hybrid cloud solutions.

Software Assurance (SA)

SA is an optional program that provides several benefits, including:

- Access to new software releases.
- License mobility.
- Training and support options.
- Extended support and options for virtualization.

Investing in SA can be advantageous for businesses anticipating growth, changes in technology, or those looking to stay up-to-date with the latest features.

Calculating Licensing Costs

Determining the total licensing costs for Windows Server 2019 involves several factors. Here's a step-by-step approach:

1. Assess Your Infrastructure

- Count the number of physical processors in the server.
- Determine the number of cores per processor.
- Evaluate how many virtual machines you plan to run.

2. Choose the Appropriate Edition

- Consider the features and capabilities required for your organization.
- Determine if you need the Standard, Datacenter, or Essentials edition.

3. Calculate Core Licenses

- For each physical processor, ensure a minimum of 8 core licenses are purchased.
- Add additional core licenses in packs of 2 for processors with more than 8 cores.

4. Determine CAL Requirements

- Assess the number of users or devices that will access the server.
- Decide between User CALs and Device CALs based on your organization's access patterns.

5. Consider Additional Costs

- Factor in any additional services or subscriptions, such as Software Assurance.

Choosing the Right Licensing Strategy

Selecting the right licensing strategy is crucial for maximizing the benefits of Windows Server 2019. Here are some strategies to consider:

1. Evaluate Your Current Infrastructure

- Analyze your current server workloads and future growth.
- Identify whether you need to scale up your server capabilities.

2. Consider Virtualization Needs

- If your organization relies heavily on virtualization, the Datacenter edition may be more cost-effective.
- For less virtualized environments, the Standard edition could suffice.

3. Explore Cloud Options

- Consider leveraging cloud services or hybrid setups with License Mobility.
- Assess whether a cloud service provider can offer a more manageable licensing solution.

4. Keep Compliance in Mind

- Ensure that your licensing model aligns with Microsoft's compliance requirements.
- Regularly audit your licenses to prevent any discrepancies.

Conclusion

Navigating the licensing landscape for Windows Server 2019 can be complex, but a clear understanding of the editions, licensing models, and CAL requirements can empower businesses to make informed decisions. By carefully assessing infrastructure needs, evaluating future growth, and considering cloud options, organizations can optimize their licensing strategy, ensure compliance, and ultimately reduce costs. Embracing a proactive approach to licensing will not only enhance operational efficiency but also provide a robust foundation for future expansion in the rapidly evolving digital landscape.

Frequently Asked Questions

What are the different editions of Windows Server 2019 available for licensing?

Windows Server 2019 is available in several editions: Standard, Datacenter, Essentials, and the free Windows Server 2019 Hyper-Core. Each edition has its own features and licensing requirements.

How is Windows Server 2019 licensed?

Windows Server 2019 is licensed based on the number of physical cores in the server. Microsoft requires a minimum of 8 core licenses per processor and a minimum of 16 core licenses per server.

What is the difference between the Standard and Datacenter editions of Windows Server 2019?

The Standard edition is designed for environments with minimal virtualization needs, supporting up to two virtual machines, while the Datacenter edition is intended for highly virtualized data centers and supports unlimited virtual machines.

Are there any licensing options for small businesses using Windows Server 2019?

Yes, the Essentials edition of Windows Server 2019 is tailored for small businesses with up to 25 users and 50 devices, providing a simpler licensing model.

Can I use Windows Server 2019 in a virtualized environment?

Yes, both the Standard and Datacenter editions allow for virtualization, but the number of virtual machines you can run depends on the edition—Standard allows for two, while Datacenter allows for unlimited.

What is the User CAL and Device CAL licensing model for Windows Server 2019?

Windows Server 2019 uses Client Access Licenses (CALs) which can be either User CALs (licensed per user) or Device CALs (licensed per device). Organizations can choose the model that best fits their

usage scenario.

Is there a special licensing requirement for using Windows Server 2019 on Azure?

When using Windows Server 2019 on Azure, you can leverage Azure's pay-as-you-go model, which includes the licensing costs as part of the virtual machine pricing, simplifying the process.

What should I consider when upgrading from an older version of Windows Server to 2019 regarding licensing?

When upgrading, you need to ensure that you comply with the licensing terms of the new version. This may involve acquiring new licenses, especially if you're moving from a version that had different licensing rules.

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