Windows Server

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Related Licensing Guides

Windows Server, Microsoft's primary OS (operating system) for servers, is a prerequisite for all Microsoft server applications, such as SQL Server and Exchange Server. In volume licensing programs, Windows Server 2016 is licensed under the Core/CAL License Model and versions 2012 and 2012 R2 are licensed under the Processor/CAL License Model. Among other things, the License Models dictate the number and type of core or processor licenses required under various scenarios, including virtualization. (The effects of the license model change on SA (Software Assurance) customers, including core license grants, are covered in the Oct. 2016 entry in the Windows Server Timeline.)

Server editions. There are two editions sold through volume licensing programs that target midsize and large organizations, Standard edition and Datacenter edition. Version downgrade rights permit use of older product versions than the one licensed. Down edition rights included with Datacenter edition allow use of Standard edition instead, and both Datacenter and Standard provide down edition rights to Windows Server 2008 R2 Enterprise edition and earlier versions.

Technical features. With Windows Server 2012 and 2012 R2, both Datacenter and Standard editions have the same technical feature set, including AD Domain Services. However, with version 2016, several new storage-, administration-, and networking-related features are unique to Datacenter edition (see Windows Server Edition Packaging illustration).

Virtualization. Unlike Standard edition, Datacenter edition licenses (regardless of version) place no limits on the number of Windows Server-based Virtual OSEs (Operating System Environments), also

commonly referred to as VMs (virtual machines), that can execute simultaneously on a licensed server (see "Processor/CAL License Model" and "Core/CAL License Model" entries for details). Neither Datacenter nor Standard edition provides rights to run Windows client OSs within the Virtual OSEs.

Server license packaging. Server-side licenses for Windows Server Standard and Datacenter are available stand-alone or as part of a CIS Suite (Core Infrastructure Server Suite).

CAL types. There are three types of CALs (Client Access Licenses): the Windows Server CAL is the base CAL, and the RDS (Remote Desktop Services) CAL and the RMS (Rights Management Services) CAL are additive CALs. All can be purchased on a Per-Device (Device CAL) or Per-User (User CAL) basis. The Windows Server CAL grants access to all Windows Server features except for RDS and RMS, and use of the latter two components triggers the need for the associated additive CAL, in addition to the Windows Server CAL (see Windows Server CAL Types and Features illustration).

For all three types of CALs, the CAL version must match or exceed the version of the server software deployed. However, R2 releases of Windows Server have no CALs of their own and access can be licensed with CALs for the immediate preceding (non-R2) version.

If a server is used solely for hosting and managing Virtual OSEs, a customer's Windows Server CALs need to be sufficient to access the versions of Windows Server running within the Virtual OSEs; the version of Windows Server deployed as the server's Physical OSE is immaterial.

CAL packaging. CALs are available standalone or as part of suites (see CAL Suite Contents illustration and CALs Included with Online Services Suites illustration).

The Windows Server CAL is included in the Core CAL Suite, Enterprise CAL Suite, most CAL Suite Bridges, Enterprise Mobility + Security (EMS) E3 and E5 suites (with E3 previously called the "Enterprise Mobility Suite"), and Secure Productive Enterprise (SPE) E3 and E5 suites (with E3 previously called the "Enterprise Cloud Suite").

The Windows Server RMS CAL is included in the Enterprise CAL Suite, some CAL Suite Bridges, Azure Information Protection Premium P1 and P2, EMS suites, and SPE suites.

The Windows Server RDS CAL is not bundled with any other offering, but the same use rights are available alternatively through a RDS User SL (Subscription License).

When CALs are required. All forms of access by internal users and external users must be licensed, with the exception of Web Workload or HPC Workload scenarios. CALs are the only way to license internal users, as well

as an option for licensing external users. Alternatively, external users can be licensed by purchasing an External Connector license for every physical Windows Server machine accessed by external users.

License reassignment. Regardless of SA status, Windows Server Standard and Datacenter licenses as well as CALs are subject to the general rule for reassignment (not-within-90-days-of-the-last-reassignment, as outlined in the reassign entry). SA-covered External Connector licenses receive the License Mobility Across Server Farms use right but SA-covered Standard and Datacenter licenses do not.

> There is an ability to leverage SA-covered Standard and Datacenter licenses to partially license VMs (virtual machines) hosted on (multitenant) servers under a SA benefit called Azure HUB (Hybrid Use Benefit).

Servicing Branches for Windows Server 2016. Both Standard and Datacenter editions offer two models for how the OS receives updates/fixes and new features: LTSB (Long Term Service Branch) and Current Branch for Business (CBB). Use of the LTSB is required if Windows Server 2016 is deployed in two of the three possible Windows Server 2016 installation modes: the desktop experience (as required for server-based desktops and many server applications) and the Server Core installation mode. Use of CBB is required if Windows Server is deployed in the Nano Server installation mode (designed to minimize on-disk footprint and RAM requirements). To use CBB, customers must have active SA on Windows Server Standard and Datacenter edition licenses and Windows Server base and additive CALs.

Related online services. As an alternative to running Windows Server on-premises, Microsoft offers an online service called Azure VMs (Virtual Machines).

SPLA. Under a SPLA (Services Provider License Agreement), third parties can license Windows Server and offer Windows Server-based virtual OSEs (operating system environments) as a fee-based service.

Related illustrations: Windows Server Edition Packaging illustration; Core/CAL License Model Flowchart illustration;Windows Server CAL Types and Features illustration; CAL Suite Contents illustration; CALs Included with Online Services Suites illustration

See also: Windows Server SA Benefits; Windows Server Timeline