

# SOFTWARE LICENSING ADVISORS

## LICENSING BRIEF

### WINDOWS SERVER EXTERNAL ACCESS AND AUTHENTICATION

*Changes in Windows Server 2012 permit External Users to access corporate data at lower cost*



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## Windows Server External Access and Authentication

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### Summary

With the release of Windows Server 2012, Microsoft has made significant changes to use rights for External Users.

The company has reduced the number of use cases in which External Connectors are required and lowered barriers for organizations that want to authenticate External Users for Web-based external-facing systems. The changes will make it less expensive to use Windows Server for public Web sites that ask users to log on (to download a white paper, for example) and for “extranets” that give partners, customers, and other External Users restricted access to documents, applications and other resources on the customer's site, as long as they are delivered by a Web interface.

### Pre-2012 External Connector Requirements

Users or their devices must have a Client Access License (CAL) or an External Connector to access certain Microsoft servers ([list](#)).

CALs or External Connector Licenses are required for access to server software.

The primary difference is that CALs can be purchased for any person or device, but External Connectors license only External Users.

External Users means users that are not either your or your affiliates’ employees, or your or your affiliates’ onsite contractors or onsite agents.

While employees of other companies may already have CALs to use with their employers' servers, their CALs only work with their own employers' servers.

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Your CALs and External Connector Licenses permit access only to your Licensed Servers (not a third party's).

External Connectors replace CALs when an organization may not be able to tell how many CALs are required or where it would be impossible to check which external devices or users are accessing the server. A bank may have millions of customers who want to check their account balances via a Web site running on Windows Server, for example, and the cost of providing a CAL for each could be extraordinary.

Ranging in price from a few thousand to tens of thousands of dollars (depending on the server licensed), they are assigned to a specific Microsoft server product running on a specific device and allow any number of External Users to access that server product on that device.

External Connector License means a license attached to a Server that permits access to the server software by External Users.

Prior to 2012 server releases, Microsoft did offer free access to servers under some conditions. One condition was that these users had to access the server through the Internet (they could not be on the customers local network) and could not be authenticated, typically by asking them to enter a name and password that could be associated with an account on the customers' servers.

You do not need CALs for any user or device that accesses your instances of the server software only through the Internet without being authenticated or otherwise individually identified by the server software or through any other means

## Changes in 2012

With the release of Windows Server 2012, Microsoft made significant changes to licensing External Users, not only for Windows server but for other servers.

The new language for Windows Server eliminates the need for CALs when External Users access a Windows Server that is running a Web workload. Although External Connectors are not referenced specifically, it would seem obvious that External Connectors are not required if CALs are not required.

CALs are not required to access server software running a Web or HPC Workload.

While Microsoft-based high-performance computing (HPC) workloads are not common, Web workloads are broadly used, and Microsoft's definition of these workloads provides considerable scope.

Web Workloads (also referred to as “Internet Web Solutions”) are publicly accessible and consist solely of web pages, websites, web applications, web services, and/or POP3 mail serving. For clarity, access to content, information, and applications served by the software within an Internet Web Solution is not limited to your or your affiliates’ employees.

This change should make Windows Server more competitive against alternatives such as Linux, which dominates in the Web server category.

On the other hand, Windows Server no longer excludes anonymous users from the CAL or External Connector requirement. However, situations in which External Users access corporate resources anonymously through a non-Web interface are rare. Virtual private networks may offer direct access to non-Web workloads behind the corporate firewall (direct database access, for example), but they always require authentication, as the term “private” suggests.

## Remaining External Connector Scenarios for Windows Server

CALs or External Connectors are still required to access specific Windows Server features.

Windows Remote Desktop Services (RDS) does not qualify as a Web workload or exclude anonymous access and therefore requires both a Windows Server CAL and an RDS CAL.

You need a license for each product and separately licensed functionality used on a device or by a user. For example, if you use Office on Windows, you need licenses for both Office and Windows. Likewise, to access Remote Desktop Services in Windows Server you need both a Windows Server CAL and a Remote Desktop Services CAL.

Microsoft's Application Virtualization product, previously available only in the Microsoft Desktop Optimization Pack, was added as a feature of RDS in Windows Server, so that too requires CALs or the RDS External Connector.

In addition, if users are remotely accessing a virtual machine running Windows Server that is not running a Web workload, it continues to require both Windows and RDS CALs.

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(This architecture is sometimes used as a substitute for a virtual desktop infrastructure, VDI. Because it uses a Windows Server operating system rather than a Windows desktop operating system, such as Windows 7, it avoids Microsoft's complex and costly VDI licensing, and is both more flexible and less expensive for scenarios such as giving personally owned mobile devices access to a Windows desktop.)

A third service that runs on Windows Server and has its own External Connector is Windows Server Rights Management Services, which encrypts documents or emails and ensures that they cannot be viewed, copied, printed, or forwarded, etc. unless the user is given rights to do so. The following table, taken directly from the Product Use Rights (PUR), describes cases in which Windows Server requires an “additive” External Connector.

Additive External Connectors	
Product or Functionality:	List of External Connector Licenses:
Microsoft Application Virtualization for Remote Desktop Services	Windows Server 2012 Remote Desktop Services External Connector
Windows Server 2012 R2 Rights Management Services	Windows Server 2012 Active Directory Rights Management Services External Connector
Windows Server 2012 R2 Remote Desktop Services functionality or Windows Server 2012 R2 for purposes of hosting a graphical user interface (using the Windows Server 2012 R2 Remote Desktop Services functionality or other technology)	Windows Server 2012 Remote Desktop Services External Connector

Note that, because these are called additive External Connectors, a regular Windows External Connector is also required for all of these features.

Additive External Connector License means an External Connector License that must be used in conjunction with a base External Connector License.

## External Access for Other Servers

Although our focus in this document is on Windows Server, other server products that run on Windows Server may also require External Connector licenses in the past. Because they are not Web workloads, the Windows Servers on which they run will continue to require CALs or External Connectors for Windows Server. For example, when External Users have access to Exchange 2010 or Lync 2010 servers, they require one or more External Connectors.

Exchange 2010 has a single External Connector, but it gives External Users rights equivalent to only the Exchange 2010 Standard CAL, not the Enterprise CAL. Lync 2010 has Standard, Enterprise, and Plus External Connectors, which give External Users rights equivalent to the Lync 2010 Standard, Enterprise, and Plus CALs.

SharePoint has not had an External Connector since its 2003 release. Instead External User access has required special—and costly—“Internet” editions that ruled out using SharePoint for public Web sites for many users. SharePoint 2013 has abandoned that approach and However, the 2013 versions of these servers (and any 2010 or earlier version covered with Software Assurance) no longer require External Connectors. Instead, Microsoft has introduced the right to license External User access as part of the server license itself.

Depending on the product and the functionality being accessed, External User access is permitted under CALs, External Connector Licenses or the software license assigned to the Server.

Whether or not a separate External Connector is required can be found in the PUR's Product-Specific License Terms for each server, as shown here for Exchange Server.

### Exchange Server 2013 Standard

The license terms that apply to your use of this product are the Universal License Terms, the General License Terms for this Licensing Model, and the following:

Self-Hosting of Applications Allowed: **Yes** (See [Appendix 2](#))

Additional Software: **Yes** (See [Appendix 3](#))

License Mobility Within Server Farms: **Yes** (See General Terms)

External User Access: **Licensed with Server** (Access to Additional Functionality requires both Base and Additive CALs)

BASE CALs

These new rights can be complex and must be determined for each server.

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For example, the Exchange External Connector, which licenses only Standard CAL features, has been discontinued, but as seen above an External User who requires access to Exchange Enterprise CAL features will need both Exchange Standard and Enterprise CALs.

Microsoft Dynamics CRM requires even External Users who use the Microsoft Dynamics CRM 2013 client to have CALs.

SharePoint has not had an External Connector since its 2003 release. Instead External User access has required special—and costly—“Internet” editions that ruled out using SharePoint for public Web sites for many customers. The pendulum has swung far to the other side with SharePoint 2013, which has no External Connectors and grants even internal users CAL-free access to publicly available information (although most will still need SharePoint CALs, to access non-public corporate information).

CALs are not required to access content, information, and applications that you make publicly available to users over the Internet (i.e., not restricted to Intranet or Extranet scenarios).

## AUTHENTICATED ACCESS FOR OTHER SERVERS

Note as well that, while the authenticated access rule for Windows Server has been eliminated (which means that ALL access by internal users to Windows Server requires a Windows Server CAL unless it is otherwise excluded), these rules still exist for other servers. In other words, in some circumstances internal users may not require CALs.

As a somewhat complex example, Exchange server permits CAL-free access for unauthenticated users and adds certain Lync Server users. (Presumably because Exchange Server stores voice mail for Lync, but users may not be authenticated directly to Exchange server.)

You do not need CALs for any user or device that accesses your Instances of the server software without being directly or indirectly authenticated by Active Directory or Lync Server.

## About This Document

This document summarizes research from Software Licensing Advisors on published and public Microsoft documentation regarding Windows Server 2012 (and later) licensing rules, and general rules outlined in Microsoft licensing documents.

Quotations in this document are taken from various documents that are part of the customer's contract with Microsoft, including Product Use Rights, the Product list, and standard Microsoft contracts. The language in your contract may be different, depending on the age of the contract and modifications that might have made to the contract.

Our interpretations do not always conform with the advice that Microsoft account teams, white papers, and other communications give to customers. This document is designed to present, to the best of our knowledge, the rules that customers are bound by contract to follow. Customers can then decide, when communications from Microsoft appear to diverge from our interpretations, how they should proceed.

Among other things, they can elect to use this information to

- negotiate contract language acknowledging that a specific interpretation of the language will apply to their contract, or
- design their operations and architectures around these interpretations of the rules, in the belief that Microsoft will not have sufficient grounds to pursue legal action in an audit or similar action against the customer, or
- follow Microsoft's advice, if they believe Software Licensing Advisors has not correctly interpreted the language that describes these rules, has not made an argument strong enough to survive legal scrutiny, or if they want to avoid arguments with Microsoft over these rules.

This document is NOT advice to pursue any particular path, but is intended only to inform customers, so that they can take any course of action they deem advisable with greater knowledge of what the applicable contract language says. Software Licensing Advisors does not provide legal advice and is not responsible for any consequences that might result from your pursuing any actions as a result of what you read here.

## REFERENCE DOCUMENTS

### Microsoft Product Use Rights

#### UNIVERSAL LICENSE TERMS: DEFINITIONS

**Additive CAL** means a CAL that must be used on conjunction with a base CAL.

**Additive External Connector License** means an External Connector License that must be used in conjunction with a base External Connector License.

**External Connector License** means a license attached to a Server that permits access to the server software by External Users.

**External Users** means users that are not either your or your affiliates' employees, or your or your affiliates' onsite contractors or onsite agents.

**Licensed Device** means the single physical hardware system to which a license is assigned. For purposes of this definition, a hardware partition or blade is considered to be a separate device.

**Licensed Server** means the single Server to which a license is assigned. For purposes of this definition, a hardware partition or blade is considered to be a separate Server.

**Licensed User** means the single person to whom a license is assigned.

**Web Workloads** (also referred to as "Internet Web Solutions") are publicly accessible and consist solely of web pages, websites, web applications, web services, and/or POP3 mail serving. For clarity, access to content, information, and applications served by the software within an Internet Web Solution is not limited to your or your affiliates' employees.

Software in Internet Web Solutions is used to run:

- web server software (for example, Microsoft Internet Information Services), and management or security agents (for example, the System Center Operations Manager agent).

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- database engine software (for example, Microsoft SQL Server) solely to support Internet Web Solutions.
- the Domain Name System (DNS) service to provide resolution of Internet names to IP addresses as long as that is not the sole function of that instance of the software.

## UNIVERSAL LICENSE TERMS: RIGHTS TO USE OTHER VERSIONS

For any permitted copy or instance, you may create, store, install, run or access in place of the version licensed, a copy or instance of a prior version, different permitted language version, or different available platform version (for example, 32 bit or 64 bit). You may use different versions of components only as permitted under the Product-Specific License Terms. The use of an earlier version under these downgrade rights does not extend the support lifecycle of the earlier version.

## UNIVERSAL LICENSE TERMS: NO COMMERCIAL HOSTING

You may not host the products for commercial hosting services.

## UNIVERSAL LICENSE TERMS: USING MORE THAN ONE PRODUCT OR FUNCTIONALITY TOGETHER

You need a license for each product and separately licensed functionality used on a device or by a user. For example, if you use Office on Windows, you need licenses for both Office and Windows. Likewise, to access Remote Desktop Services in Windows Server you need both a Windows Server CAL and a Remote Desktop Services CAL.

## PRODUCT-SPECIFIC LICENSE TERMS: WINDOWS SERVER 2012 R2 DATACENTER

### ADDITIVE EXTERNAL CONNECTORS

Product or Functionality:	List of External Connector Licenses:
Microsoft Application Virtualization for Remote Desktop Services	Windows Server 2012 Remote Desktop Services External Connector
Windows Server 2012 R2 Rights Management Services	Windows Server 2012 Active Directory Rights Management Services External

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	Connector
Windows Server 2012 R2 Remote Desktop Services functionality or Windows Server 2012 R2 for purposes of hosting a graphical user interface (using the Windows Server 2012 R2 Remote Desktop Services functionality or other technology)	Windows Server 2012 Remote Desktop Services External Connector

## SERVER: SERVER CAL: GENERAL LICENSING TERMS

### ACCESS LICENSES

- Except as described here and noted in the Product-specific license terms, all server software access requires CALs.
- Requirements for External User access vary by product, as noted in the Product-specific license terms.
- Depending on the product and the functionality being accessed, External User access is permitted under CALs, External Connector Licenses or the software license assigned to the Server.
- You must assign each CAL to a user or device, as appropriate, and each External Connector License to a Licensed Server.
- CALs and External Connector Licenses permit access to the corresponding version (including earlier versions used under downgrade rights) or earlier versions of server software.
- CALs are not required for access by another Licensed Server or for up to 2 users or devices to administer the software.
- Your CALs and External Connector Licenses permit access only to your Licensed Servers (not a third party's).

## EXCHANGE SERVER 2013 ENTERPRISE AND STANDARD: PRODUCT-SPECIFIC RIGHTS

### External User Access

Licensed with Server (Access to Additional Functionality requires both Base and Additive CALs)

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## UNAUTHENTICATED ACCESS

You do not need CALs for any user or device that accesses your Instances of the server software without being directly or indirectly authenticated by Active Directory or Lync Server.

### License Grant for Exchange Server 2010 External Connector Customers

The 2010 version of the Exchange Server 2010 External Connector License is the final version of that license. Customers with Exchange Server 2010 External Connector Licenses with active SA coverage as of October 1, 2012 are deemed to have one Exchange Server 2013 Enterprise license for each such External Connector license.

## LYNC SERVER 2013: PRODUCT-SPECIFIC RIGHTS

### UNAUTHENTICATED ACCESS

You do not need CALs for any user or device that accesses your Instances of the server software without being directly or indirectly authenticated by Active Directory or Lync Server.

### External User Access

Licensed with Server

## SHAREPOINT 2013: PRODUCT-SPECIFIC RIGHTS

### External User Access

Licensed with Server

### Additional Terms:

#### CAL WAIVER FOR USERS ACCESSING PUBLICLY AVAILABLE CONTENT

CALs are not required to access content, information, and applications that you make publicly available to users over the Internet (i.e., not restricted to Intranet or Extranet scenarios).

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## LIST OF SERVERS THAT REQUIRE CALS

Derived from the list of servers covered by the Server / CAL (Server License + CAL + Optional External Connector) model. While all of these servers require CALs, not all have External Connectors.

- Exchange
- Forefront Identify Manager
- Forefront United Access Gateway
- Lync
- Dynamics AX
- Dynamics CRM
- Office Audit and Control Management Server
- Project Server
- SharePoint
- SQL Server Business Intelligence
- SQL Server Enterprise and Standard (which are also licensed by cores)
- Visual Studio
- Windows Multipoint Server
- Windows Server

*Source: Microsoft Product Use Rights, July 2014*

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## SERVER OPERATING SYSTEMS: GENERAL LICENSING TERMS (OCT. 2011 PUR)

### Client Access Licenses (CALs)

You must acquire and assign a CAL to each device or user that accesses your instances of the server software directly or indirectly. A hardware partition or blade is considered to be a separate device. The appropriate CAL for each product is listed in the Product-Specific License Terms section.

You do not need CALs for any user or device that accesses your instances of the server software only through the Internet without being authenticated or otherwise individually identified by the server software or through any other means

## SERVERS: PROCESSOR/CAL: GENERAL LICENSING TERMS (OCT. 2011 PUR)

### ACCESS LICENSES

- You must assign each CAL to a user or device, as appropriate, and each External Connector License to a Licensed Server.
- CALs or External Connector Licenses are required for access to server software.
- CALs and External Connector Licenses permit access to the corresponding version (including earlier versions used under downgrade rights) or earlier versions of server software.
- CALs are not required for access by another Licensed Server or for up to 2 users or devices to administer the software.
- CALs are not required to access server software running a Web or HPC Workload.
- CALs not required for access in a Physical OSE used solely for hosting and managing Virtual OSEs.
- Your CALs and External Connector Licenses only permit access to your Licensed Servers (not a third party's).

*Source: Microsoft Product Use Rights, Oct. 2011*

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