

On July 22, 2010 *Directions on Microsoft* conducted a Telebriefing on **Licensing SharePoint Server 2010**. The briefing covered features requiring a SharePoint 2010 Enterprise Client Access License (CAL), licensing FAST Search Server for SharePoint, license reassignment and other virtualization-related rules, pricing for SharePoint-related licenses, as well as Windows Server and SQL Server licensing prerequisites.

Below are answers to questions that licensing analyst Rob Horwitz was not able to get to during the TeleBriefing Q&A session.

For in-depth training on licensing Microsoft's enterprise products, please consider attending one of our Microsoft Licensing Boot Camps. For more information, please visit [www.MicrosoftLicensingBootCamp.com](http://www.MicrosoftLicensingBootCamp.com).

## Client Access Licenses (CALs) and Compliance

**Q: Can we run a mix of User and Device CALs (e.g. some business units use User; some use Device)?**

**A.** The short answer: yes but it can be a compliance headache. User and Device CALs for SharePoint Server 2010 (and other server products) cost the same but have different part numbers. Customers can purchase a mix of User and Device CALs for the same product, but to ease management and tracking Microsoft recommends customers standardize on one or the other. Unless your business units are completely separated from one another—each with their own SharePoint system—then compliance calculations are likely to be a hassle. To our knowledge, the tools that Microsoft is developing to help with CAL compliance (see question further below in this section) won't be much assistance in a scenario where a SharePoint system is accessed by a mix of User CAL-licensed clients and Device CAL-licensed clients.

**Q: Is there a mechanism to convert Device CALs to User CALs?**

**A.** Changing the mode of previously purchased CALs is an option only when the customer adds Software Assurance (SA) to CALs, and then only at the time they renew SA on the CALs.

**Q: If you purchase Device CALs for your desktop/computers, do you have to purchase one for PDA (mobile) devices?**

**A:** Yes. So, in this scenario, you're better off buying User CALs. Each User CAL gives one user (employee or nonemployee) the right to use any device to access all instances of SharePoint Server running within the organization. User CALs are attractive for knowledge workers that make use of multiple devices, such as a desktop, laptop, and smart phone.

**Q: How does Microsoft monitor customers; how do they know when a company that hasn't purchased Enterprise CALs is using features that require Enterprise CALs?**

**A:** Microsoft doesn't "monitor" SharePoint customers—the SharePoint Server software doesn't report configuration or usage data to Microsoft. Like most other Microsoft server products, SharePoint Server licensing is done on the "honor system." That said, Microsoft does have the right to audit customers when they suspect something is awry.

We've heard from customers that Microsoft's first step is commonly a "soft audit" where they recommend that the customer have a Software Asset Management (SAM) assessment performed by a Microsoft partner. Such engagements typically include provisions that protect customers from legal action by Microsoft if they take steps to resolve noncompliance (by purchasing required licenses) and that restrict Microsoft's access to the results of a SAM inventory as long as the partner certifies that the customer is or has become compliant.

**Q: If we don't buy the Enterprise CAL, what are recommended steps for ensuring compliance with licensing (how do I prevent use of features that we are not licensed for)?**

**A:** The SharePoint Server 2010 software contains the code to implement both the Standard CAL-level features as well as the Enterprise CAL-level features. However, during product configuration, the administrator must explicitly choose to enable Enterprise CAL-level capabilities. This way, you can avoid inadvertently creating situations where you'd need to buy Enterprise CALs.

**Q: What are the compliance issues associated with having some clients licensed with a SharePoint Server Standard CAL, and others with both CALs (Standard CAL+ Enterprise CAL)?**

**A:** Assuming that it is impractical for the organization to simply segregate the two groups to separate SharePoint systems, assuring compliance can be tricky. In general, the bar you need to reach for compliance in an audit:

- 1) The number of Standard CALs you've purchased has to be  $\geq$  the number of unique clients (i.e., users or devices, depending on how you've purchased the CALs) that have "touched" on-premises SharePoint Server sites within the past 90 days
- 2) The number of Enterprise CALs you've purchased has to be  $\geq$  the number of unique clients that have utilized Enterprise-level features within the past 90 days.

The "safe-harbor" is to license SharePoint Server organization wide, acquiring CALs for every employee (per-user) or every workstation (per-device).

If an organization wants to license only a subset of clients with the Standard CAL, or an even smaller subset of clients with the Enterprise CAL, they'd have two potential compliance strategies.

First would be a permissions-based approach—locking out unlicensed clients (no Standard CAL) from accessing SharePoint resources or preventing clients with the Standard CAL only from accessing Enterprise-level features. From what we understand of SharePoint, this would be awkward to set up and administer. The second approach would be to make a "best guess" and then follow up with a periodic compliance check (self audit). Microsoft recently release a Microsoft Assessment and Planning (MAP) Toolkit 5.0 (<http://technet.microsoft.com/en-us/solutionaccelerators/dd537566.aspx>) which among other things, can examine SharePoint log entries written over a period of time to determine how many Standard and Enterprise CALs the organization should own to cover the actual measured use.

Also, at the Oct. 2009 SharePoint conference, Microsoft indicated the company was working on a license usage report tool to help customers measure the number of SharePoint 2010 Standard CALs and Enterprise CALs that would be required for license compliance given the way SharePoint was being used within their enterprise. Among other things, the tool was advertised as tracking the number of unique users using Standard CAL features only, using Enterprise CAL features, and using Office Web Apps. However, the tool did not ship with SharePoint Server 2010 in May, and presumably this tool will be delivered later this year as a download.

**Q: Is the SharePoint Server 2010 Standard CAL and Enterprise CAL included in Microsoft's Core CAL Suite and Enterprise CAL Suite?**

**A:** As has been the case for some time, a SharePoint Server Standard CAL is included in Microsoft's Core CAL Suite, and both SharePoint CALs—the Standard CAL and Enterprise CAL—are included in the Enterprise CAL Suite.

**Q: Can SharePoint CALs be moved much like Server licenses can?**

**A:** Customers can reassign a User CAL from one user to another, or a Device CAL from one workstation to another. However, customers can't routinely reassign CALs in an effort to cap their CAL purchases at the maximum number of concurrent clients. For example, a multinational company can't reassign CALs from Paris-based users or devices to Los Angeles en masse each day to take advantage of different time zones.

**Q: Is the CAL set up at the server, so a User CAL would attach to a certain login, and a Device CAL would attach to a particular client machine?**

**A:** SharePoint Server CALs are simply a set of legal rights; they are not "set up," "installed," or otherwise recorded (in the Windows Registry or Active Directory, for example). The presence (or not) of a CAL cannot be detected by software inventory tools.

**Related products (SharePoint pre-requisites, interdependencies)**

**Q: SharePoint Foundation and SharePoint Server require SQL Server, must I buy SQL Server CALs for my users?**

**A:** The short answer is "no"—you don't have to buy SQL Server CALs if you license SQL Server under a per-processor licensing model.

SQL Server is required to store SharePoint configuration parameters, security credentials, content, usage logs, Web analytics reports, state information, and other items. Customers have both free (SQL Server Express) and fee-based (SQL Server Standard/Enterprise) options, but the former is throttled to the point where it is practical only for small-scale SharePoint sites.

SQL Server 2005 / 2008 / 2008 R2 Standard or Enterprise editions can be licensed under a server-CAL model, or under a per-processor model.

Server-CAL. Under this model, an organization purchases a server license for each server running SQL Server (SQL Server 2008/2008R2 Standard server license = \$898, Enterprise=US\$8,592) and a SQL Server CAL (US\$164) for each client user or device.

Per-processor. In the per-processor model, an organization purchases one license for each physical processor socket on the motherboard. Since processor cores in a multicore processor are not counted separately, customers have a strong incentive to run SQL Server on hardware containing the most powerful multicore processors available. (SQL Server 2008 R2 Standard per-proc license = \$7,171, Enterprise=US\$27,495)

For more details on licensing SQL Server 2008 R2, see “SQL Server Gets More Editions, Higher Prices, Memory Caps” at

<http://www.directionsonmicrosoft.com/DOMIS/update/2010/06jun/0610ssgmeh.htm>. SQL Server 2008 licensing is detailed in the "Licensing SQL Server 2008" at <http://www.directionsonmicrosoft.com/DOMIS/licensing/2009/01jan/nav.html>.

## **Q: What are typical costs for the Windows Server & Office licenses?**

**A:** An edition of Windows Server 2008 or 2008 R2 is a pre-requisite for SharePoint Foundation and SharePoint Server. Windows Server Standard Edition and Enterprise Edition are licensed under the server-CAL model.

- A Windows Server 2008 R2 Standard Edition server license costs US\$726, Enterprise Edition US\$2,358.
- A Windows Server 2008 CAL is US\$30.

Windows Server Datacenter Edition is licensed per-processor (US\$2,405 per proc) and also requires each client to have a CAL.

More information about Windows Server licensing can be found at “Windows Server 2008 R2 Packaging, Licensing, Pricing” at <http://www.directionsonmicrosoft.com/DOMIS/licensing/2009/11nov/1109se.htm>.

Office 2010 is licensed on a per-device basis. The two suite editions available through volume licensing are Office Standard (US\$373) and Office Professional Plus (US\$508). Both editions include the right for the primary user of the Office-licensed device to use Office Web Apps in conjunction with an on-premises SharePoint Foundation or SharePoint Server 2010 installation.

**Q: Can Project Server 2010 work with SharePoint Foundation 2010 or does it need SharePoint Server 2010?**

**A:** Unlike predecessor versions, which could work with SharePoint Server but did not rely on it, Project Server 2010 requires SharePoint Server for some of its functionality. To mitigate the cost of the additional SharePoint licenses, Microsoft is offering special accommodations for customers who have Software Assurance (SA) subscriptions for their Project Server-related licenses as of Apr. 30, 2010.

Project Server licenses. Customers with an existing Project Server license and an SA subscription receive one complimentary SharePoint Server 2010 license (in addition to the right to upgrade to Project Server 2010). However, after the SA subscription on their Project license expires, the complimentary SharePoint Server 2010 license is no longer covered by SA and customers who want to continue their eligibility for SA upgrade rights will need to begin paying for a SharePoint Server SA subscription as well as for their Project Server SA subscription.

Project Server CALs. While customers with SA subscriptions for their existing Project Server CALs don't automatically get complimentary SharePoint Server CALs, they do receive the right (as part of the Project Server CAL) to access SharePoint Server 2010 solely to support their use of Project Server 2010. If these customers want to exploit SharePoint Server for other purposes, they can acquire "complimentary" SharePoint Server 2010 Standard and Enterprise CALs by committing to pay for SA subscriptions on these SharePoint CALs. This offer extends to the end of any SA subscription that commenced prior to May 1, 2011.

## Licensing SharePoint for Internet Use

**Q. How do I license scenarios where my on-premises SharePoint Servers are being accessed by users outside my organization?**

**A.** Customers using SharePoint Server to construct Internet or extranet sites accessed by nonemployees—such as customers or business partners—get the option to choose between two licensing approaches. While customers can use the server-CAL approach, it may not be practical for the organization to identify the set of users or devices that would require CALs, or the set of possible users could be so large as to make CAL purchases prohibitively expensive. To address such situations, Microsoft offers an alternative specifically for licensing nonemployee users.

While most other Microsoft server products licensed under the server-CAL model provide an alternative to CALs for licensing nonemployee users—usually in the form of an External Connector license—SharePoint’s alternative model is unique. Rather than require customers to buy two different server licenses for each server—a license for the right to run the server software and a separate External Connector license to allow an unlimited number of clients to access the software running on the server—SharePoint bundles both these rights into a single license.

A SharePoint Server for Internet Sites server license includes both the right to run a single instance of the SharePoint software on a server and the right for an unlimited number of nonemployee clients (on-site contractors are considered employees) to access the server.

**Q: Which servers need a “SharePoint Server for Internet Sites” license?**

**A.** In multiserver deployments licensed using SharePoint Server for Internet Sites server licenses, all SharePoint servers that directly or indirectly provide content to nonemployee users require a SharePoint Server for Internet Sites license. As one might expect, this includes SharePoint front-end servers and application servers. However, it also includes indexing servers and even servers used for content staging. Servers in a development or test environment—for example, used to customize the look of the Web site and test it before changes go into production—can be excepted from this requirement if they are covered by Microsoft Developer Network (MSDN) licensing.

**Q: Does a “SharePoint Server for Internet Sites” license cover access by my employees?**

**A.** It depends. Besides access by nonemployees, the license covers server access by employees (i.e., employees wouldn’t need CALs), but only if either of the following conditions are true:

- The SharePoint server makes exactly the same content available to employees and nonemployee users alike (in other words, if employees can access content, nonemployees must be able to access it as well)
- The employee is accessing the site for the sole purpose of authoring content for external users.

What happens if neither condition is met? Customers who want to use the same SharePoint Server or group of servers to support both employee-specific content as well as externally accessible content have to double-license each server instance, applying both a SharePoint Server 2010 server license and a SharePoint Server 2010 for Internet Sites (Standard or Enterprise) license to each running instance of the server software. As with internal-only sites, employee access requires the purchase of SharePoint Server CALs.

**Q. What is the difference between the two types of “For Internet Sites” licenses?**

**A.** There are two types of SharePoint Server for Internet Sites licenses.

SharePoint Server 2010 for Internet Sites, Standard (US\$11,793) provides the right to run a single instance of SharePoint Server 2010 on a server with only Standard CAL-level capabilities enabled. The software may be used to create and host a single site at a time resolved from a single domain name (e.g., directionsonmicrosoft.com) and its subdomains (e.g. licensing.directionsonmicrosoft.com). Microsoft defines a site as a collection of interconnected Web pages and related Web content that share a common home page. This license is new for SharePoint Server 2010.

SharePoint Server 2010 for Internet Sites, Enterprise (US\$41,392) provides the right to run (on the licensed server) either SharePoint Server 2010 with both Standard CAL-level and Enterprise CAL-level capabilities enabled, or FAST for SharePoint. The terms of the license allow a single instance of SharePoint Server 2010 or FAST for SharePoint, but not both, meaning an external-facing SharePoint site that uses FAST for SharePoint will require at least two licenses for SharePoint Server 2010 for Internet Sites, Enterprise. Note that all servers comprising a site that exposes Enterprise CAL-level features to external users require a SharePoint Server 2010 for Internet Sites, Enterprise license—even servers that do not host SharePoint components that directly support Enterprise CAL-level capabilities. Customers with an existing SharePoint Server 2007 for Internet Sites license covered under Software Assurance (SA) as of Apr. 30, 2010, receive upgrade rights to SharePoint Server 2010 Internet Sites, Enterprise.

**Q: What installation media is associated with the “For Internet Sites” licenses?**

**A.** The software associated with both the Standard and Enterprise edition licenses are installed from the same media as SharePoint Server 2010. The installer can differentiate between a license key for Standard and Enterprise and activate the appropriate set of features.

**Q: Besides the SharePoint Server 2010 For Internet Sites licenses, what Windows Server and SQL Server related licenses will I need?**

**A.** In most cases, besides licensing each server with SharePoint Server 2010 for Internet Sites *and* an edition of Windows Server 2008 / 2008 R2, customers also have to license each server with a Windows Server 2008 External Connector (US\$2,020), which provides the right for an unlimited number of nonemployee clients to access all instances of Windows Server running on a physical server. (The most common exception to this rule: if users are not authenticated or otherwise individually identified in any way by the SharePoint site, no Windows Server External Connector is required.) Furthermore, one or more SQL Server per-processor licenses are required for the SharePoint site’s back-end database.

**Q: What if I only want to use SharePoint Foundation (and not SharePoint Server) for Internet use—how would I license that scenario?**

- A.** Each server in the deployment would have to be licensed for an edition of Windows Server 2008 / 2008 R2, and you'd need a Windows Server 2008 External Connector for each server as well. (As mentioned above, if users are not authenticated or otherwise individually identified in any way by the SharePoint Foundation site, no Windows Server External Connector is required.) In addition, you'll need to license an edition of SQL Server in the per-processor licensing model (assuming that the free SQL Server Express is insufficient for powering your site).

Note that some Windows Server editions have restrictions that prevent them from hosting SharePoint Foundation. Rather confusingly, SharePoint Foundation 2010 cannot be run on Windows Server Foundation Edition, an inexpensive Windows Server edition which targets organizations with under approximately a dozen users. While Windows Web Server (formerly called Windows Server Web Edition) can host SharePoint Foundation sites for external clients such as an organization's customers and business partners, Windows Web Server licensing restrictions make it viable only for single server deployments where both SharePoint Foundation components and its SQL Server database run on the same physical machine.

## Specific Product Features

**Q: Users accessing Excel Services or Visio Services via a browser—do they need to license Excel/Visio applications?**

- A:** No. Use of Excel Services and Visio Services is covered by the SharePoint Server 2010 Enterprise CAL. Excel/Visio applications don't need to be installed on nor licensed for clients. However, the subset of users that create spreadsheets hosted by Excel Services will need an Excel license and installation, and the subset of users that author diagrams hosted by Visio Services will similarly need a license for Visio.

**Q: Is Business Connectivity Services included in SharePoint Foundation, or is it something you only get when you buy SharePoint Server 2010?**

- A:** The short answer is the core infrastructure is in SharePoint Foundation, but components that make it usable are exclusive to SharePoint Server 2010.

First introduced in SharePoint Server 2007 as the Business Data Catalog (BDC) and renamed and improved in SharePoint Server 2010, Business Connectivity Services (BCS) enables users to view, update, and search selected data in sources external to SharePoint, such as CRM and enterprise resource planning systems.

The BDC technology stack shipped with SharePoint Server 2007 (i.e., no components were

included with Windows SharePoint Services, the predecessor to SharePoint Foundation) and any use of the BDC triggered the need for the SharePoint 2007 ECAL. However, with the latest release, SharePoint Foundation 2010 includes the core run-time service for BCS as well as components that allow external data to be accessed and displayed in SharePoint lists.

SharePoint Server 2010 adds the components necessary for the following features:

- Displaying information extracted from external systems within a browser (i.e., supporting Web Parts)
- Mapping of account credentials for connecting to external systems (i.e., a SharePoint user account can be mapped to a CRM application account so users get appropriate access through SharePoint)
- Indexing external sources so that they can be searched through SharePoint's enterprise search capabilities or FAST Search (this feature is also provided with Search Server, which requires no CALs)
- Accessing external data from within Office 2010 applications via SharePoint Server.

Each client that makes use of any of the BCS-related components shipped with SharePoint Server 2010 requires an Enterprise CAL. This includes any client submitting search queries to a SharePoint system that indexes external content via the BCS, and any client viewing pages consisting of Web Parts that display data extracted via the BCS.

## SharePoint Foundation

### **Q: Is SharePoint Foundation free for production use?**

**A:** If by "production use" you mean internal use by employees, the answer is yes. You just need to license the servers running SharePoint Foundation with Windows Server 2008 / Windows Server 2008 R2 Standard/Enterprise/Datacenter edition, buy Windows Server 2008 CALs for the clients, and license SQL Server (which SharePoint Foundation is using as the database back-end). [See the preceding question about SQL Server licensing.]

If by "production use" you mean a public Internet site, then instead of buying CALs you'll need to buy a Windows Server 2008 External Connector license (about \$2,000) for each of the SharePoint Foundation servers.

**Q: What search limitations are there in SharePoint Foundation?**

**A:** The major limitations (compared with SharePoint Server 2010's search capabilities):

- Search scope is limited to a single site collection (in other words, users cannot conduct a search across content stored throughout the organization.)
- Search does not crawl external data sources
- Most search capabilities are configured automatically, which among other things limits scalability

## Miscellaneous

**Q: What were the major licensing, pricing, and packaging changes between SharePoint Server 2010 and the 2007 version?**

**A:** Here are the highlights

- Two licenses didn't exist before: the "FAST Search Server 2010 for SharePoint" license and the "SharePoint Server 2010 for Internet Sites, Standard" edition license (note that "SharePoint Server 2010 for Internet Sites, Enterprise" license is the successor to the "SharePoint Server 2007 for Internet Sites" license).
- The set of features licensed by the Enterprise CAL expanded to include several features new to SharePoint Server 2010 (for example, Visio Services, Access Services, and PerformancePoint Services); the price of the ECAL went up 10% to \$83 (highest price a US customer would pay through volume licensing)
- The SharePoint Server 2010 license price went up 10% to \$4,926
- For the first time, SharePoint Server became a prerequisite for use of another Microsoft product—Project Server 2010 requires SharePoint Server 2010. [Start of a future trend?]

**Q: Through which distribution channels is SharePoint offered?**

**A:** Volume licensing only, not retail or OEM channels.

**Q: Can SharePoint Server Enterprise CALs be purchased via Select or Open agreements or just EAs?**

**A:** The SharePoint Server 2010 Enterprise CAL can be purchased under all three (Open, Select, or Enterprise Agreements). Under EAs, the SharePoint Server Enterprise CAL is classified as an “Additional Product”.

**Q: If I am running SharePoint on a VMware VM, and there is an problem with SharePoint, will Microsoft support it or do I need to reproduce the problem on a physical machine?**

**A:** Microsoft will support it within a VM, at least in theory. But I’d suggest reading some of the fine print at <http://www.windowsservercatalog.com/svvp.aspx>, <http://support.microsoft.com/kb/909840>, <http://support.microsoft.com/kb/897615/>, and <http://support.microsoft.com/kb/957006/>. Also, from what I can tell, Microsoft has yet to update its policy to reflect SharePoint Server 2010, so you’d have to assume for the time being that the SharePoint Server 2007 policy will be brought forward.

**Q: If I have two Web front ends running in the same farm do I need a SharePoint Server license for both servers?**

**A:** Yes. If a server has SharePoint Server code running on it, it requires a SharePoint Server license.

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## Boot Camp Instructors

### Rob Horwitz

Rob Horwitz is among the industry's most respected authorities on Microsoft licensing programs, policies, and strategies. Before co-founding Directions on Microsoft in 1992, Rob spent eight years at Microsoft in



software development and technical marketing roles. Rob holds a B.S. in computer science from the Massachusetts Institute of Technology and an M.B.A. from Wharton.

### John Cullen

Before joining Directions on Microsoft, John Cullen spent a decade at Microsoft resolving the most complex licensing issues faced by Microsoft's largest enterprise customers and partners. John brings an insider's



understanding of how Microsoft licensing programs really work and uses this knowledge to teach Boot Camp attendees how to drive maximum value from their Microsoft licensing decisions while staying safely within the rules. John is a graduate of the University of California at Berkeley and received an M.A. in foreign policy from Claremont, a J.D. from the University of Oregon, and a LL.M. in Taxation from the University of Washington.

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## Product Licensing Lay of the Land

Figuring out what licenses are needed—why it's hard  
Rising complexity is not your imagination  
Top reasons licensing got so complex, and will stay that way  
Microsoft licensing models: types and caveats  
*What gets counted, exceptions/inconsistencies*  
*One product, multiple licensees*  
Versions and editions and related terms  
*Product upgrade, step-up*  
*Edition downgrade, version downgrade*  
Use of the word "Enterprise"  
Perpetual vs. subscription licenses  
Upgrades and Software Assurance (quick intro)  
Distribution channels  
Why you'll buy through volume licensing

## Licensing Windows and Office

Windows licensing: general rules, complicating factors  
Office licensing: general rules, complicating factors  
Windows 7 editions comparison  
Office 2007 and 2010 editions comparison  
Windows and Office license prices  
Licensing Windows "desktop" (with Office) for  
*Traditional thick client*  
*Remote boot (e.g., diskless PC)*  
*Application virtualization (App-V)*  
*Local virtual machines and MED-V*  
*Terminal Services*  
*Virtual desktop infrastructure (VDI), VECD*  
*subscription license*  
Windows and Office licensing: major takeaways

## Licensing Windows Server

General rules, complicating factors  
Windows Server editions comparison  
Virtualization licensing rules, scenarios  
Licensing the server, example  
Client Access License (CAL) rules  
Licensing external users  
License prices  
Major licensing changes over last four years

## Licensing Exchange Server

General rules, complicating factors  
Licensing the server  
Virtualization licensing rules  
Server editions: Standard vs. Enterprise  
Licensing the server, example  
Types of Client Access Licenses, rules  
License prices

## Licensing SQL Server

General rules, complicating factors  
SQL Server editions comparison  
Microsoft products that depend on SQL Server  
Licensing choices for Standard and Enterprise  
Common licensing scenarios  
Virtualization licensing rules  
License prices

## Licensing SharePoint Server

General rules, complicating factors  
Types of Client Access Licenses (CALs), rules  
Feature split across CALs: portal, search, document management and business intelligence, infrastructure  
Licensing for Internet/extranet use  
Virtualization licensing rules  
Licensing SharePoint Server, an example  
License prices

## Server Licensing Summary: Similarities/Differences

Licensing models  
Client Access License (CAL) rules  
Core and Enterprise CAL Suites—what's included  
Server edition differentiators  
Server virtualization rules  
Server licensing: major takeaways

## Volume Licensing Concepts

Discounts, points and pools, platforms  
Comparing programs

## Evaluating Software Assurance and Product Roadmap

Drill down on Software Assurance  
Choose what's right for your organization  
Use the product roadmap to maximize value and flexibility

## Maximize Your Savings with Open and Select

Understand Microsoft's Open and Select License  
Pros and cons of using Open and Select  
How to structure purchases under Select for maximum cost savings

## Enterprise Agreements

Products, platforms, and true-ups  
Factors that impact EA value  
Data to support an EA decision

## Essential Resources

Activation and reimaging  
Tools and other resources for pricing and promotions  
Important resources, such as the PUR, price list and product list

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\* Registration includes room accommodations, breakfast and lunch on both days. Travel is not included.

### For Information:

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