

## Supported global solutions for Office SharePoint Server

The following poster-size model provides an overview of the recommended global solutions: [Deploying Microsoft Office SharePoint Server Geographically](http://go.microsoft.com/fwlink/?LinkId=110982&clcid=0x409) [ <http://go.microsoft.com/fwlink/?LinkId=110982&clcid=0x409> ] (<http://go.microsoft.com/fwlink/?LinkId=110982&clcid=0x409>). This model was created in Microsoft Office Visio. If you do not have Visio installed, you can [download a free viewer](http://go.microsoft.com/fwlink/?LinkId=73526&clcid=0x409) [ <http://go.microsoft.com/fwlink/?LinkId=73526&clcid=0x409> ] (<http://go.microsoft.com/fwlink/?LinkId=73526&clcid=0x409>). A plotter works best for printing this file.

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Microsoft currently recommends three different deployment configurations to accommodate geographically dispersed sites that are built with Microsoft Office SharePoint Server 2007 and Windows SharePoint Services 3.0. The three recommended deployment solutions are based on a central site and one or more regional sites. In each of the three, the central site hosts the majority of the SharePoint Products and Technologies solution for an organization.

The primary difference between the three solutions lies in how much of the solution a regional site hosts for itself. The solutions can accommodate multiple regional sites. Multiple regional sites do not have to use the same deployment solution.

This article uses the following definitions for central site and regional site:

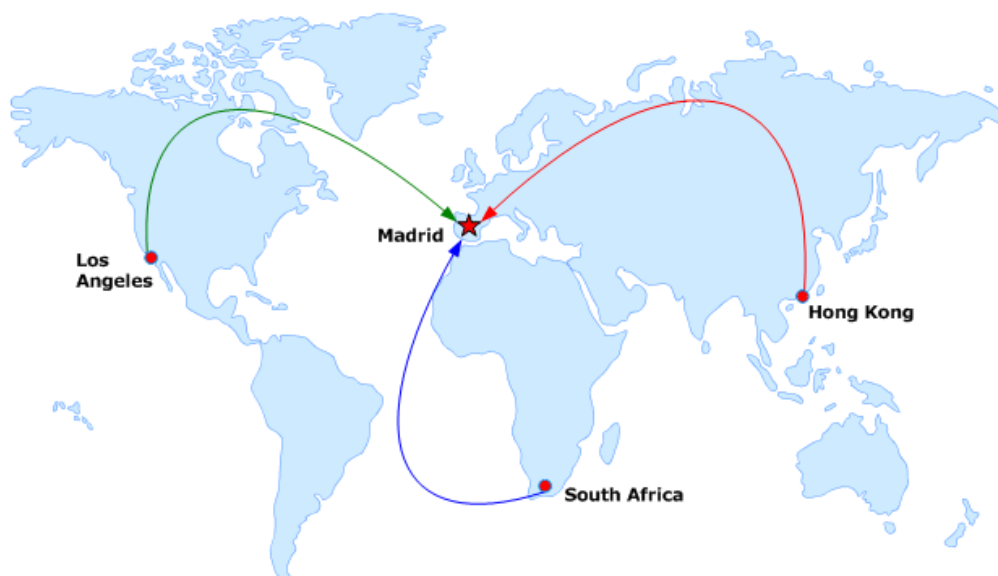
Term	Definition
Central site	The location that hosts the majority of corporate data and/or employee computers connected by using a local area network (LAN). Corporate servers at the central site are typically contained within a data center.
Regional site	<p>A location that hosts a subset of corporate data and/or employee computers connected together by using a combination of LAN and wide area network (WAN) links. A regional site is connected to a central corporate site by using a WAN link.</p> <p>For purposes of this paper, a regional site can be one of the following:</p> <ul style="list-style-type: none"> <li>• A site located in a different region or country.</li> <li>• A site separated by insufficient network links (even if the site is within reasonable proximity to the central site).</li> <li>• A site physically separated from the central site but otherwise well-connected (such as a government agency or branch office).</li> </ul>

The following sections summarize the three supported solutions.

### Central solution

In the central solution, all Office SharePoint Server 2007 components and portal site farm services are hosted at the central site. Users access all services across the WAN.

In the following illustration, the central site is hosted in Madrid. Users at regional sites in Los Angeles, South Africa, and Hong Kong access sites and services from the central site in Madrid over the WAN.



The following table summarizes the sites and services that are hosted at the central site and the regional sites.

Central site hosts for regional sites	Regional sites host
Server farm running Office SharePoint Server 2007, including: <ul style="list-style-type: none"> <li>• Published intranet content</li> <li>• Team or division collaboration sites</li> <li>• My Sites</li> <li>• Enterprise-wide search</li> </ul>	Nothing

The central solution is the recommended solution for environments in which bandwidths and latencies between WAN connections provide a reasonable user experience. This is the easiest of the three supported solutions to maintain and operate.

The central solution typically works well when work sites and users span a single continent. If you support users across low-bandwidth connections or users who are located on multiple continents, it is important to evaluate the bandwidth and latency combinations for these connections along with the expected use of Office SharePoint Server 2007 (page sizes, file sizes, and usage patterns) to gauge how well a central deployment will serve your organization.

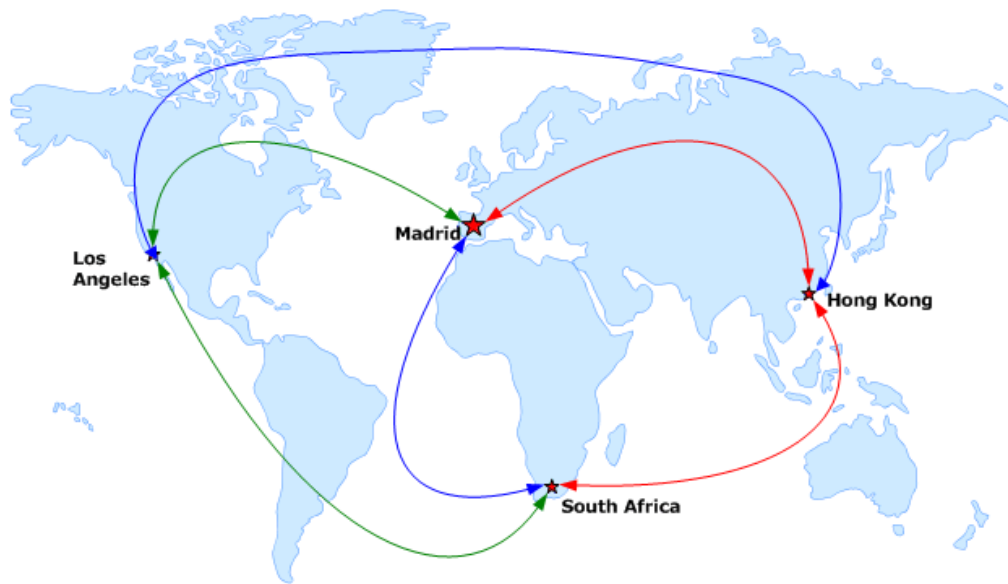
If users are unable to use the sites and services because performance over the WAN is too slow, consider deploying multiple server farms to regional sites. However, before scaling beyond the central solution, evaluate the ways in which you can optimize a central solution to improve performance over the WAN. For more information, see the following resources:

- [Optimizing Office SharePoint Server for WAN environments](http://technet.microsoft.com/en-us/library/cc263099(TechNet.10,printer).aspx) [ http://technet.microsoft.com/en-us/library/cc263099(TechNet.10,printer).aspx ]
- [Optimizing custom Web parts for the WAN](http://technet.microsoft.com/en-us/library/cc263412(TechNet.10,printer).aspx) [ http://technet.microsoft.com/en-us/library/cc263412(TechNet.10,printer).aspx ]

## Central with regional sites solution

The central with regional sites solution includes one centralized site plus regional sites where Office SharePoint Server 2007 is running at each of the regional sites. Users collaborate with their local teams on the local server farm. Users access all enterprise-wide features across the WAN. The Trusted My Site Host Locations feature is implemented to ensure that users are directed to the Shared Services Provider (SSP) intended for their profile.

In the following illustration, the central site is hosted in Madrid. Server farms running Office SharePoint Server 2007 are also deployed at each of the regional sites in Los Angeles, South Africa, and Hong Kong. The bi-directional arrows show that collaboration takes place across regional sites in addition to collaboration with the central site.



The following table summarizes the sites and services that are hosted at the central site and the regional sites.

Central site hosts for regional sites	Regional sites host
<p>Server farm running Office SharePoint Server, including:</p> <ul style="list-style-type: none"> <li>• Published intranet content.</li> <li>• Enterprise-wide search (optional).</li> <li>• My Site redirection (Trusted My Site Host Location). This ensures that a user coming from a regional farm is redirected to the My Site on the farm where their profile resides.</li> <li>• Profile synchronization (optional).</li> <li>• Aggregation of content developed at regional sites (optional).</li> </ul>	<p>Server farm running Office SharePoint Server, including:</p> <ul style="list-style-type: none"> <li>• Team or division collaboration sites.</li> <li>• My Sites with My Site redirection. This ensures that a user coming from the central farm or another regional farm is redirected to the My Site where their profile resides.</li> <li>• Search for local content.</li> </ul>

Deploying Office SharePoint Server 2007 at regional sites is recommended if the performance of WAN connections makes it difficult for regional users to efficiently use the central site and you are unable to optimize the central solution to improve WAN performance to acceptable levels.

The central with regional sites solution provides local access to services that regional users are likely to use most — for example, collaboration sites and My Sites. It also provides local search for local content. However, this solution increases the complexity and operations costs of the overall solution. This solution also requires greater organizational coordination to build effective governance of content that is authored in multiple geographic locations.

A profile synchronization tool that can be implemented in your environment is available through Microsoft Services. The profile replication tool synchronizes profiles from a central site to all regional sites. For more information, contact [Microsoft Services](#) [ <http://go.microsoft.com/fwlink/?LinkId=108403&clid=0x409> ] ( <http://go.microsoft.com/fwlink/?LinkId=108403&clid=0x409> ).

For more information about My Site redirection, see [Manage My Site host locations](#) [ [http://technet.microsoft.com/en-us/library/cc263115\(TechNet.10,printer\).aspx](http://technet.microsoft.com/en-us/library/cc263115(TechNet.10,printer).aspx) ] .

## Distributed solution

The distributed solution includes a number of regional sites, each of which operates autonomously from other regional sites. This solution includes a centralized portal site, but the solution is not optimized for collaboration across regional sites.

In the following illustration, the central site is hosted in Madrid. Regional sites are hosted at various cities around the world. Each regional site is connected only to the central site.



The following table summarizes the sites and services that are hosted at the central site and the regional sites.

Central site hosts for regional sites	Regional sites host
<p>Server farm running Office SharePoint Server, including:</p> <ul style="list-style-type: none"> <li>• Published intranet content.</li> <li>• Aggregation of content developed at regional (for example, for reporting or for records retention).</li> <li>• My Site redirection and profile synchronization if Office SharePoint Server is used at the regional sites (optional).</li> </ul>	<p>Either:</p> <ol style="list-style-type: none"> <li>1. Server farm running Office SharePoint Server, including: <ul style="list-style-type: none"> <li>○ Team or division collaboration sites.</li> <li>○ My Sites with My Site redirection.</li> <li>○ Search for local content.</li> <li>○ Read-only copy of published intranet content (optional).</li> </ul> </li> <li>2. Server farm running Windows SharePoint Services 3.0 including: <ul style="list-style-type: none"> <li>○ Team or division collaboration sites.</li> <li>○ Windows SharePoint Services search scoped to the site collection.</li> </ul> </li> </ol>

The distributed solution is recommended for organizations that have many offices distributed geographically, such as branch offices. This solution provides local access to collaboration sites at the regional office. It also provides the ability to share content between a regional site and the central site. For example, the central site can publish content to regional sites for local access. Regional sites can upload content to the central site to consolidate content or to share regional data.

Because of the number of regional sites, it might not be practical to provide enterprise-wide search in which the central site crawls content on each of the regional sites. However, in a distributed model in which the regional sites are largely autonomous, you can provide users access to content beyond their regional site in the following two ways:

- Implement a governance strategy in which regional sites upload or publish content relevant to the entire organization to the central site. Enable regional users to connect to the central site to search on this content.
- Publish or upload targeted content from the central site to each of the regional sites. Users can search on this content by using their local search service.

## Comparison of supported solutions

The following table compares considerations across the three solutions.

Item	Central solution	Central with regional sites solution	Distributed solution
Overall recommendations	<p>Preferred if the available network bandwidth across the WAN provides a satisfactory experience for regional users. Advantages include:</p> <ul style="list-style-type: none"> <li>• No redundant hardware or services.</li> <li>• Least complex administration.</li> <li>• Consistent experience for regional users (search, My Sites, alerts, and profiles).</li> </ul>	<p>Use only if the available network bandwidth does not support the use of portal site services and features over the WAN or if the user experience is unacceptable for most SharePoint site use.</p> <p>Performance of collaboration within each regional site is greatly improved.</p> <p>Collaboration across the central and regional sites is possible, but performance depends on the WAN links.</p>	<p>Use if the available network bandwidth does not support the use of a central solution and there are many regional sites.</p> <p>This solution does not provide collaboration for teams working across geographical sites. However, this solution greatly increases the performance of collaboration sites within each regional site.</p>
Administration	<p>Centralized — all server hardware and server farm services are hosted at the central site.</p>	<p>Requires regional management of the server farm and services.</p>	<p>Requires regional management of the server farm and services.</p>
WAN bandwidth	<p>All content must be transferred over the WAN. The user experience is dependent on the available bandwidth.</p> <p>However, the bandwidth load is generated only by the regional users. The central server farm search services do not crawl data at the regional sites, which reduces bandwidth requirements.</p>	<p>Collaboration within regional farms does not affect WAN communication.</p> <p>Profile synchronization uses WAN connections to synchronize profile information across SSPs in all regional farms.</p> <p>If the regional site chooses to use enterprise-wide search services, network bandwidth across the WAN is required to send and receive results to search queries and to download content associated with search queries.</p> <p>Additionally, if the regional site chooses to be included in enterprise-wide search scopes, the central site search service uses a significant amount of bandwidth to crawl the regional content. Search can consume all network resources on the WAN link when in operation over that link.</p>	<p>Collaboration within regional farms does not affect WAN communication.</p> <p>Profile synchronization uses WAN connections to synchronize profile information across SSPs in all regional farms.</p> <p>Content sharing between regional sites and the central site is subject to WAN connections.</p> <p>Because of the number of regional sites, it might not be practical to provide enterprise-wide search in which the central site crawls content on each of the regional sites.</p> <p>However, if the regional site chooses to use enterprise-wide search services, network bandwidth across the WAN is required to send and receive results to search queries and to download content associated with search queries.</p>
Capacity planning	<p>The greatest consideration when planning for capacity at the central site is the available network bandwidth to the regional site.</p> <p>For more information, see <a href="http://technet.microsoft.com/en-us/library/cc262952(TechNet.10,printer).aspx">Plan for bandwidth requirements</a> [ http://technet.microsoft.com/en-us/library/cc262952(TechNet.10,printer).aspx ] .</p>	<p>Capacity of the regional server farm can be calculated by using the standard capacity planning guidelines. For more information, see <a href="http://technet.microsoft.com/en-us/library/cc262971(TechNet.10,printer).aspx">Plan for performance and capacity (Office SharePoint Server)</a> [ http://technet.microsoft.com/en-us/library/cc262971(TechNet.10,printer).aspx ] .</p> <p>If the central site is providing enterprise-wide search to regional sites, be sure to calculate this additional load for the central farm.</p>	<p>Capacity of the regional server farm can be calculated by using the standard capacity planning guidelines.</p> <p>If the central site is providing enterprise-wide search to regional sites, be sure to calculate this additional load for the central farm.</p>


Search	<p>Search is hosted entirely at the central site, either by the central farm or by a farm dedicated to hosting shared services.</p> <p>The central search service provides enterprise-wide search. Search administrators at the central farm can also create custom search scopes that are specific to each region. This provides a way for regional users to search only on content that is hosted at their local site.</p>	<p>The regional site can use any (or none) of the following search options:</p> <ul style="list-style-type: none"> <li>Regional search hosted by the regional server farm.</li> <li>Enterprise-wide search hosted by the central site. This can be configured to include or not include content from the regional farm. If the enterprise-wide search includes content from the regional farm, WAN bandwidth is used to crawl the regional farm content.</li> <li>Regional search scopes hosted by the central site (requires adequate WAN links to crawl the regional content).</li> </ul>	<p>The regional site provides regional search.</p> <p>Because of the number of regional sites, it might not be practical to provide enterprise-wide search in which the central site crawls content on each of the regional sites.</p> <p>However, users at the regional site can search content at the central site. The central site can also publish selected content to regional sites so this content is available locally for local search.</p>
Site directory (optional)	<p>Some site templates include a site directory. You can use a site directory to list sites that are relevant for specific regional offices.</p>	<p>Team sites on regional farms can be connected to your central farm by manually listing these sites in a site directory.</p> <p>Targeted sites on the central farm can be listed in the site directory of a regional site.</p>	<p>Team sites on regional farms can be connected to your central farm by manually listing these sites in a site directory.</p> <p>Targeted sites on the central farm can be listed in the site directory of a regional site.</p>
Crawling content sources	<p>A single SSP is recommended for providing enterprise-wide search. Implementing more than one SSP does not allow relevancy to be applied across all of the content.</p>	<p>To provide enterprise-wide search, add a content source for each region. Increase the change log retention time on Web applications on regional farms to coordinate with the incremental crawl schedule.</p>	<p>To provide enterprise-wide search, add a content source for each region. Increase the change log retention time on Web applications on regional farms to coordinate with the incremental crawl schedule.</p>
My Sites	<p>A single SSP can host My Sites for the organization.</p>	<p>Host My Sites at the region closest to users. Use the Trusted My Site Host Locations feature to ensure that users create only one My Site in the SSP intended for their use.</p>	<p>Host My Sites at the region closest to users. Use the Trusted My Site Host Locations feature to ensure that users create only one My Site in the SSP intended for their use.</p>
User profiles	<p>User profiles are managed at the central site only.</p>	<p>To replicate profile information between the central and regional farms, implement the profile replication tool. Contact <a href="#">Microsoft Services</a> [ <a href="http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409">http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409</a> ] (<a href="http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409">http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409</a>).</p>	<p>To replicate profile information between the central and regional farms, implement the profile replication tool. Contact <a href="#">Microsoft Services</a> [ <a href="http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409">http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409</a> ] (<a href="http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409">http://go.microsoft.com/fwlink/?LinkId=108403&amp;clcid=0x409</a>).</p>
Globalization	<p>Sites or site collections can be created in different languages by using language packs. Additionally, site variations allow site owners to publish content translated in different languages in the same site collection. However, the Central Administration site and Shared Services Administration sites are provided in a single language.</p>	<p>Same as central solution.</p>	<p>Same as central solution.</p>

Backup and recovery	All backup and recovery procedures are completed at the central site.	Performing backup and recovery procedures across the WAN is not recommended. Backup and recovery tasks must be completed at regional sites.	Performing backup and recovery procedures across the WAN is not recommended. Backup and recovery tasks must be completed at regional sites.
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## Accommodating organizational scenarios

In some cases, the choice of which of the three deployment solutions to implement is determined more by the way an organization does business than by the features provided the solutions. If the sites are reasonably well connected, the available bandwidth is not the primary consideration in choosing which solution to use. Rather, accommodating the organizational deployment scenario or facilitating a certain mode of doing business is the primary consideration.

The following table provides recommendations based on several common organizational deployment scenarios.

Scenario	Central solution	Central with regional sites solution	Distributed solution
State government supporting multiple independent state agencies	<p>Recommended. Works well for agencies that:</p> <ul style="list-style-type: none"> <li>Do not want to host their SharePoint sites.</li> <li>Are well connected by network links.</li> </ul> <p> <b>Note</b></p> <p>For agencies that require physical isolation of sensitive data, the central site can host a separate server farm.</p>	<p>Allows agencies to host their own portal site solutions while providing the option to participate in enterprise-wide search.</p> <p>Requires IT staff at the agency site to deploy and operate the server farm.</p> <p>Consider this option for agencies that:</p> <ul style="list-style-type: none"> <li>Want to host their own data and have IT staff to implement this solution.</li> <li>Are not well connected by network links.</li> </ul>	<p>Consider for agencies that:</p> <ul style="list-style-type: none"> <li>Require separate and partitioned search solutions and profile management to protect sensitive data.</li> <li>Require a portal site solution that performs well but are not well connected by network links.</li> </ul>
Traveling or dispatched workgroups — for example, military units, cruise lines, or dispatched research teams	<p>Use only if:</p> <ul style="list-style-type: none"> <li>Traveling workgroups can establish a reasonable connection to the central site (at about 1-10 megabits per second or more).</li> </ul> <p>—Or—</p> <ul style="list-style-type: none"> <li>Traveling workgroups do not require access to the central site while away from the corporate LAN.</li> </ul>	Does not apply	<p>Works well for traveling workgroups that meet the following criteria:</p> <ul style="list-style-type: none"> <li>Server hardware travels with the workgroup.</li> <li>Traveling workgroups mostly use sites that are locally hosted (rather than the central portal site).</li> <li>The workgroup includes a team member who can maintain and operate the server farm.</li> </ul>
Central site supporting many branch offices	<p>Recommended. Consider whether the investment in network bandwidth to support this solution is a better return on investment when compared to the costs of hosting server farms at multiple branch offices.</p>	<p>Might work well in scenarios where several branch offices can host a server farm for nearby branch offices. For example, a branch office in Madrid can host a server farm that is used by all branch offices in Western Europe.</p>	<p>Consider option if:</p> <ul style="list-style-type: none"> <li>Branch offices are not well connected.</li> <li>Content hosted by a branch office does not need to be available to other sites.</li> <li>Branch offices include a team member who</li> </ul>

			can maintain and operate the server farm.
Adoption of additional Office SharePoint Server 2007 solutions through mergers or acquisitions	<p>Use as the final stage of migrating the merged or acquired unit to the central site by performing the following tasks:</p> <ul style="list-style-type: none"> <li>• Migrate the regional solutions and any remaining portal site content to the central site.</li> <li>• Configure crawling and search scopes at the central site to accommodate business requirements at the acquired site.</li> </ul>	<p>Use as the first or second stage in centralizing the SharePoint Products and Technologies solution by performing the following tasks:</p> <ul style="list-style-type: none"> <li>• Provide the acquired site access to the central portal site and enterprise-wide search capabilities.</li> <li>• Maintain the Office SharePoint Server 2007 or Windows SharePoint Services 3.0 sites at the acquired site.</li> <li>• Optionally crawl the content at the acquired site to include this content in enterprise-wide search scopes.</li> <li>• Migrate the solution hosted at the acquired site to the central site. Alternatively, remove the portal site at the acquired site if there is no loss of required functionality.</li> </ul>	<p>Use as the first stage in centralizing solution by performing the following tasks:</p> <ul style="list-style-type: none"> <li>• Provide the acquired or merged site access to the central portal site.</li> <li>• Optionally, crawl the content at the acquired or merged site to include this content in enterprise-wide search scopes.</li> </ul>

## See Also

### Concepts

[Extending Office SharePoint Server global solutions with Office Outlook 2007 and Office Groove software](http://technet.microsoft.com/en-us/library/cc262878(TechNet.10,printer).aspx)

[ [http://technet.microsoft.com/en-us/library/cc262878\(TechNet.10,printer\).aspx](http://technet.microsoft.com/en-us/library/cc262878(TechNet.10,printer).aspx) ]

[Optimizing Office SharePoint Server for WAN environments](http://technet.microsoft.com/en-us/library/cc263099(TechNet.10,printer).aspx) [ [http://technet.microsoft.com/en-us/library/cc263099\(TechNet.10,printer\).aspx](http://technet.microsoft.com/en-us/library/cc263099(TechNet.10,printer).aspx) ]