

Enterprise Unified Communication and Collaboration (EUCC) SharePoint

Service Description Version 2.00

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Purpose

This Enterprise Service Description is applicable to **Enterprise Unified Communication and Collaboration (EUCC) SharePoint** services offered by the MN.IT Services (MN.IT) and described in the MN.IT Service Catalog. This document describes the services and features that are included with the **Enterprise Unified Communication and Collaboration (EUCC) SharePoint** offering.

Overview

EUCC SharePoint is a managed collaboration solution from MN.IT that provide an organization's employees with a way to efficiently work together, quickly locate organizational resources, search for experts and corporate information, manage content and workflow, and gain business insight to make better-informed decisions. Built on the capabilities of Microsoft SharePoint 2010 technology, and hosted in reliable, security-enhanced data centers, EUCC SharePoint is a standardized service that provides an end-to-end solution delivered over the Internet, offering functionality that the customer can use immediately.

EUCC SharePoint offers flexible, web-based tools and services to build and host a robust portal for customer organizations, and to help users manage information and collaborate effectively with others. It

enables users to easily create, manage, and customize team-focused and project-focused sites for collaboration and personal productivity. Users get the control and flexibility they require for their collaboration without the need for building and maintaining an on-premises IT infrastructure.

Benefits

In today's workplace, having an easy and efficient way to collaborate with coworkers is vital. EUCC SharePoint provides features and tools that customers can use to create an agile collaboration environment, including most out-of-box SharePoint 2010 features, as well as additional EUCC SharePoint service enhancements, including:

- Self-service SharePoint site creation using templates for a variety of functions, including online discussion areas, shared document and meeting workspaces, document libraries with version control, and surveys.
- Scalability to hundreds of thousands of sites within an organization, with the ability for managers to delegate site creation to others.
- Dedicated infrastructure and physical space in Microsoft data centers, which provide logical and physical security while delivering at least 99.9% service availability.
- Infrastructure upgrades to the most current version of SharePoint included at no extra charge.
- Robust information portals.
- Content management features for documents, web content, and in-place records management.
- Self-service document restore and data recovery from the Recycle Bin.
- Ability to search SharePoint site content across the entire organization.
- Email alerts when documents and information have been changed or added to a site.
- Ability to develop full trust custom solutions.
- Pre-production environment to validate custom solutions prior to production deployment.
- Enhanced security for Internet access by using 1024-bit encryption and antivirus scanning.
- Microsoft Office Web Apps, which give the user the freedom to access, edit, and share Microsoft Office documents from virtually anywhere on a PC, mobile phone, and web browser (Internet Explorer®, Firefox, and Safari).
- Users can be located based on their responsibilities, skills, memberships, past projects, and other attributes.
- Users can tag content to make it more discoverable, through a combination of taxonomy which is predefined by the organization and folksonomy which is generated within a community.

The features of the EUCC SharePoint service are available without the time and expense required to build out and operate an on-premises IT infrastructure. The service reduces the burden of routine IT management and frees IT resources to work on strategic initiatives that move an organization forward. Customers benefit from reduced costs associated with updates and upgrade events. In addition, this enterprise-ready service is delivered from world-class Microsoft data centers using applications and processes that meet rigorous technical auditing requirements.

For more information about the benefits of SharePoint 2010, visit the Microsoft SharePoint 2010 product overview website (<http://sharepoint.microsoft.com/en-us/Pages/default.aspx>). EUCC SharePoint does not support all of the features that may be contained in an on-premises deployment of SharePoint 2010. Some of these unsupported features are not compatible with a hosted service, and others are not yet available but may be included in a future release. For a list of the features that are

currently available with EUCC SharePoint, see “Appendix A: EUCC SharePoint Supported Feature List”, and for a list of features that are not supported, see “Unsupported Features”, both later in this document.

The core feature areas that are available to EUCC SharePoint users can be grouped into six standard categories:

- Sites
- Communities
- Content
- Search
- Insights
- Composites

Sites

EUCC SharePoint empowers users to increase their productivity through information management. Users are able to share information with coworkers quickly and easily. Sites are accessible across a wide range of devices and browsers from the desktop PC, to web kiosks, to mobile devices, and can be taken offline by using SharePoint Workspace 2010.

Customers can use a wide variety of portal and collaboration templates to quickly build dynamic intranet and extranet sites. Users also have a wide array of useful out-of-the-box Web Parts, including calendar, tasks, lists, and links. With audience targeting, users can select a specific group of individuals to share and review information, and to control distribution of content. Likewise, with the new tagging functionality, all content can be tagged using a predefined taxonomy or a community-generated folksonomy to provide faster discovery of the information.

My Sites provide social and collaboration interaction across teams, departments, and organizations. For more information about My Sites, visit Microsoft SharePoint 2010: Sites (<http://sharepoint.microsoft.com/en-us/product/capabilities/sites/Pages/default.aspx>) on the product overview website.

Search

SharePoint 2010 Search reduces the time required to find people, expertise, and content, by enhancing the search experience with "Did you mean?" and related queries that help users find the right information by using information that they have learned from previous queries.

Social behavior has been integrated into the Search feature, so that search queries are ranked based on the user base of such queries. In addition, users can view results in the browser directly from the search results page, for an interactive web experience with documents without opening a Microsoft Office client application.

Note: Some Search features, such as searches based on Business Connectivity Services, are not currently supported. All unsupported features are described in “Unsupported Features” later in this document.

With the new people and expertise search capabilities, EUCC SharePoint uses phonetic matching and nickname expansion to help find the right people faster. For more information about SharePoint 2010 Search, visit Microsoft SharePoint 2010: Search (<http://sharepoint.microsoft.com/en-us/product/capabilities/search/Pages/default.aspx>) on the product overview website.

Enterprise Search

Helping users find the right information, file content, and people is the purpose of the enterprise search feature (which is included with both the Standard and Enterprise editions of SharePoint). Users can search their EUCC SharePoint environment to find the resources and expertise they seek. EUCC SharePoint supports the following new search query capabilities:

- Boolean query syntax for free-text queries and property queries
- Prefix matching for search keywords and document properties
- Suggestions while typing search queries
- Suggestions after running queries
- Federated search connectors for searching the enterprise from Windows 7

For more information about the EUCC SharePoint search feature, see the following resources:

- What's new in enterprise search (Microsoft SharePoint Server 2010) ([http://technet.microsoft.com/en-us/library/ee667266\(office.14\).aspx](http://technet.microsoft.com/en-us/library/ee667266(office.14).aspx)) TechNet article
- Getting Started: Search (<http://technet.microsoft.com/en-us/sharepoint/ee518667.aspx>) video presentation

The enterprise search feature in EUCC SharePoint has the following limitations:

- Search indexing is limited to 20 million items by default. More search indexing capacity is included with additional storage capacity, which is available at an additional cost. Those customers who require search indexing of more than 80 million items should contact Microsoft to review the available options.
- All federated services must use HTTPS. Otherwise, users will experience difficulties, error messages, and warning messages while browsing their SharePoint search results. For more information about searches based on federated trust, see Federated Search Overview (<http://msdn.microsoft.com/en-us/library/cc806030.aspx>) in the MSDN Library.
- Connections to external content sources outside of the EUCC SharePoint environment can have a maximum latency of 100 milliseconds between the EUCC SharePoint servers and the content source.
- By default, enterprise search indexes only the first 16 MB of content per file, so a file larger than that will not be completely indexed. Depending on the file type, enterprise search may not index the file at all if it cannot be indexed fully.

Enterprise Search Configuration Options

For enterprise search configuration, customers should determine what content should be indexed. EUCC SharePoint supports the indexing of content from SharePoint 2010. Through the development or purchase of a third-party protocol handler, other systems can also be indexed.

To complete configuration, it is important to ensure that the account used to crawl the data source has appropriate permissions and access to the content. After the customer validation of the service, Microsoft will work to ensure that the content is indexed appropriately, and that crawl schedules are established.

MN.IT's administrators receive information about how this content can be included in any local search scopes that are created by the customer. Customers can submit a configuration request through MN.IT to change which content is indexed, or the frequency of the crawl schedule.

Important: *It is critical for the customer to define which internal content sources outside of the local SharePoint deployment should be indexed and included in searches, and to provide a service account to crawl non-SharePoint sources.*

Communities

The Communities features help keep teams connected and productive by providing easy access to the people, documents, and information they need to make well-informed decisions within their jobs. My Sites contain rich information about users, including biographical information, job title, location, contact information, interests, and more. My Sites also provide users with a central location to manage and store content for their own use, content to be shared, links, and contacts. This makes working together and collaborating with the right people and subject matter experts much easier.

To help personalize communities by making it easier to identify and connect with people, EUCC SharePoint provides a photo and presence status next to any person's name (the requirements for presence status are described in "Presence Integration" later in this document). Also, the Status Updates and Note Board, located in each user's My Site, are a great way to stay connected with colleagues, post comments, and ask questions.

With the organization browser feature, users can navigate smoothly through their organizational structures to find peers and management chains. Users can also add different colleagues to specific groups. With the new tag functionality, users can classify and organize a great amount of information, and navigate through the tag taxonomy using the tag cloud functionality.

Blogs and wikis are greatly enhanced, with improved commenting, editing, and content management features for documents, and in-place records management at a site collection level. Users can also use the new five-star ratings feature to rate pages, lists, libraries, or even individual documents to help search and discover the best content faster.

For more information about the Communities features, visit Microsoft SharePoint 2010: Communities (<http://sharepoint.microsoft.com/en-us/product/capabilities/communities/Pages/default.aspx>) on the product overview website.

User Profiles

User profiles are a combination of user-supplied personal information and data imported to EUCC SharePoint from the customer's Active Directory. Profile data is first synchronized with the user directory, then supplemental data is added to the profile. EUCC SharePoint synchronizes with user directories to prepopulate the profile store with data found in the user directory, and optionally

combines that with line-of-business (LOB) data and user-provided data. This augmented data can come from a user directory, from LOB systems, or from the user.

When the service is initially set up, EUCC SharePoint runs a full import, and does not update, alter, or process the information imported from the systems. EUCC SharePoint then runs an incremental import on a daily basis. If the directory doesn't support incremental updates, a full import is run weekly. It is the customer's responsibility to ensure that the source is accurate and complete. Any changes to the data must be done by the customer on the source systems. EUCC SharePoint should not be the authoritative source for content that is also found in a customer's directory service.

Insights

Utilizing Insights features, users can make well-informed business decisions using powerful analytics. New visualizations and rich analytics features enable users to easily convey the right information graphically. Other Insights features include Visio Services, which allows a user to publish and share Microsoft Visio diagrams directly in the browser, as well as an enhanced number of chart Web Parts that empower users to manage and generate their own dashboards. With the new simplified navigation, users can analyze scorecards to better understand issues.

With Excel Services in SharePoint 2010, additional workbook types and new features introduced in Excel 2010 are now supported. Users can publish and run spreadsheets created with Excel 2010, rendering the workbooks via HTML in the browser. With Excel Services 2010, new programmability features are introduced, including a new JavaScript object model that allows users to create interactive applications with the existing workbooks.

For more information about the Insights features, see Microsoft SharePoint 2010: Insights (<http://sharepoint.microsoft.com/en-us/product/capabilities/insights/Pages/default.aspx>) on the product overview website.

Content

Content features provide easier management of the content life cycle. The Content Organizer removes the burden of classification from the user by automatically routing content to the appropriate location, based on content type and metadata values. Microsoft Office integration allows Microsoft Office applications to discover the SharePoint libraries a user interacts with, making these libraries quickly available for opening and saving files.

Additionally, unique document IDs help users manage and track information quickly. The shared content types and managed metadata service allow for different content types to be shared across site collections, defining and managing taxonomies and folksonomy.

For more information about the content features, visit Microsoft SharePoint 2010: Content (<http://sharepoint.microsoft.com/en-us/product/capabilities/content/Pages/default.aspx>) on the product overview website.

Records Center

A Records Center site is a central repository that can be used to store and manage content such as legal or financial documents that require records management and retention programs. These sites include built-in features of versioning, auditing, metadata management, eDiscovery, and customizable record routing. The functionality of a Records Center site can extend by connecting other content management systems or business processes through Records Center web services.

Note: *Records Center sites in the EUCC SharePoint environment do not support inbound email integration.*

Content Management

The content management features in SharePoint 2010 that are supported by EUCC SharePoint fall within two categories:

- **Document management.** These features help enhance the administration and management of documents in an organization—how they are created, reviewed, published, and accessed.
- **Web content management.** These features are useful for designing, deploying, and managing enterprise intranet portals and divisional portal sites.

Composites

Composites features provide the ability to create dynamic business solutions. With Business Connectivity Services (BCS), users can read from and write back to enterprise data sources as easily as if they were SharePoint lists.

Database versioning problems can be eliminated by publishing Microsoft Access® 2010 databases to SharePoint 2010 with Microsoft Access Services, reducing governance risks.

Customers can use SharePoint Designer 2010 to rapidly create solutions in their EUCC SharePoint environment, and can reuse them as well. Likewise, the new Forms Services features of the Microsoft InfoPath® 2010 information gathering program can be used in conjunction with InfoPath 2010 to build advanced forms that connect to LOB systems.

Sandboxed solutions are a Composites feature that enables the deployment of custom solutions as partially trusted code, and then controls the level of resources that those solutions can utilize. Customers have increased agility to bring these customizations to production. For details, see “Sandboxed Solutions” later in this document.

For more information about the Composites features, visit Microsoft SharePoint 2010: Composites (<http://sharepoint.microsoft.com/en-us/product/capabilities/composites/Pages/default.aspx>) on the product overview website.

Standard Features

This section describes in detail the service features and specifications of the EUCC SharePoint service.

Content Storage Allocation

The default SharePoint Online content storage allocation for a customer is calculated by multiplying the number of Standard and Enterprise user licenses purchased by 250 megabytes (MB). This total is aggregated for the entire organization and shared among all users. For example, an organization of 5,000 standard users has 1,250,000 MB—1.19 terabytes (TB)—of content storage. The content storage allocation excludes any storage that is attributed to backups, second-stage (administrator) Recycle Bins, or index size. Customers have the option of purchasing additional storage in 1-GB increments charged on a per-month basis. SharePoint Online supports a maximum of 120 TB of storage at this time, and a maximum of 300 content databases per customer farm. For more information, see the TechNet article SharePoint 2010 capacity management: Software boundaries and limits (<http://technet.microsoft.com/en-us/library/cc262787.aspx#section3>).

SharePoint Web Applications and Site Types

EUCC SharePoint includes three types of SharePoint sites that are hosted by three different SharePoint web applications. The Connect and Inside web applications are used to create SharePoint sites for collaboration, while the People web application hosts the My Sites of individual users. Each web application has a unique URL.

It is important to understand the differences between the various site types, in order to understand the features and specifications of EUCC SharePoint. The following tables describe the EUCC SharePoint web applications and the different types of sites.

Table 1. SharePoint Web Applications

Web Application	Description
inside.mn.gov	This web application is typically used for intranet and collaborative sites for users <u>inside</u> a single organization.
connect.mn.gov	This web application is typically used for collaborative sites that <u>connect</u> users from multiple organizations.
people.mn.gov	This web application hosts My Sites and provides the interface for viewing profile details, search results of users, tag clouds, and other personal site content associated with individual <u>people</u> .

Table 2. SharePoint Site Types

Site Type	Description	Storage Quota		Maximum Number of Site Collections
		Default	Max.	
Standard site collection	A collaboration site where many users and team members can contribute. Site collections can be created in directories under the Inside or Connect web applications using different templates like the team site or portal template. Examples: https://connect.mn.gov/sites/TeamA https://inside.mn.gov/sites/PortalA	2 GB	100 GB	Unlimited, within purchased storage allocation
Extra-large (XL) site	A type of site collection that can have more space allocated than the standard site collection. Occupies its own content	200 GB	400 GB	Unlimited within purchased

Site Type	Description	Storage Quota		Maximum Number of Site Collections
		Default	Max.	
collection	<p>database pre-grown to either 200 or 400 GB (maximum of 300 content databases per farm).</p> <p>Examples: https://connect.mn.gov/sites/XLSiteB https://inside.mn.gov/sites/XLSiteB</p>			storage allocation
Records Center site collection	<p>A type of site collection used as a central repository to store and manage content that requires records management and retention programs such as legal or financial documents. Offers the storage of an extra-large site collection as well as built-in features of versioning, auditing, metadata management, eDiscovery, and customizable record routing. Occupies its own content database pre-grown to either 200 or 400 GB (maximum of 300 content databases per farm).</p> <p>Examples: https://connect.mn.gov/sites/RCSiteC https://inside.mn.gov/sites/XLSiteC</p>	200 GB	400 GB	Shares the same limit with XL site collections
My Site	<p>A My Site is a SharePoint site collection for an individual user that provides integrated collaboration features and storage. This site is provisioned at the time when a user first navigates to the My Site.</p> <p>Example: https://people.mn.gov/personal/alias</p>	1 GB	5 GB	Unlimited, within purchased storage allocation

** All site collection owners receive a notification when the storage use for a site is approaching the storage quota. For example, the owner of a 2-GB site collection receives notification when the usage reaches 1.5 GB.*

Note: To request a storage quota increase up to the maximum quota limit, users can submit a service request (SR) via the MN.IT help desk. SRs must be submitted on a site-by-site basis.

File Upload Size

The maximum file size that a customer can upload to an EUCC SharePoint site is 250 MB. Although a site can accept files of this size, the customer's ability to upload large files is dependent on the connectivity capabilities from the customer to the EUCC SharePoint service. Bandwidth and network latency may effectively prevent uploading of very large files.

Site Use Confirmation

An EUCC SharePoint site collection might be created and actively used for a period of time, but then no longer needed. Such unused site collections still occupy part of the storage allocation that is available to a customer. To mitigate the amount of storage consumed by unused site collections, newly created sites are added to an internal database and logged as an active site. After a specified time interval, the

site owner is sent an email notification asking the owner to either confirm that the site is active or delete the inactive site.

Note: *The site use confirmation feature does not apply to My Sites. My Sites are not automatically deleted if a site is not used, or when a user is removed from the user directory. Instead, the user's manager is assigned ownership of the My Site and has control over whether and when to delete the site.*

SSL Security

All URLs are secured with Secure Sockets Layer (SSL) certificates and have an HTTPS address for access. All URLs are directly accessible from the Internet.

Service Configuration Requests

The EUCC SharePoint service and the web applications within that environment are initially provisioned for new customers with a standard configuration. After service delivery, many of the configurations for the service can be changed at the customer's request. MN.IT maintains a list of the available configurations along with a configuration request (CR) template used to request each configuration type. MN.IT maintains a Development Environment (DEV) that can be used for testing proposed configuration changes.

User Access

EUCC SharePoint users can access the service using supported Microsoft Office applications, web browsers, and mobile devices. Further details are presented in the sections that follow.

Integration with Microsoft Office Applications

Microsoft Office 2010 supports rich integration with EUCC SharePoint. Users can interact with SharePoint sites without leaving their Microsoft Office applications and two-way synchronization is available with documents that are stored on SharePoint sites.

EUCC SharePoint can be used with the following Microsoft Office client applications:

- Microsoft Office 2010 (or Microsoft Office 2007 SP2 plus the April 2009 Cumulative Update)
- Microsoft SharePoint Designer 2010
- Microsoft SharePoint Workspace 2010

Browser Support

Users can choose among several popular web browsers to access EUCC SharePoint sites and information. Several widely used web browsers are supported to work with all the features and functionality of SharePoint 2010. However, certain browsers are supported with limitations; these known limitations might cause some Microsoft SharePoint Server 2010 functionality to be limited or available only through alternative steps (see Tables 4 and 5). For these browsers, functionality might be unavailable for noncritical administrative tasks.

Note *Some browsers (including Microsoft Internet Explorer 6.0) are not supported at all. As part of planning a migration to the EUCC SharePoint service, we recommend that customers review the browsers used in their organizations to ensure optimal performance with SharePoint Server 2010.*

Supported Web Browsers

Supported web browsers offer a full user experience by taking advantage of advanced features provided by ActiveX® controls. Supported web browsers, listed in the following table, offer full functionality on all EUCC SharePoint sites.

Table 3. Operating System Support for Supported Web Browsers

Operating System	Browser
Windows Vista®, Windows XP Windows Server® 2008, Windows Server 2003	Internet Explorer 9 (32-bit in default Internet Explorer 8 document mode), Internet Explorer 8 (32-bit), Internet Explorer 7 (32-bit)
Windows 7, Windows Server 2008 R2	Internet Explorer 9 (32-bit in default Internet Explorer 8 document mode), Internet Explorer 8 (32-bit)

Supported Web Browsers with Limitations

Supported web browsers with known limitations provide basic functionality so that users can both read and write to EUCC SharePoint sites and perform basic site administration. In browsers without support for ActiveX controls, functionality is different from what is available in a supported browser. The browsers that are supported with limitations are listed in the following table.

Table 4. Operating System Support for Web Browsers Supported with Limitations

Operating System	Browser
Windows 7, Windows Server 2008 R2	Internet Explorer 9 (64-bit in default Internet Explorer 8 document mode), Internet Explorer 8 (64-bit), Firefox 3.6
Windows Vista, Windows XP, Windows Server 2008, Windows Server 2003	Internet Explorer 9 (64-bit in default Internet Explorer 8 document mode), Internet Explorer 8 (64-bit), Internet Explorer 7 (64-bit), Firefox 3.6
Apple Mac OS X Snow Leopard	Safari 4.x, Firefox 3.6
UNIX/Linux 8.1	Firefox 3.6
Mobile devices (in mobile view)	Various mobile browsers

Other popular web browsers can also be used, although some SharePoint 2010 functionality may be limited or available only through alternative steps.

Note: All browsers listed in the tables above are supported. For custom solutions that were originally developed for an unsupported browser, customers are responsible for testing browser compatibility with a supported browser for full administration, or with a browser that is supported with limitations for basic site administration.

For more information about browser support, see the Microsoft TechNet article Plan browser support (Microsoft SharePoint Server 2010) (<http://technet.microsoft.com/en-us/library/cc263526.aspx>).

Mobile Device Support

Users can view sites and lists from the EUCC SharePoint environment on a mobile device, which helps users stay current about team projects and tasks when on the road. For example, lists appear on phones (or other telecommunications devices that support international standards) in a simplified text format, with a link for scrolling through the content of each page.

Sites that make use of the publishing feature and master pages can have one master page specifically for use with a browser and a separate master page designed specifically for mobile devices. Users can even receive alerts whenever lists are updated.

To utilize EUCC SharePoint on a mobile device, the browser must support the following requirements:

- Microsoft NT LAN Manager (NTLM) 2.0
- SSL 3.0
- Either integrated authentication, federated authentication, or basic authentication

User Authentication

Every user must authenticate to the EUCC SharePoint service; the service does not permit anonymous access. EUCC SharePoint supports user account authentication for employees using the Windows NTLM protocol.

With Windows NTLM token-based authentication, user accounts are stored within a customer's implementation of Active Directory, and EUCC SharePoint requires a one-way external directory trust. Users who are logged on to domain-connected computers have their credentials validated automatically with pass-through authentication and are not prompted for additional credentials. Windows NT token-based authentication requires connectivity to the customer's user directory (to Active Directory).

The following table provides a summary of the supported and unsupported authentication methods for SharePoint Online.

Table 5. EUCC SharePoint Authentication Methods

Authentication Method	Support Level	Description
NTLM 2.0 Windows classic	Supported	This method uses basic authentication or integrated authentication for NTLM-based (Active Directory) credentials. By default, only Integrated Windows authentication (IWA) is enabled with this method.
Secure store service	Unsupported (with some exceptions)	EUCC SharePoint does not support the use of the secure store service for authentication to line-of-business (LOB) applications and data sources at this time, except for use with the shared data connectivity account defined for Microsoft Excel® Services and Microsoft Visio® Services, and the shared data connectivity account defined to perform Business Connectivity Services (BCS)-based profile imports.
Single sign-on	Unsupported	EUCC SharePoint does not support any method of single sign-on (SSO) authentication in a situation where a user authenticates to the service, and then the server connects to another system on behalf of the user, impersonating that user. This is true even for a third-party SSO feature.
Pluggable authentication providers	Unsupported	EUCC SharePoint does not support the hosting of custom authentication providers or those developed by third parties. This includes pluggable role and membership providers for Microsoft ASP.NET, forms-based authentication, or Windows Live® ID integration.
Kerberos	Unsupported	Kerberos token authentication is not supported by SharePoint Online.

User Profile Synchronization

Customers must provide MN.IT with a network service account with read access to their user directory. This enables two essential functions: user profile synchronization, and population of the People Picker control for adding users to sites. For more information about profile synchronization, see Configure profile synchronization (SharePoint Server 2010) on Microsoft TechNet ([http://technet.microsoft.com/en-us/library/ee721049\(office.14\).aspx](http://technet.microsoft.com/en-us/library/ee721049(office.14).aspx)).

Data Protection and Security

EUCC SharePoint includes a comprehensive set of state-of-the-art security and data protection features that enable customers to confidently use the service.

Virus Filtering

Microsoft Forefront® Protection for SharePoint 2010 provides comprehensive protection for documents and files that have been uploaded to EUCC SharePoint environments, using multiple scan engines and content controls to help eliminate malicious code. Microsoft Forefront Endpoint Protection 2010 refreshes virus signatures daily. Antivirus scanning is configured to scan only when files are uploaded to the system. If a file contains a virus, upload fails with an error message displayed to the user about the virus found in the document. At this time no reporting is provided about antivirus scanning statistics.

Blocked File Types

To protect users' computers from potentially harmful code, certain file types are blocked from being uploaded to or retrieved from the EUCC SharePoint environment. Files are blocked on the basis of the file name extension, and MN.IT maintains a list of file name extensions that are blocked by default. The file name extensions that are blocked by default are listed in "Appendix B: Default Blocked File Types".

Deleted Item Recovery

EUCC SharePoint users can access each site's Recycle Bin to recover documents and lists that a user has deleted. Items are retained for 35 days in the "first-stage" or site Recycle Bin, after which they are automatically deleted if no further action is taken by the user. If a user deletes an item from the first-stage Recycle Bin, it goes into a "second-stage" or administrator Recycle Bin and is retained for the full 35 days, after which it is automatically deleted. The site collection administrator can restore items from the second-stage Recycle Bin until they are automatically deleted. Items in the first-stage Recycle Bin count against the customer's storage allocation. Items in the second-stage Recycle Bin do not.

The following data types are captured by the Recycle Bins:

- Lists
- Libraries
- Folders
- List items
- Documents
- Web Part pages

The following data types are not captured by the Recycle Bins:

- Deleted Web Parts
- Site customizations applied using SharePoint Designer
- SharePoint site collections (sites or subsites)

Recovery of Deleted Sites and Content

MN.IT assists customers in recovery of deleted content, sites, and subsites that are not captured by the Recycle Bins. The following conditions apply to site restorations:

- Customers must submit a service request within 5 business days of the deletion.
- Restoration can take up to ten business days to complete.

Data Backup and Restore

Data protection services are provided to prevent the loss of customer data hosted by EUCC SharePoint. Backup of SQL Server production databases is performed every 24 hours. Customers can recover libraries, lists, and documents, as described in “Deleted Item Recovery” earlier in this document. To help avoid reaching quota limits, we suggest that users configure the number of major and minor versions of documents that are to be retained. For additional details about the MN.IT service continuity plan, see “Service Continuity Management” later in this document.

Rights Management Service

Active Directory Rights Management Service (RMS) employs Information Rights Management (IRM) technology to protect your data. EUCC SharePoint offers two methods of working with RMS-protected Microsoft Office documents:

- Enable RMS at the document library level.
- Upload IRM-protected documents to EUCC SharePoint.

RMS is available as part of the EUCC SharePoint standard configuration. To take advantage of RMS functionality, submit a Change Request through the MN.IT.

Note: *RMS is not compatible with the Opera or Safari browsers.*

Enable RMS for Document Library

You can protect Microsoft Office documents from unauthorized access by enabling RMS at the document library level (and documents attached to list items). Access to encrypted documents can be restricted to individuals or to groups in accordance with your organization’s access policies. Encryption is done by an RMS server, and IRM policies persist even when the files are transferred or copied.

When you enable RMS on a document library, all users with permissions to that library can access the documents. A user who downloads a document cannot transfer that document to another user, even if the recipient has permissions to the document library where RMS is enabled. The recipient would have to download the document from the document library directly in order to view or edit it.

Note: *RMS encryption will not prevent EUCC SharePoint administrators from reading documents; encryption happens only when documents are downloaded.*

Here are some of the activities that can be restricted using RMS:

- Editing documents
- Forwarding files
- Copying, cutting, and pasting document content
- Printing documents
- Faxing documents
- Using the default Print Screen key to capture an image of a document

Upload IRM-Protected Documents

EUCC SharePoint supports the uploading of Microsoft Office documents that are protected with Information Rights Management (IRM). The contents of these IRM-protected documents are not indexed by the search crawler, and thus will appear less relevant in any search results. Only the public properties that are not encrypted, such as file name, author, and date, are indexed for IRM-protected documents.

***Note:** If you upload a previously IRM-protected document to an EUCC SharePoint document library with RMS enabled, the original IRM protection is maintained unchanged.*

Data Encryption in Transit

EUCC SharePoint supports encryption of data moving between a user's browser and the EUCC SharePoint servers, in compliance with Federal Information Processing Standard (FIPS) 140-2 guidelines. Encryption of data in transit under FIPS 140-2 guidelines is a requirement of many U.S. federal government agencies. The client browser and EUCC SharePoint server both authenticate themselves with strong encryption algorithms before an encrypted transfer of data occurs between the browser and server.

Data Encryption at Rest

EUCC SharePoint does not support encryption of SharePoint content at rest (stored in SQL Server databases).

Extending EUCC SharePoint with the Client Object Model

Three client object models in Microsoft SharePoint Foundation provide powerful ways to interact with SharePoint data remotely from script that executes in the browser, from Microsoft Silverlight® applications, or from Microsoft .NET-based client applications. These .NET–managed, Silverlight, and ECMAScript (JavaScript, Microsoft JScript®) APIs include a subset of the features available in the server object model, providing access to objects at and below the site-collection level. For more information about how to use the client object model, explore the SharePoint 2010 Client Object Model Resource Center on MSDN (<http://msdn.microsoft.com/en-us/sharepoint/ff770207.aspx>).

Sandboxed Solutions

Sandboxed solutions are customizations that a customer's site collection administrators can deploy directly, without requiring review or validation from Microsoft. Sandboxed solutions are automatically monitored for resource usage and disabled if they exceed a threshold selected by the customer. As

partially trusted code, they have some limitations on what they can do (for example, sandboxed solutions cannot access a database or call unmanaged code). Microsoft SharePoint Online Code Analysis Framework (MSOCAF) can also be used to validate the code of sandboxed solutions (for more about MSOCAF, see “Custom Solution Deployment” later in this document). For guidance about how to develop and deploy sandboxed solutions and how they are monitored, see the “SharePoint Online Custom Solution Developers Guide”, available from the EUCC web site (<https://connect.mn.gov/sites/EUCC>).

Custom Solution Deployment

To gain additional value from EUCC SharePoint Dedicated, customers can extend SharePoint functionality by working with MN.IT to deploy custom solutions that use fully trusted code. For example, customers can develop custom Web Parts to display SharePoint data.

***Important:** Microsoft does not offer a hosted development environment or testing environment. Consequently, development and testing can be done on MN.IT’s Development Environment (DEV). DEV was created using a Microsoft provided build guides that that mimics the security, restrictions, and other specifics of the Production environment.*

The process for deploying a custom solution, or a third-party solution, is as follows:

1. The customer submits a High Level Design (HLD) document to Microsoft (via MN.IT) that describes the details of the proposed custom solution or third-party solution. The customer sends this document before development begins.
2. Microsoft reviews the HLD document and provides feedback.
3. After validation and Microsoft acceptance of the HLD document, the customer develops and tests the custom solution in DEV. The customer is completely responsible for validation and testing.
4. As a part of the development process, the customer must validate the custom solution using the Microsoft EUCC SharePoint Code Analysis Framework (MSOCAF) tool that is provided by Microsoft. MSOCAF validates the custom solution against security and performance flaws, anticipates deployment issues, and ensures that the custom solution is built using established best practices. It can also automate the submission of the custom solution to Microsoft for deployment.
5. After the customer confirms that the custom solution has been properly tested, documented, and validated against MSOCAF, the customer can securely submit the deployment package, which includes the solution packages and the supporting documents, to Microsoft through MSOCAF.
6. Microsoft reviews the custom solution, and if it is approved then it is scheduled for production deployment according to the published change calendar.
7. Before production deployment, Microsoft deploys the custom solution to the hosted EUCC SharePoint pre-production environment (PPE) for customer validation.

***Notes:** Microsoft hosts a PPE for customers to validate custom solutions prior to production deployment. However, the PPE is not a substitute for DEV. The PPE is a heavily scaled down representation of the production environment. It is not designed for performance, and should not be used to test performance of a custom solution in the hosted environment.*

8. After the customer validates the custom solution, and both the customer and Microsoft sign off on the custom solution in the PPE, Microsoft deploys it to the production environment.

Note: All deployments to production must adhere to certain change windows that are published in the change calendar. Deployment may be delayed to the next change window if requirements are not met by published deadlines.

For more information and guidance about how customers can deploy custom solution on the EUCC SharePoint platform, see Custom Solution Policies and Process, available from the EUCC web site.

Third-Party Solutions

Third-party solutions, or independent software vendor (ISV) solutions, go through the same custom solution review process as described above. The customer is responsible for testing third-party solutions prior to submission to Microsoft. For a list of third-party solutions that work with EUCC SharePoint, see the “Custom Solution Developer’s Guide”, available from the EUCC web site (<https://connect.mn.gov/sites/EUCC>).

Note: The customer is responsible for obtaining the necessary third-party licenses for the primary, secondary (failover), and PPE environments.

SharePoint Product Upgrades

EUCC SharePoint customers benefit from periodic upgrades to the latest SharePoint technology, including new releases of SharePoint Server. These upgrades are made available at no additional charge, and ensure that customers are always using the latest SharePoint software.

After a major version of SharePoint is released by Microsoft, MN.IT has up to 12 months to upgrade their service to the new release.

Service Continuity Management

EUCC SharePoint is hosted in Microsoft-managed, enterprise-level data centers that are designed to deliver highly available, highly resilient services. Because of this, the EUCC SharePoint service maintains a 99.9% service availability level.

However, service availability can be affected by hardware failures, natural disasters, and human error. To address these risks, Microsoft has implemented a service continuity management plan, a process for managing risks to help ensure that the IT infrastructure is capable of providing continuing services if normal availability solutions fail. The service continuity management plan for EUCC SharePoint includes provisions to quickly recover from such unexpected events.

Two metrics commonly used in service continuity management to evaluate disaster recovery solutions are:

- **Recovery point objective (RPO):** The acceptable amount of data loss at the conclusion of the data recovery process.
- **Recovery time objective (RTO):** The acceptable amount of time the service can be down before being brought back online.

The RPO and RTO defined for EUCC SharePoint in the event of a disaster are:

- **Two-hour RPO:** In the event of a failover to a secondary data center, EUCC SharePoint will restore a copy of the customer's data that is less than or equal to two hours old at the time of service disruption.
- **Four-hour RTO:** The customer will be able to resume service within four hours after service disruption if a disaster incapacitates the primary data center.

Service Reports

In addition to out-of-the-box SharePoint 2010 site usage reports (<http://technet.microsoft.com/en-us/library/ee663487.aspx>), the EUCC SharePoint service offers service usage metrics, with data related to service adoption and general service availability, and server farm status reports.

Usage Metrics

The following usage metrics are available to EUCC SharePoint customers upon request:

- EUCC SharePoint service availability
- Number of unique SharePoint users
- Number of site collections and My Sites
- Total amount of storage used

Availability

The service-level agreement (SLA) for EUCC SharePoint service availability is 99.9 percent, reported monthly. This is the percentage of minutes that the service was available over the course of the month. During a service interruption, MN.IT calculates the duration (in minutes) and the portion of the service affected.

Language Pack Support

The EUCC SharePoint service is built using U.S. English. Language packs provide localized versions of the site templates, site definitions, and site administration experience. After a language pack is installed for a site, the site cannot be converted to a different language pack at a later date.

The available language packs are (in alphabetical order, left to right):

Arabic	Basque	Bulgarian	Catalan
Chinese (Simplified)	Chinese (Traditional)	Croatian	Czech
Danish	Dutch	English	Estonian

Finnish	French	Galician	German
Greek	Hebrew	Hindi	Hungarian
Italian	Japanese	Kazakh	Korean
Latvian	Lithuanian	Norwegian (Bokmål)	Polish
Portuguese (Brazil)	Portuguese (Portugal)	Romanian	Russian
Serbian (Latin)	Slovak	Slovenian	Spanish
Swedish	Thai	Turkish	Ukrainian

Unsupported Features

The following products and features are *not* supported in the EUCC SharePoint service:

- Microsoft Project Server
- Microsoft PerformancePoint® Services
- Email integration (email-enabled lists), including Directory Management Services
- Document Conversion Services
- Lotus Notes Connector
- Secure Store Service (for external content types and custom solutions other than the two provisioned accounts)
- Hosted Microsoft FAST™ Search
- Searches based on Business Connectivity Services (formerly the Business Data Catalog)
- Tenant administration
- Site Variations
- Search-based alerts
- Consumption or hosting of service application proxies
- WSRP Viewer Web Part (requires SSO)
- Categories Web Part (requires the deprecated Site Directory template)
- Selected features of SQL Server. See the “SharePoint Online Custom Solution Developer’s Guide” for full details (<https://connect.mn.gov/sites/EUCC>)
- Zones, alternate access mapping (AAM), or short vanity URLs for SharePoint sites. MN.IT can assist with redirects from alternate URLs, but EUCC SharePoint supports only a single URL per web application.
- My Site Cleanup timer job. You can submit a CR through MN.IT to delete unwanted user profiles.

Optional Services

In addition to the features that are included in the core EUCC SharePoint offering, several optional services are available to customers on request, in some cases at an additional cost. These optional services include:

- Additional storage
- FAST Search for SharePoint integration
- Data Loss Prevention

- Presence integration
- End-user training for EUCC SharePoint
- Content migration from on-premises SharePoint Server

Deployment of Custom Solutions

EUCC SharePoint offers support for customers that want to deploy custom solutions as part of the EUCC SharePoint service. The same process that is described in “Custom Solution Deployments” earlier in this document is followed for any additional custom solution deployments.

FAST Search for SharePoint Integration

With FAST Search for SharePoint integration, customers can crawl and index content in the hosted EUCC SharePoint environment from an external FAST Search for SharePoint deployment. FAST Search for SharePoint servers may either be located on-premises or hosted by a third party. Query results within the hosted environment are delivered by the FAST Search server and are rendered within the FAST Search web parts.

***Note:** At this time, MN.IT has not implemented FAST Search*

Search scopes can be created by the customer in the FAST environment; they are then available for use in the EUCC SharePoint environment. Content in the hosted environment can be made more discoverable by mapping to managed properties within FAST Search administration. The FAST functionality that improves relevancy based on user click-through for search results is supported for results the hosted environment.

In addition, crawling and indexing of the EUCC SharePoint environment from other external search engines (including FAST ESP) is now supported, whether they are hosted on-premises or by a third-party. Integration of other external search engine(s) into the EUCC SharePoint environment must be added through custom solution development.

Notes:

- FAST Search for SharePoint Integration is compatible with Windows classic, Windows claims, and SAML claims user authentication.
- Customers that want to crawl and index from an external FAST ESP deployment must be using Windows Classic (NTLM) authentication.
- FAST features for site collection administration (keywords, site promotion / demotion, and user context) are not supported by the FAST Search Integration feature.

Data Loss Prevention

Discovery data loss prevention (DLP) protects confidential data in your EUCC SharePoint environment by scanning for specific keywords or content. Strengthen security by ensuring that users are not uploading sensitive data in violation of internal policies. Content that you can scan for includes the following:

- Confidential data (like credit card and social security numbers)

- Password files
- Design documents

You can use an on-premises DLP solution to scan your SharePoint Online environment or deploy a third-party solution. EUCC SharePoint supports the use of third-party DLP solutions, including Symantec DLP. In either case, the DLP servers reside on the customer's premises, not in the SharePoint Online farm, and communicate directly with the SharePoint Online web front end. DLP solutions are custom solutions and as such must be deployed according to the procedures and specifications in the "Custom Solution Policies and Process" and "Custom Solution Developer's Guide", both available from the EUCC web site.

Deployment of a DLP solution requires that you prepare by doing the following:

- Obtain licensing of the DLP solution you plan to use.
- Provision, deploy, and maintain the required DLP servers on your premises.
- Create targets and configure scans.
- Set your scanning schedule and verify that scans are working as expected.
- Review report content and do remediation.

Presence Integration

Presence functionality is the ability to detect another user's online availability, and when it is enabled the real-time presence status indicator is displayed everywhere a person's name appears in EUCC SharePoint. The icon identifies the user's status—for example, Available, Away, Do Not Disturb, or Offline—to let others know their availability for collaboration.

Customers can take advantage of presence functionality in EUCC SharePoint through integration with Microsoft Lync™ client application, if they subscribe to EUCC Lync. To learn how EUCC Lync provides improved efficiencies, increased productivity, and cost savings in an enterprise-class communications service, refer to the EUCC Lync Service Description.

Note: *EUCC SharePoint presence integration is available only for those EUCC SharePoint users who have the Lync desktop client installed and properly configured.*

Training

End-user training is key to successful EUCC SharePoint adoption, and training is an important factor in supporting adoption. Microsoft provides a range of administrator and end-user documentation and tools online to help customers develop a program for effective adoption. Visit the Microsoft Office Online (<http://office.microsoft.com/en-us/support/>) website for training help. Microsoft partners can provide additional administration and end-user training by customer request.

Office Online Training for SharePoint 2010

- Getting started with SharePoint 2010 - <http://office.microsoft.com/en-us/sharepoint-server-help/get-started-with-sharepoint-server-2010-HA010371435.aspx>
- What's New in SharePoint 2010 - <http://office.microsoft.com/en-us/sharepoint-server-help/whats-new-in-microsoft-sharepoint-server-2010-HA010370058.aspx>

- SharePoint 2010 feature videos - <http://office.microsoft.com/en-us/sharepoint-server-help/CL100315293.aspx?CTT=5&origin=HA101859255>
- SharePoint 2010 training courses - <http://office.microsoft.com/en-us/sharepoint-server-help/CH010372432.aspx?CTT=5&origin=HA101859255>

Work Smart Productivity Guides on Microsoft TechNet

- Scenario-based guides for SharePoint 2010 - <http://technet.microsoft.com/en-us/library/bb687781.aspx>

Microsoft Education Partner Network Documents on SharePoint 2010

- SharePoint 2010 Evaluation Guide - <http://go.microsoft.com/?linkid=9727428>
- SharePoint 2010: Professional Developer Evaluation Guide and Walkthroughs - <http://www.microsoft.com/downloads/details.aspx?FamilyID=cffb14e8-88a9-43bd-87aa-4792ab60d320>
- Get Started Developing on SharePoint 2010 - <http://msdn.microsoft.com/en-us/sharepoint/ee513147.aspx>
- Getting Started with SharePoint 2010 for IT Pros - <http://technet.microsoft.com/en-us/sharepoint/ee518660.aspx>

Content Migration from On-Premises SharePoint Server

MN.IT is able to migrate customer content to the EUCC SharePoint environment. Using Metalogix SharePoint Migration Manager, MN.IT can offer the following capabilities when migrating to EUCC SharePoint:

- Migrate SharePoint Sites, Lists and Libraries between servers with full fidelity
- Upgrade from SharePoint 2003, SharePoint 2007, or SharePoint 2010 to EUCC SharePoint
- Re-organize or re-template SharePoint content
- Manage migrations with zero downtime

Additional Migration Services

Many customers have existing collaborative applications or manage older internal deployments of earlier versions of SharePoint Server. EUCC SharePoint, in conjunction with its partners, can provide consultants (for a fee) to help customers with the following migration services:

- Develop a strategy for migration
- Understand the differences between their version of SharePoint Server and EUCC SharePoint
- Outline risks and anticipated impacts due to non-supported customizations
- Facilitate migration activities

Related Information

- Minnesota Statutes 207 Chapter 16E (MN.IT Services, formerly The Office of Enterprise Technology)
- Enterprise Technology Fund 970 Rate Schedule
- Operational documents and information on MN.IT websites
- Enterprise Unified Communication and Collaboration (EUCC) Service Level Agreement

Appendix A: EUCC SharePoint Supported Feature List

The following information lists SharePoint 2010 features that are supported in EUCC SharePoint. If a specific feature is not listed, contact MN.IT to confirm whether that feature is supported.

Table 6. EUCC SharePoint Features

Communities

- Ask Me About
- Blogs
- Colleague suggestions
- Colleagues network
- Discussions
- Enterprise Wikis
- Keyword suggestions
- Memberships
- My Content
- My Newsfeed
- My Profile
- My Site
- Note Board
- Organization Browser
- Photos and presence
- Ratings
- Recent Activities feed
- Status Updates
- Tag clouds
- Tag profiles
- Tags
- Tags and Notes tool
- Wikis

Composites

- Access Services
- Browser-based customizations
- Business Connectivity Services: BCS (Formerly BDC)
- Business Connectivity Services: External Data column
- Business Connectivity Services: External Data Web Parts
- Business Connectivity Services: external lists
- Business Connectivity Services: Microsoft Office client integration
- Business Connectivity Services: profile pages
- Business Data Integration with the Microsoft Office client
- Client object model (OM)
- Customization via SharePoint Designer
- Developer Dashboard
- Event receivers
- External data columns
- External lists
- Forms: Out-of-the-box workflows and customization via SharePoint Designer
- InfoPath Forms Services
- Language Integrated Query (LINQ) for SharePoint
- Sandboxed solutions
- Solution packages
- REST and ATOM data feeds
- Ribbon and dialog framework
- SharePoint timer jobs
- Silverlight Web Part
- Workflows

Content

- Content Organizer
- Document sets
- Managed metadata service
- Metadata-driven navigation
- Microsoft Office client integration
- Rich media management
- Shared content types
- Support for accessibility standards
- Unique document IDs
- Word Automation Services
- Office Web Apps

Insights

- Chart Web Parts
- Data Connection Library
- Excel Services
- Filter framework
- Status indicators
- Visio Services

Communities

- Ask Me About
- Blogs
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- Colleagues network
- Discussions
- Enterprise Wikis
- Keyword suggestions
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- My Content
- My Newsfeed
- My Profile
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- Unique document IDs
- Word Automation Services
- Office Web Apps

Insights

- Chart Web Parts
- Data Connection Library
- Excel Services
- Filter framework
- Status indicators
- Visio Services

Search

- Advanced content processing
- Best Bets
- Common connector framework for indexing and federation
- Duplication detection
- Federated search
- Metadata-driven refinement panel
- Mobile search experience
- People and expertise search
- Phonetics and nickname expansion
- Query suggestions, "Did You Mean?", and related queries
- Recently authored content
- Relevancy tuning by document or site promotions
- Search from Windows 7 and Windows Mobile
- Search scopes
- Social behavior improves relevance
- Social tags
- Sort the search results
- Taxonomy tag integration

Sites

- Audience targeting
- Cross-browser support
- Fluent user interface
- Mobile connectivity
- Offline interaction with SharePoint Workspace 2010
- Out-of-the-box Web Parts
- Scalability
- Templates

Appendix B: Default Blocked File Types

The file name extensions that are blocked by default in EUCC SharePoint are shown in the following table. Changing the list of file name extensions affects both new files being added to an EUCC SharePoint site and files already posted to a site. For example, if a document library contains a .doc file, and the .doc file name extension is added to the list of blocked file name extensions, users can no longer open the .doc file in the document library. Users can rename or delete a file with a blocked file name extension, but cannot perform any other actions.

A single list of blocked file types is maintained for the entire SharePoint server farm. Because the list of blocked file types is maintained by file name extension, all files that use a file name extension on the list cannot be uploaded or downloaded, irrespective of the file's intended use. If .asp is on the list of extensions to block, the feature blocks all .asp files on the server, even if they are used to support web site features on another server in the server farm. If a file ends in a period (.), the preceding characters are checked against the list of blocked file name extensions as well. For example, if .exe is on the list of blocked file name extensions, a file called "filename.exe." is also blocked.

The following list shows various ways of representing the same file, all of which are blocked if the .hta extension is on the list of blocked file name extensions:

- filename.hta
- filename.hta.
- filename.hta.{3050F4D8-98B5-11CF-BB82-00AA00BDCE0B}
- filename.hta::\$DATA

Table 7. File Name Extensions Blocked by Default

Extension	File Type	Extension	File Type
ade	Microsoft Office Access project extension	mas	Microsoft Access stored procedures
adp	Microsoft Office Access project	mat	Microsoft Access table shortcut
app	Executable application file	mau	Media attachment unit
asa	ASP configuration file	mav	Microsoft Access view file
ashx	ASP.NET web handler file	maw	Microsoft Access data access page
asmx	Active server methods file	mcf	Manifest configuration file
asp	Active Server page	mda	Microsoft Access add-in program
bas	Microsoft Visual Basic® class module	mdb	Microsoft Access program
bat	Batch file	mde	Microsoft Access MDE database
cdx	Compound index file	mdt	Microsoft Access data file
cer	Internet security certificate	mdw	Microsoft Access workgroup
chm	Compiled HTML Help file	mdz	Microsoft Access wizard program
class	Java class file	msh	Visual Communicator project file or mesh file
cmd	Windows command file	msh1	Microsoft Help
cnt	Help contents file	msh1xml	Microsoft Help XML file
config	Configuration file	msh2	Microsoft Help
cpl	Windows Control Panel extension file	msh2xml	Microsoft Help XML file
crt	Security certificate	mshxml	Microsoft Agent script helper
csb	Photoshop custom shapes file	msi	Windows Installer package
der	DER encoded X509 certificate	msh	Windows Installer patch
dll	Windows dynamic link library	mst	Microsoft Visual Test source files
exe	Executable program	ops	Microsoft Office profile settings file
fxp	Microsoft Visual FoxPro® compiled program	pcd	Photo CD image or Visual Test compiled script
gadget	Windows gadget	pif	Shortcut to MS-DOS® program
grp	Windows Program Manager group	pl	Perl Script
hlp	Windows Help file	prf	System file
hpj	Help project file	prg	Visual FoxPro source file
hta	HTML application file	printer	Printer file type
htr	Motion analysis software skeletal file	ps1	Windows PowerShell cmdlet file
htw	HTML file	ps1xml	Windows PowerShell cmdlet XML file
ida	IIS server file	ps2	Windows PowerShell Level II PostScript file
idc	Internet Database Connector file	ps2xml	Windows PowerShell Level II PostScript XML file
idq	Internet data query file	psc1	Windows PowerShell Export-Console file
ins	Internet Naming Service	psc2	Windows PowerShell Export-Console file
isp	Internet Communication settings	pst	Microsoft Outlook® personal information store file
jse	JScript Encoded script file	reg	Registration entries
ksh	Unix Korn Shell Script	rem	BlackBerry encrypted data file
lnk	Shortcut	scf	Windows Explorer command file
mad	Microsoft Access® module	scr	Screen saver
maf	Microsoft Access form	sct	Windows script component
mag	Microsoft Access diagram	shb	Windows shortcut
mam	Microsoft Access macro		
maq	Microsoft Access query		
mar	Microsoft Access report		

Extension	File Type
shs	Shell Scrap object
shtm	HTML server-side include file
shtml	HTML server-side include HTML file
soap	Simple Object Access Protocol file
stm	HTML file that contains server-side directives
svc	ASP.NET web service
url	Uniform Resource Locator (Internet shortcut)

Extension	File Type
vb	Visual Basic script file
vbe	Visual Basic Scripting Edition Encoded script file
vbs	Visual Basic Scripting Edition file
ws	Windows script file
wsc	Windows script component
wsf	Windows script file
wsh	Windows script host settings file

Appendix C: User Profile Properties for Profile Synchronization

With Active Directory, there are no limits on including fields as user profile properties. However, at minimum, the following fields are recommended:

- **objectSID**: Uniquely identifies a person as a security principal.
- **objectGUID**: Uniquely identifies a person in the user directory.
- **displayName**: Contains the full name of a person, search purposes.
- **msRTCSIP-PrimaryUserAddress**: Contains presence information for customers who use EUCC Lync.
- **mail**: Used to send email alerts, for workflows, and for alert configuration.

The complete list of fields that are imported by default is:

objectSID	objectGUID	objectGUID
givenName	Sn	Sn
telephoneNumber	physicalDeliveryOfficeName	physicalDeliveryOfficeName
title	Manager	Manager
WWHomePage	msRTCSIP-PrimaryUserAddress	msRTCSIP-PrimaryUserAddress
msDS-SourceObjectDN	Mail	