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# Module 11: Implementing Address Book Server on Live Communications Server 2005 SP1

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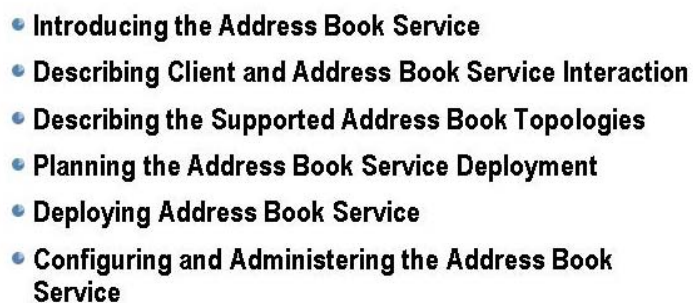
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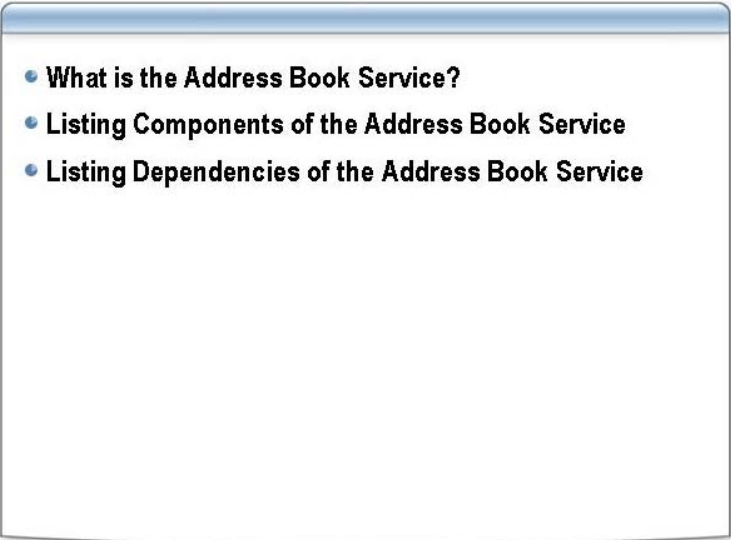
## Overview

- 
- **Introducing the Address Book Service**
  - **Describing Client and Address Book Service Interaction**
  - **Describing the Supported Address Book Topologies**
  - **Planning the Address Book Service Deployment**
  - **Deploying Address Book Service**
  - **Configuring and Administering the Address Book Service**

This module guides you through the process of planning and deploying the Microsoft® Office Live Communications Server 2005 with Service Pack 1 (LCS 2005 with SP1) Address Book Service. After completing this module, you will be able to:

- List the Address Book Service components and dependencies.
- Describe the interaction between the Client and the Address Book Service.
- Describe the supported Address Book topologies.
- Plan Address Book Service deployment.
- Deploy Address Book Service.
- Configure and administer the Address Book.

## Lesson: Introducing the Address Book Service

- 
- **What is the Address Book Service?**
  - **Listing Components of the Address Book Service**
  - **Listing Dependencies of the Address Book Service**

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### Introduction

The Address Book Service is an important new component of LCS 2005 with SP1. The Address Book Service performs two important functions:

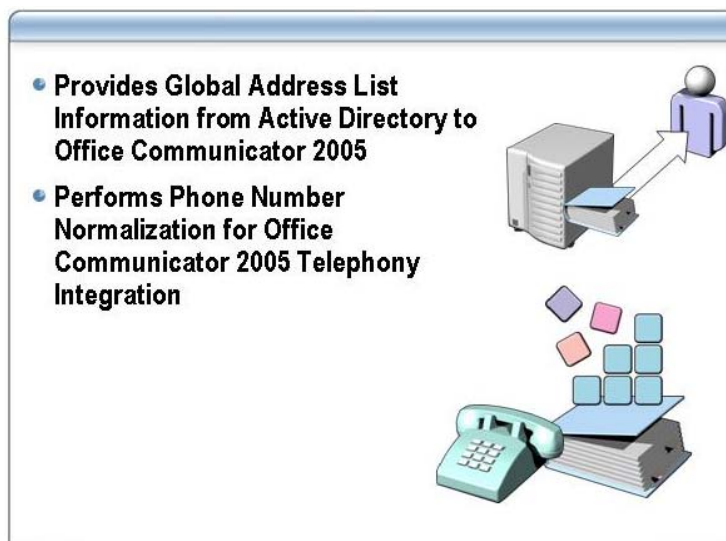
- Provides global address list information from Active Directory® to Microsoft Office Communicator 2005.
- Performs phone number normalization for Communicator telephony integration.

### Lesson objectives

After completing this lesson, you will be able to:

- Describe the Address Book Service.
- List the components of the Address Book Service.
- List the Address Book Service dependencies.

## What Is the Address Book Service?



### Introduction

The primary function of the Microsoft Office Live Communications Server 2005 Address Book Service is to provide global address list information to Microsoft Office Communicator clients.

If Communicator clients access Active Directory directly, it could affect network performance. To make address book updates faster and more efficient, the Address Book Service acts as an intermediary to provide an updated local copy of the address list to Communicator clients.

The Address Book Service is a Microsoft Windows® service that runs daily. The service performs the following tasks:

- Retrieves contact information from an SQL or MSDE database stored on a Standard Edition Server or Enterprise pool.
- Generates a set of compressed full files and delta files. These files are stored in a standard NTFS folder.

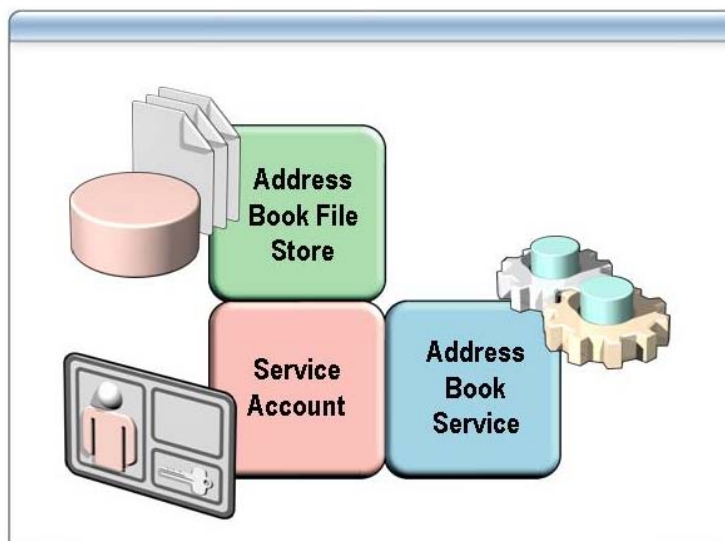
As a secondary role, Address Book Service can perform normalization for the phone numbers that are stored in Active Directory user and contact objects. Communicator includes strict enforcement of the E-164 international standard for encoding country or region codes, area codes, and telephone numbers. Active Directory does not enforce a particular telephone number format. This may require that the telephone numbers in Active Directory, and subsequently the Live Communications Server database and the Live Communications Server address book service, be normalized to follow the E-164 standard.

Phone numbers that are stored in disparate directories are essentially unstructured strings that lack a strict model for consistency. Normalization is enabled by using two standard normalization rules that are supplied with the Address Book Service. Although the Address Book Service can be used to perform phone normalization, it is not the recommended method. Normalizing numbers within Active Directory is the preferred method.

Phone numbers are normalized so that they can be easily used by the Communicator client and telephony systems. The Live Communications Server 2005 with Service Pack 1 Resource Kit includes the Phone Normalization utility that enables IT administrators to modify phone fields in the Active Directory into Tel URI format for use by Communicator with PBX Remote Call Control features.

For more information, see, Deploying Office Live Communications Server 2005 and Office Communicator 2005 at Microsoft, at <http://www.microsoft.com/technet/itsolutions/msit/infowork/lcs2005twp.mspx>

## Listing Components of the Address Book Service



### Introduction

The Address Book Service is supported only on LCS 2005 with SP1 Enterprise or Standard Edition Server.

The Address Book Service includes the following components:

- Address Book Service
- Address Book Service Account
- Address Book File Store

### Address Book Service

Address Book Service uses a Windows service called Microsoft Office Live Communications Server Address Book Service, AbServer. By default, AbServer runs once each day at 01:30, local time. The Address Book Service reads the user and contact information from a SQL table called RTC. User Replicator is responsible for writing this user and contact information to the RTC table.

Address Book Service performs the following tasks:

- Generates a set of data files to be stored in a standard NTFS directory. This set of files contains:
  - A full file containing all contacts.
  - Delta files between the current full file and each previous full file.
- Optionally normalizes all Active Directory phone numbers into a well-defined format, Tel URI.

### Address Book Service Account

The Address Book Service runs under a service account with the default name LCABService. During setup, you can use this account, create a new account, or select an existing account.

The Address Book Service account must be an Active Directory domain account in the domain where the Address Book Service is installed. During setup, this account is automatically added to the RTCABSDomainServices group. Membership of this group then grants the following permissions:

- Read-only access to the SQL or Microsoft Data Engine (MSDE) database
- Write permission to the Address Book File Store.

#### **Address Book File Store and Data Files**

The Address Book File Store is a shared NTFS folder that stores the Address Book information.

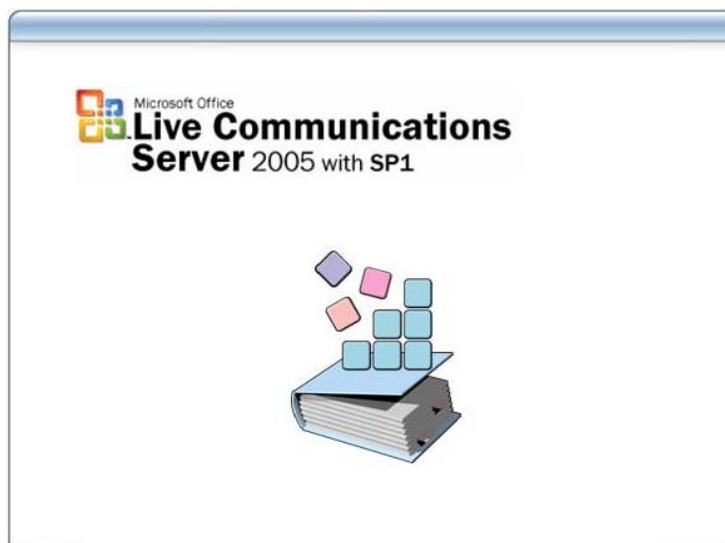
The data gathered by Address Book Service is stored in a binary format.

The number of days the delta files are kept is set at the static value of 30 days, and this number cannot be changed. After 30 days, Address Book Service reaches a steady state, and a set of 465 files that include 30 full files and 435 delta files is stored in a directory that is accessible to clients through the Address Book URL.

Each time Address Book Service starts, the service determines whether there are data files in the output directory. If the service does not find any data files, it generates a full file. The service does not generate a delta file if there are no initial full files to compare with. The service writes the output files to a folder that can be assigned an access control list (ACL) by using the standard NTFS permissions.



## Listing the Address Book Service Dependencies



### Introduction

As part of the planning process, you must ensure that you have the prerequisite software and hardware installed and configured.

You should consider the hardware and storage requirements according to the type of Live Communications Server deployment, rather than the requirements of the Address Book Service.

### Hardware Requirements

The hardware requirements for Address Book Service are the same as the hardware requirements for LCS 2005 with SP1, Standard Edition or Enterprise Edition. In each deployment, specific performance and capacity can vary depending on network traffic and on environmental variables. For specific data, see the *Live Communications Server 2005 Planning Guide* at <http://office.microsoft.com/en-us/FX011526591033.aspx#Live%20Communications%20Server%202005%20Planning%20Guide>.

Use the following guidelines when installing Address Book Service:

- If you are installing Address Book Service on a Live Communications Server 2005 Standard Edition deployment, your hardware requirements will be the same as those for a Standard Edition Server.
- If you are installing Address Book Service on Live Communications Server 2005 Enterprise Edition, your hardware requirements will be the same as those for an Enterprise Edition Server.

If you are installing Address Book Service on a dedicated computer, your hardware requirements will be the same as those for a Standard Edition Server.

### Software Requirements

To install the Address Book Service, you must have the following software configuration:

- Microsoft Windows Server® 2003 operating system
- Live Communications Server 2005 Standard Edition or Enterprise Edition with SP1

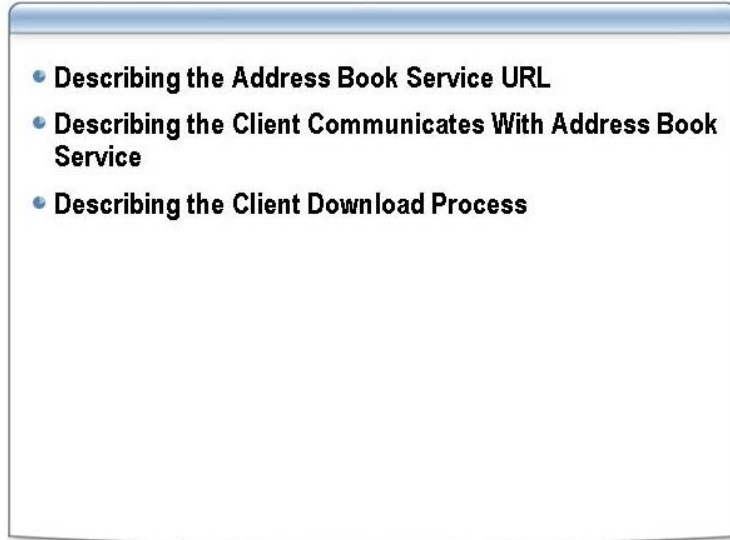
- Microsoft Internet Information Services (IIS) 6.0, if you require the Address Book Service URL. The next lesson covers this feature in greater detail.
- A shared NTFS folder. This shared NTFS folder must be installed on a computer running Windows Server 2003.

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**Tip** Place the shared NTFS folder on the back-end database server for a Live Communications Server 2005 Enterprise pool.

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## Lesson: Client and Address Book Service Interaction



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### Introduction

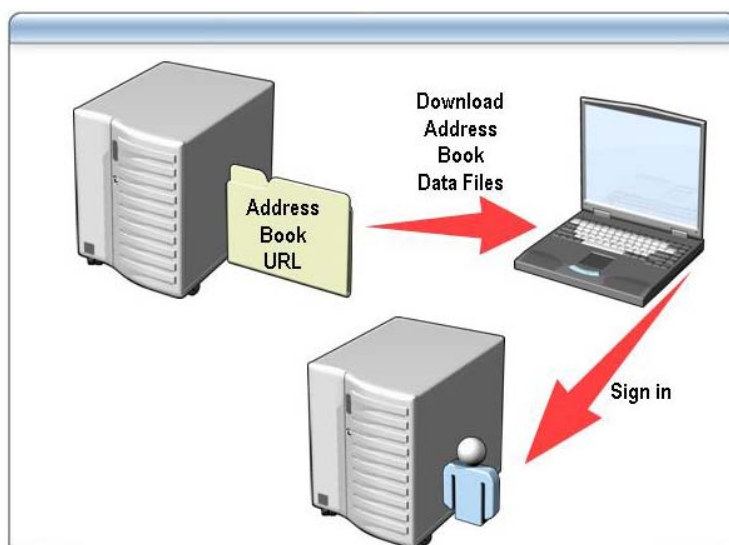
The Address Book Service interacts with the IM client to provide address book functionality to the user. It is important to understand how this process works, and how the client obtains its information from the Address Book Service.

### Lesson objectives

After completing this lesson, you will be able to:

- Describe the importance of the Address Book URL.
- Describe how the client communicates with the Address Book Service.
- Describe the Address Book update process.

## The Address Book Service URL



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### Introduction

When a Communicator client logs on to an Enterprise pool or Standard Edition Server, it receives a URL to the Address Book Service NTFS folder. The Address Book URL is the path that clients use to access the data files in the Address Data File Store, and it is stored on the Standard Edition Server or Enterprise pool

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**Note** The Communicator can receive the URL from the logon process or a Group Policy.

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By using this URL, the client retrieves a full file the first day it connects to the server and delta files on subsequent days.

### The Address Book URL Formats

Communicator can access the Address Book File Store by using a URL in either of the following two formats:

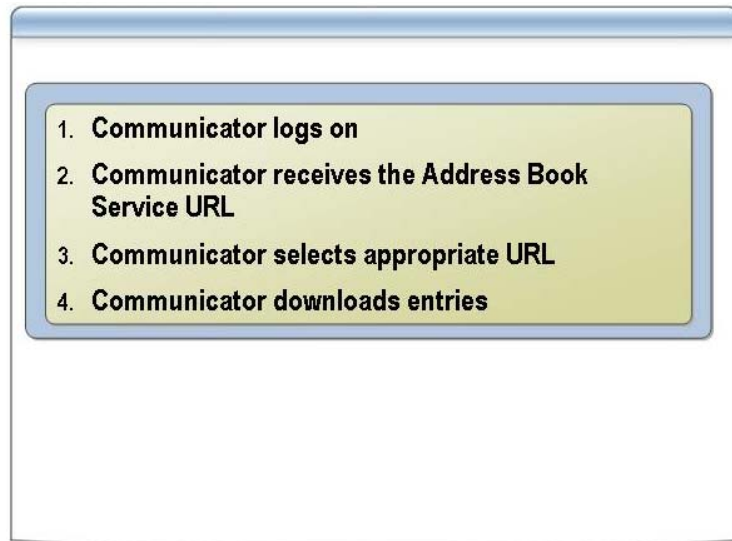
- **File URL (also called a UNC path).** This format is required. The file URL is a standard file URL in the format `\\server\share`. Standard share and NTFS permissions apply to this URL.
- **HTTP or secure HTTP (HTTPS) URL.** This format is optional. This format requires access to an IIS 6.0 Web server as a component of the Address Book Service.

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**Note** The IIS HTTP server is optional when all users access the file store from within the intranet. However, if you want the information in the file store to be accessible by remote users who are connecting from outside the intranet or by users in a branch office or remote site, an IIS Server is required, and you must configure HTTPS on your virtual directory. You will also need to publish this Web site securely using an advanced firewall such as Microsoft Internet Security and Acceleration Server 2004.

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## How the Client Communicates With the Address Book Service



### Introduction

The Address Book Client Provider is a module within Communicator that is responsible for synchronizing global address list (GAL) contacts with the Communicator contact database. Since all GAL contacts are read-only, this synchronization is a one-way process.

### The Process

1. Communicator logs on to the Enterprise pool or Standard Edition Server.
2. From the pool or Standard Edition Server, or a Group Policy, Communicator receives the Address Book URL entries. These entries can contain one or more intranet and one or more Internet URLs.
3. Communicator determines whether it is connecting from inside the intranet or connecting from outside through an Access Proxy, and then selects the appropriate URL for the connection.
4. The logon credentials of the Communicator client are used to connect to the supplied URL. Communicator uses the standard Microsoft Internet Explorer® API to perform the URL authorization. If access is denied, one of two things occur:
  - If the user is inside the intranet, the client displays an icon indicating an Address Book download failure. The user is not asked for credentials again.
  - If the user is outside the intranet, the user is prompted to enter proper URL credentials.

### Internet Explorer Dependencies

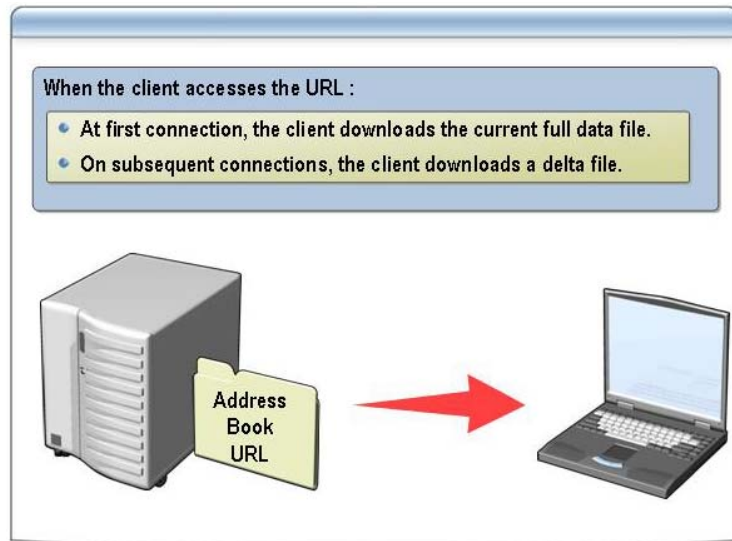
Because Communicator uses the standard Internet Explorer API to perform the URL authorization, it depends on the following Internet Explorer settings:

- **Security Settings, including the intranet URL settings.** For example, if you are using an Internet URL, such as `http://server.com/share`, for intranet users instead of an intranet URL, such as `http://server/share`, then unless this URL is configured explicitly as an intranet URL in Internet Explorer, Communicator will ignore this entry.

If you have a specific need to use an Internet URL, you must manually configure this URL as an intranet URL in Internet Explorer, or you must use Active Directory group policy to configure the URL.

- **Proxy Settings.** If you use an HTTP proxy to manage your Web traffic and the Address Book data flows through this proxy, then the client will not be able to access these URLs if the proxy becomes unavailable or if authorization problems occur with the proxy.

## The Client Download Process



### Introduction

When the client accesses the URL for the first time, upon successful connection the client attempts to download the current full data file. On subsequent days, the client attempts to download a delta file based on the last full synchronization date.

Typically, this delta file is based on the previous day. If the client is offline for a day or more, it determines which delta files it must download to get up to date. If the client is offline for more than 30 days, it attempts to download the full data file.

### Storing the Information

Storing the information in a local database reduces the time taken to synchronize information on the client computer with the latest information stored in Active Directory, thereby significantly improving the GAL search process. The location of this database is:

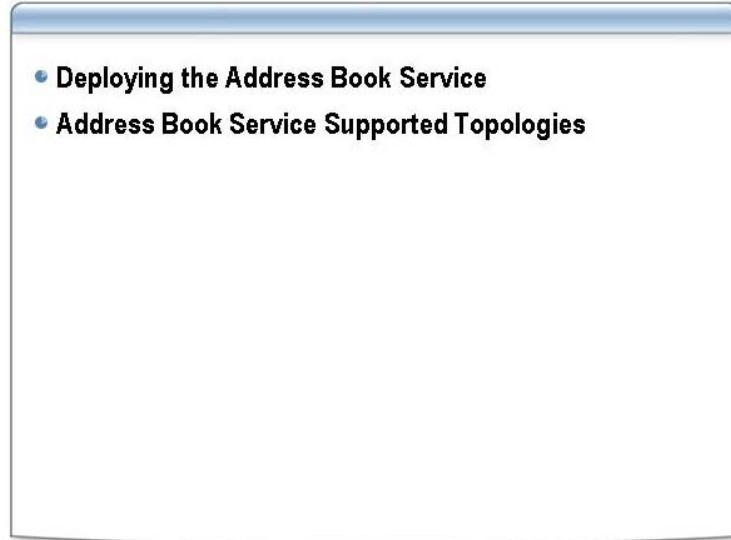
<drive letter>: Documents and Settings\<user>\Local Settings\Application Data\Microsoft\Communicator

### Download Failures

In the event of a download failure because of network connectivity or other issues, the client retries in time intervals that double on each failure (1 minute, 2 minutes, 4 minutes, and so on, up to a maximum of 64 minutes). Any data that was downloaded before the failure is discarded, and the retry begins again at the beginning. If the failure persists for more than 24 hours, a warning is displayed, and an application event is added to the Event Log.

When the client logs in, it determines whether the previous download occurred more than 24 hours ago. If so, then the current download occurs immediately. Otherwise, download is scheduled at 00:00 UTC (Universal Coordinated Time).

## Lesson: Supported Address Book Topologies



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### Introduction

When you deploy the Address Book Service, you must understand the different topology options.

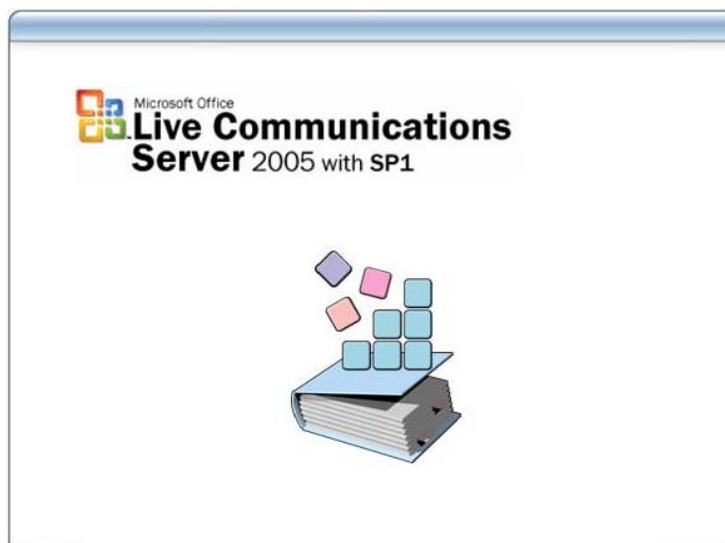
### Lesson objectives

After completing this lesson, you will be able to:

- Describe how to deploy the Address Book Service.
- Describe supported Address Book Service topologies.



## Deploying the Address Book Service



### Introduction

The Address Book Service is designed to use the LCS 2005 with SP1 Standard Edition or Enterprise Edition architecture. You can install Address Book Service on a stand-alone computer, or you can choose from the following options to take advantage of your existing Live Communications Server deployment:

- Address Book Service installed on a single LCS 2005 with SP1 Standard Edition Server, with the File Store hosted on a separate file server. If an IIS server is used, IIS can be installed on the same file server as Address Book Service.
- Address Book Service installed on an Enterprise Edition Server within a pool, with the File Store located on the back-end database server. If an IIS server is used as the back-end database server, installing Address Book Service on a different computer is recommended.
- Address Book Service installed on a separate computer. The File Store and IIS can also be installed on this computer. This topology is supported only if you are running Address Book Service on an Enterprise pool. If you want to use Address Book Service on a Standard Edition Server, Address Book Service must be installed locally.

The Address Book Service does not support federation and hosting. The Address Book Service has no impact on federation topologies. Federated users do not have access to the Address Book URL or to data contained in the File Store.

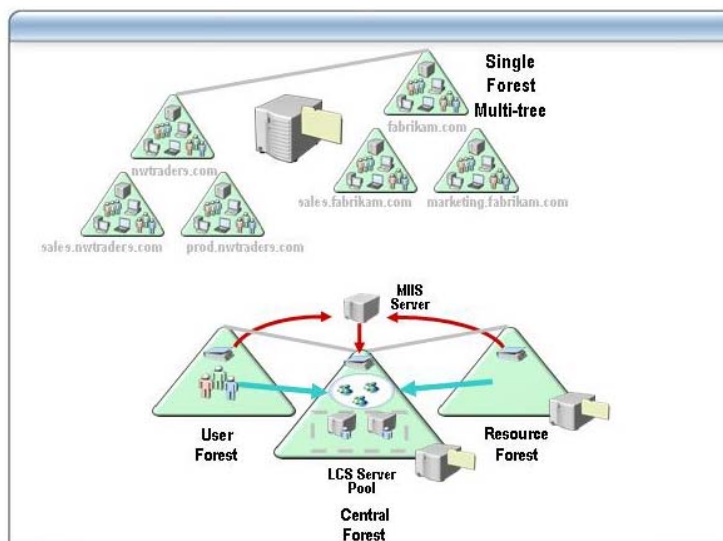
An Address Book URL can be deployed on an IIS Server inside the perimeter network to allow remote users to connect to the Address Book File Store. For remote users, HTTPS authentication (Basic over SSL) is required. In this scenario, an Access Proxy must be deployed to allow remote users to connect to their Enterprise pool or Standard Edition Server in order to log on and receive the Address Book URL.

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**Note** If the remote user's computer is part of the domain, a Group Policy can be used to enable the user to receive the Address Book URL.

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## Address Book Service Supported Topologies



### Introduction

The Address Book Service is supported in the following topologies:

- A single-forest topology containing a single domain or multiple domains
- A resource forest in a multiple-forest topology
- The central forest in a multiple-forest topology

### Address Book Service in a Single Forest

The Address Book Service must be deployed in a domain where Live Communications Server 2005 is deployed, and the Address Book URL must be accessible from all other domains hosting Live Communications Servers or users. You can accomplish this accessibility by deploying IIS or by using distributed file system (DFS) to replicate the address book files.

Depending on your geographical dispersion and on network connectivity across your organization, you may want to consider deploying multiple instances of Address Book Service in your Live Communications Server domains.

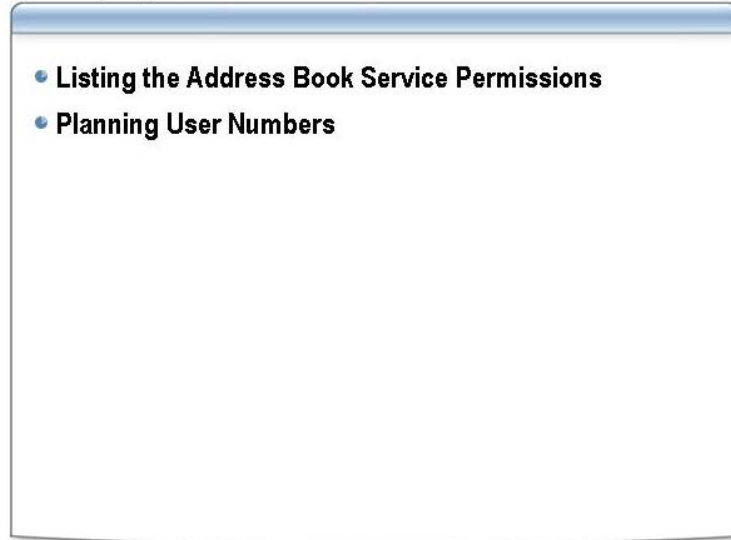
### Address Book Service in a Resource Forest

The Address Book URL must be accessible from the resource forest and all user forests. You can provide this accessibility by deploying IIS or by using DFS.

### Address Book Service in a Central Forest

The Address Book URL must be accessible from the central forest and from all user forests. You can provide this accessibility by deploying IIS or by using DFS.

## Lesson: Planning the Address Book Service Deployment



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### Introduction

Before you deploy the Address Book Service, you must evaluate your organization's infrastructure to determine if one instance or multiple instances of the Address Book Service are required to support your environment. For most organizations, a single instance will suffice.

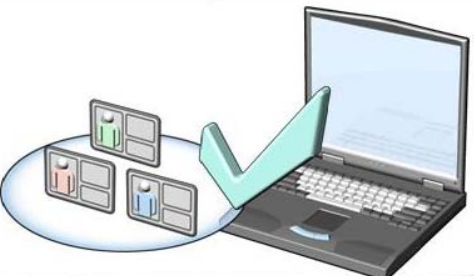
With geographically dispersed sites and multiple pools in disparate regions, it may be necessary to deploy multiple instances of the Address Book Service. Technically, a single instance can still support a geographically dispersed organization, but its reliability will be affected by network availability and speed, as well as by your IT administrative model.

### Lesson objectives

After completing this lesson, you will be able to:

- List the Address Book Service permissions.
- Plan for the supported number of users.

## Listing Address Book Service Permissions



Group	Permissions
rtcABSDomainServices	Read/Write/Delete
rtcDomainServerAdmins	Read/Write/Delete
Authenticated Users	Read

### Introduction

The following permissions are required for installing, configuring, and running the Address Book Service:

- Active Directory and User Replicator permissions
- ABServer.exe and SQL/MSDE permissions
- Address Book File Store permissions
- Address Book Setup permissions

### Active Directory and User Replicator permissions

In order for User Replicator to function within a domain, the domain must have the replication permissions given to the service account for Rtcsvr.exe, which is granted through membership in the RTCHSDomainServices group. Additionally, User Replicator must have read-only access to every user object in a domain. These permissions are granted by DomainPrep and Domain Add. In a locked Active Directory environment, you must use the optional procedure CreateLCSOUPermissions to grant RTCHSDomainServices group the appropriate permissions.

### ABServer.exe and SQL and MSDE permissions

Running the LCS 2005 with SP1 DomainPrep process creates the new domain group, RTCABSDomainServices.

The Create Enterprise pool procedure and Enterprise Edition activation or Standard Edition activation grants the Address Book Service group, RTCABSDomainServices, the necessary permissions in the SQL or MSDE table, ABUserEntry, in the RTC database.

**Address Book File Store permissions**

The file store is assigned Access Control Lists (ACLs) by using the standard NTFS and share permission Access Control Entries (ACEs). Address Book Service Setup adds the permissions from the following table.

Group	Permissions
rtcABSDomainServices	Allow Read/Write/Delete
rtcDomainServerAdmins	Allow Read/Write/Delete
Authenticated Users	Allow Read

Additional permissions can be added by using the standard file permission interface.

**Address Book Service Setup permissions**

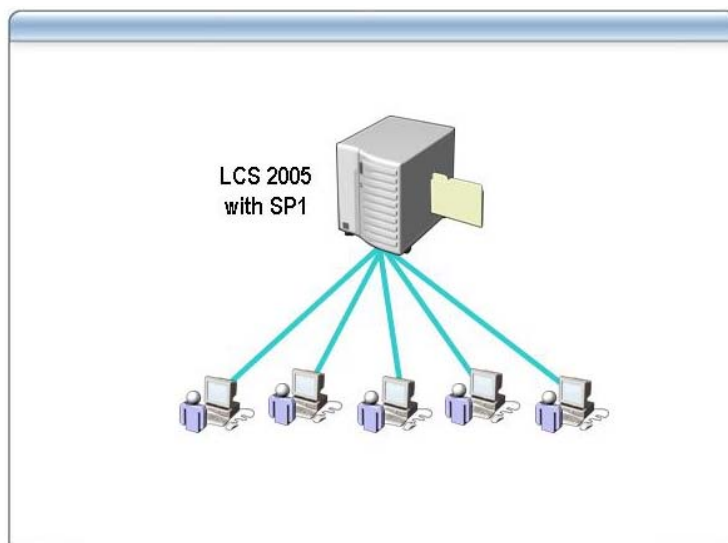
Installation of the Address Book Service requires local administrator credentials.

Activation requires Domain Admin or Account Operators and RTCDomainServerAdmins credentials. Write permission to the SQLTable ABAttribute is granted only to the RTCDomainServerAdmins group.

Removal of the Address Book Service requires:

- Local administrator credentials to remove the service removal only. However, this credential alone does not allow you to truncate ABAttribute values or to remove the Address Book data files.
- RTCDomainServerAdmins credentials to truncate or remove data files. To truncate ABAttribute values and remove the Address Book data files, you must have both local administrator and RTCDomainServerAdmins credentials.

## Planning User Numbers



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### Introduction

The number of users that the Address Book Service can support depends on the topology and the computer on which the Address Book Service is running.

### The Number of Supported Users

A single Address Book Service supports up to 500,000 users and contacts from Active Directory.

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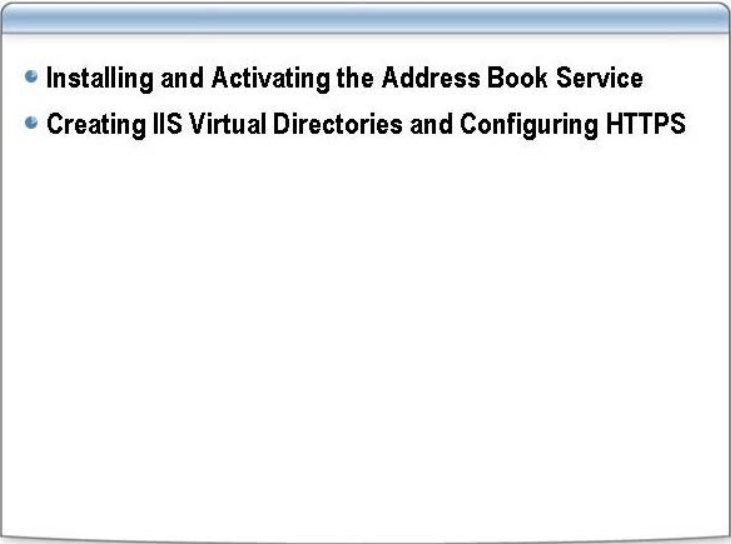
**Note** 500,000 users is the largest user limit tested by Microsoft.

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The Address Book URL of a file store on a computer running Windows Server 2003 Enterprise Edition can support up to 500,000 users. To support these large environments, you should consider deploying additional IIS Servers and using the IIS throttling and caching mechanisms, or using a distributed file system to enhance performance.

If your organization supports more than 50,000 users and contacts with both Enterprise pools and Standard Edition Servers, it is recommended that you deploy the Address Book Service on an Enterprise Edition Server within the pool.

## Lesson: Deploying the Address Book Service

- 
- **Installing and Activating the Address Book Service**
  - **Creating IIS Virtual Directories and Configuring HTTPS**

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### Introduction

To deploy Address Book Service, you must complete the following tasks:

- Determine the location for the Address Book Service.
- Designate an NTFS folder as the Address Book Files Store.
- Install and Activate the Address Book Service.
- Configure Address Book Service URLs using Live Communications Server administrative snap-in or a Group Policy Object.

The following tasks are optional depending on your deployment needs:

- Configure Internet Information Service (IIS).
- Configure Distributed File System (DFS).

### Lesson objectives

After completing this lesson, you will be able to:

- Install and activate the Book Service.
- Create IIS Virtual Directories and configure HTTPS.
- Deploy the Address Book Service.



## Installing and Activating the Address Book Service



### Introduction

When you install and setup Address Book Service, the following files are installed:

- **ABServer.exe**
- **Urthelper.dll**
- **Generic\_Phone\_Number\_Normalization\_Rules.txt**, a text file that contains the normalization rules for generic telephone numbers. You should not modify this file.
- **Sample\_Company\_Phone\_Number\_Normalization\_Rules.txt**, a text file that contains the normalization rules for Active Directory telephone numbers. You can modify this file to meet your organizational requirements. To modify this file, first copy it to **Company\_Phone\_Number\_Normalization\_Rules.txt**.

### To install Address Book Service

1. Log on with an account that is a member of the Administrators group on the server where you want to install the Address Book Service. If you want to activate the server immediately after installation, then you must log on with an account that is also a member of the Domain Admins and RTCDomainServerAdmins groups.
2. Run **AbsSetup.exe** from the **Setup\i386\** folder on the Live Communications Server 2005 with SP1 CD or from an installation folder.
3. Use the installation wizard to:
  - a. Install Address Book Service components.
  - b. Select the destination location.
4. Choose to activate now or later.

**To Activate Address Book Service**

1. Log on as a member of the Administrators and the RTCDomainServerAdmins groups on the server where you want to install Address Book Service.
2. Using Windows Explorer, navigate to the Setup\I386 folder on the Live Communications Server 2005 with SP1 CD or on the installation folder.
3. Double-click AbsSetup.exe.
4. Use the Activation wizard to:
  - a. Enter the UNC path to the Address Book file store.

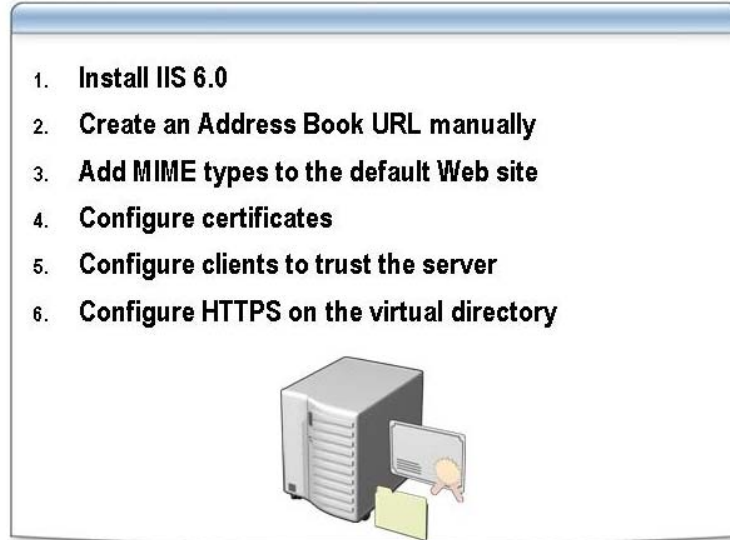
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**Important** Create the NTS folder and set the appropriate permissions before you run the wizard.

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- b. Select the pool in which you want to activate the Address Book Service.
  - c. Specify the Service Account.
  - d. Choose whether you want Address Book Service to start immediately after activation.
  - e. Begin the Address Book Service activation.
  - f. View the activation log.

## Creating IIS Virtual Directories and Configuring HTTPS



### Introduction

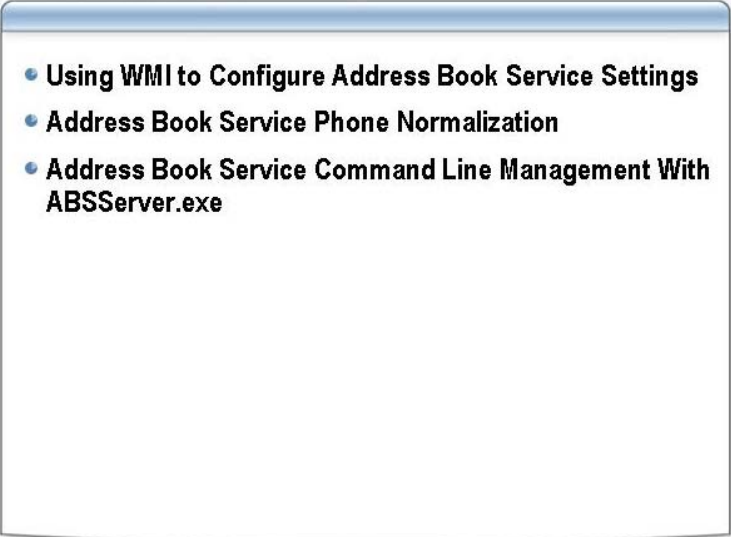
To ensure secure access when you are using external URLs, you must create IIS virtual directories and configure HTTPS.

### Create IIS Virtual Directories and Configure HTTPS

To use IIS virtual directories and configure HTTPS, follow these steps:

1. Install IIS 6.0.
2. Manually create an Address Book URL.
3. Add MIME types to the default Web site level.
4. Configure certificates on your server.
5. Configure your clients to trust the server.
6. Configure HTTPS on your virtual directory.

# Lesson: Configuring and Administering the Address Book Service

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- **Using WMI to Configure Address Book Service Settings**
  - **Address Book Service Phone Normalization**
  - **Address Book Service Command Line Management With ABSServer.exe**

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## Introduction

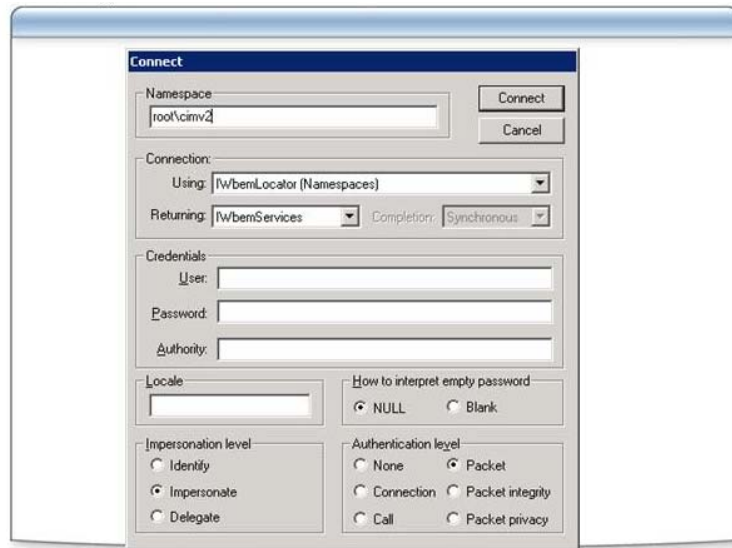
After you have installed and activated the Address Book Service, you will need to manage and administer the service. You can use multiple tools to manage LCS 2005 with SP1, including Windows Management Instrumentation (WMI) settings, phone normalization rules, and command line utilities.

## Lesson objectives

After completing this lesson, you will be able to:

- Describe how to use WMI to configure Address Book Service Settings.
- Describe Address Book Service Phone Normalization.
- Describe how to administer the Address Book Service from the command line.
- Configure and administer the Address Book Service.

## Using WMI to Configure Address Book Server Settings



### Introduction

Effective management of desktop computer and server systems in an enterprise network benefits from well-instrumented computer software and hardware, which allow system components to be monitored and controlled, both locally and remotely. Windows Management Instrumentation (WMI) provides simplified instrumentation of hardware and software for the Windows operating system, as well as providing consistent access to this instrumentation for both Windows-based management systems and legacy management systems that are hosted in other environments.

### Address Book Service WMI Settings

Address Book Service local WMI settings are stored as properties in the MSFT\_SIPAddressBookSettings WMI class in the root\CIMV2 namespace.

You can use Windows Management Instrumentation Tester (wbemtest), which ships with the Windows 2000 Server and Windows Server 2003 operating systems, to modify WMI settings for the Address Book URL.

Property Name	Type	Default Value	Description
OutputLocation	string	None	File location, a valid folder.
RunTime	integer (>= 0 <= 2359)	0130	Service Start time.
SQLServer	string	None	Pool – SQL Server@/MSDE Instance.
SQLDatabase	string	None	Pool – SQL Server/MSDE User Database.
UseNormalizationRules	Boolean	True	Decide to perform normalization or not.
ABSActivated	Boolean	False	Identify as Activated – future support.
PoolName	string	None	Future support.
SourceStream	string	None	Random GUID generated by Address Book Service setup. This GUID is embedded in the file header and is used to identify the Address Book Service instance.

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**Note** After the initial installation of the Address Book Service, it will not synchronize with Active Directory until the WMI RunTime setting has passed. The default setting for WMI RunTime is 1:30 A.M.

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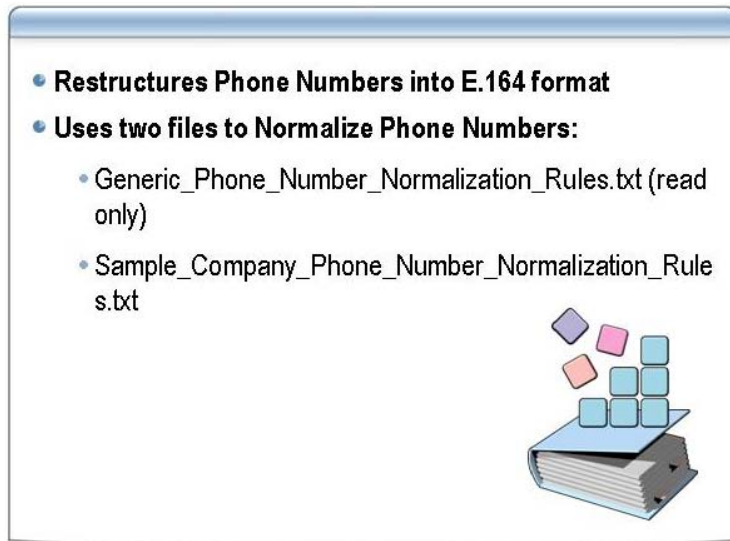
The static Address Book Service settings that are compiled time constants in the code are as follows:

- Output file extension = .lsabs
- NumberOfDaysToKeep = 30

To use wbemtest to  
Modify WMI Settings

1. Click **Start**, point to **Run**, and in the **Open** box, and then type **wbemtest**.
2. In the **Windows Management Instrumentation Test** dialog box, click **Connect**.
3. In the **Connect** dialog box, in **Namespace**, type **root\cimv2**.
4. Click **Connect**.
5. Click **Open Instance**.
6. In **Get Object Path**, type **MSFT\_SIPAddressBookSettings**.
7. Click the instance that you want to open.
8. Edit the properties that you want to modify.
9. Close the **Windows Management Instrumentation Tester** dialog box.
10. Stop and restart the Address Book Service.

## Normalizing Phone Numbers



### Introduction

Phone numbers that are stored in disparate directories are essentially unstructured strings that lack a strict model for consistency. However, Office Communicator 2005 requires standardized E.164 phone numbers.

The Address Book Service can provide phone number normalization in conjunction with mapping rules. These rules are stored in the `Generic_Phone_Number_Normalization_Rules.txt` text file that is stored in the same directory as the `ABServer.exe` executable.

If the `UseNormalizationRules` WMI flag is set to `TRUE`, the rules apply to those Active Directory attributes with `0x2000` bit set in the `Flags` column value. If the `0x1000` bit is set in the `Flags` column value, then the associated Active Directory attribute value is always normalized.

### Files Used to Normalize Phone Numbers

The Address Book Service uses two files to normalize phone numbers:

- `Generic_Phone_Number_Normalization_Rules.txt` is a read-only file and should not be changed.
- `Sample_Company_Phone_Number_Normalization_Rules.txt` is the sample file in which you configure rules specific to your company requirements. To use the rules in this file, make a copy and rename the copy to `Company_Phone_Number_Normalization_Rules.txt`; otherwise, Address Book Service will use only the generic rules configured in `Generic_Phone_Number_Rules_Normalization.txt`.

## Administering the Address Book Service from the Command Line

Switch	Argument	Description
-?	None	Displays all command switches for ABServer.exe
-syncNow	None	Manually synchronizes the Address Book Service
-testPhoneNorm	phone-number	Loads the normalization rules text files and attempts to normalize the phone number arguments
-dumpfile	input-file [output-file]	Dumps the input file to the output file

---

### Introduction

You can manage the Address Book Service by running ABServer.exe from a command prompt. You can modify the environment Path system variable to include the location of ABServer.exe, %SystemRoot%\Program Files\Microsoft LC 2005\Address Book Service, or you can run the tool directly from the Live Communications Server Address Book directory.

If ABServer.exe is run without arguments, then it behaves as if it is being started as a service and attempts to connect to the service control manager, which results in an error message. If ABServer.exe is run with one or more arguments, the first argument is a command switch, which may be followed by arguments.



**ABServer.exe Command  
Line Switches and  
Arguments**

Switch	Argument	Description
-?	None	Displays all command switches for ABServer.exe.
-syncNow	None	Manually synchronizes the Address Book Service by pausing the service to perform synchronization and then restarting the service.
-testPhoneNorm	phone-number	Loads the normalization rules text files and attempts to normalize the phone number arguments. The results are displayed in the command line shell. If the phone number argument contains spaces, it must be enclosed in quotation marks.
-dumpfile	input-file [output-file]	Dumps the input file given as the first argument, formatted as text, to the output file given as the second argument. If the second argument is not given, the output file name defaults to the same path and file name as the input file with a .txt extension.

---

**Important** After the initial installation of the Address Book Service, it will not synchronize with Active Directory until the WMI RunTime setting has passed. If you need to test the Address Book Service immediately after installation, you must use the command **ABServer.exe -syncNow**.

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## Lab 11: Using Address Book Service in Live Communications Server 2005 SP1



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### Objectives

After completing this lab, you will be able to:

- Perform and installation of Address Book Service on LCS 2005 with SP1.
- Provision the OLC clients to use the Address Book Service.
- Use Office Live Communicator to perform queries against the Address Book Service data.
- Force a refresh of the Address Book Service data.

Estimated time to complete this lab: **30 minutes**



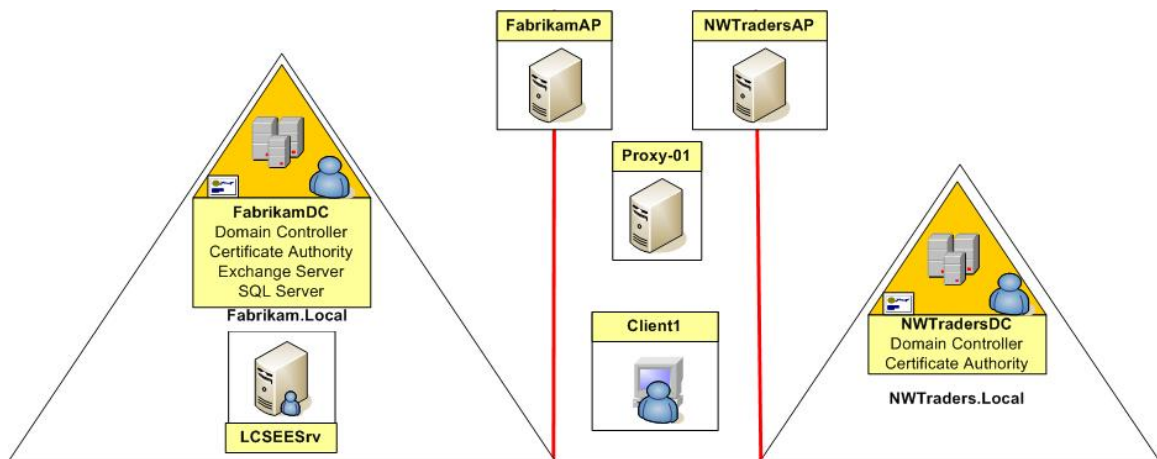
**Important:** At the end of this lab, close down the VPC images and delete changes.

### Introduction

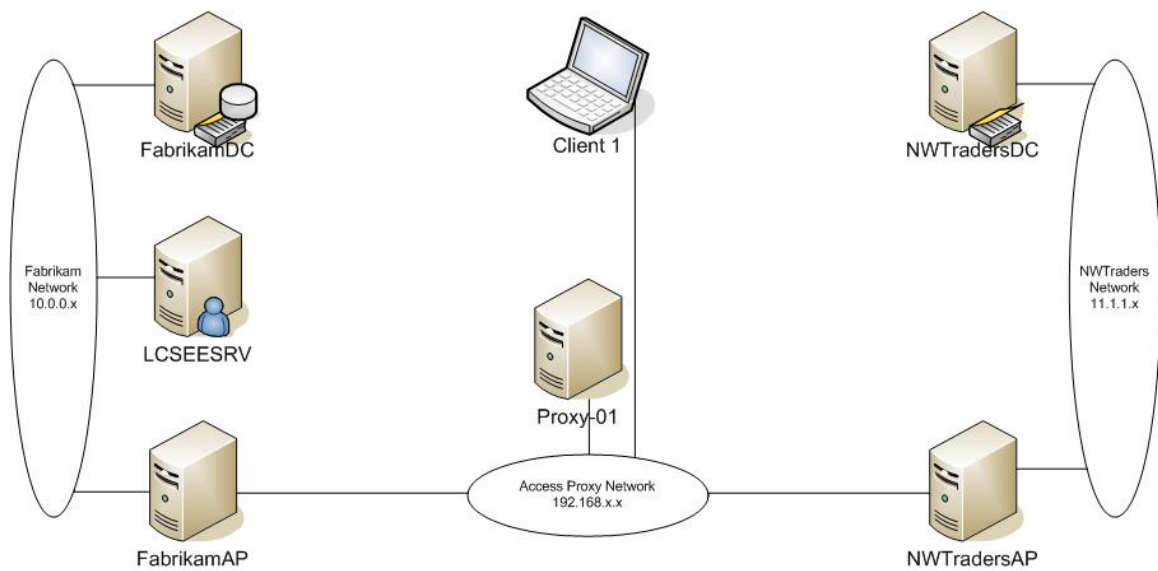
Matt Dawson, the network administrator for Fabrikam, has been asked if he can make it easier for Fabrikam employees to search for their co-workers. Matt has assessed that the Address Book Service in LCS 2005 with SP1 should be suitable for this purpose, and he is now ready to install the service. He will then test the Address Book Service functionality in Office Live Communicator.

### Network Topology

The labs in this course use virtual machines. In order to configure the virtual machines to be usable in a lab environment, the network topology has been substantially modified from a typical network configuration. The lab configuration combines many server roles in non-standard ways that are not recommended and are generally not viable in a production network. The network topology used in these labs is shown in the following figure.



## Physical Network Topology



## Virtual PC Image to Computer NetBIOS Name Mappings

The following table shows the mapping between the VPC images and the computer NetBIOS names for this lab. Please ensure you use the correct VPC image from the VPC console to start the lab.

VPC Configuration Name	Computer NetBIOS Name
7034A-FabrikamDC-B	FabrikamDC
7034A-LCSEESRV-B	LCSEESRV



**Important:** You should start these virtual PC images prior to commencing the labs in this module.

On 7034A-FabrikamDC-B, a Service Control Manager message box may appear, with the following message: At least one service or driver failed during system startup. Use Event Viewer to examine the event log for details. If this message appears, click OK, and continue. The message refers to the Kerberos Key Distribution Center service. However, this service starts properly.

On 7034A-LCSEESRV-B, the Live Communications Server service may fail to start if FabrikamDC has not completely booted before starting LCSEESRV. Before you start the lab, check that the Live Communications Server service on LCSEESRV is running.

At the end of the lab, close down these virtual PC images without saving changes.

## Exercise 1


### Installing the Address Book Service

#### Scenario

Matt wants to check the functionality of the Find dialog box, as he thought this should let him find LCS users in the Fabrikam domain. To do this, he wants to log on as an ordinary user, not as an administrator.

#### Description

In this exercise, you will review the Find feature in Microsoft Office Communicator 2005, and then install the Address Book Service on Live Communications Server 2005 with SP1, Enterprise Edition.

Tasks	Detailed Steps
 <b>Important:</b> Perform this exercise on the 7034A-LCSEESRV-B virtual machine.	
1. Use Office Communicator without the Address Book Service	<ol style="list-style-type: none"> <li>a. Log on to <b>7034A-LCSEESRV-B</b> as <b>Matt</b> with a password of <b>pass@word1</b>.</li> <li>b. Click <b>Start</b>, point to <b>All Programs</b>, and then click <b>Microsoft Office Communicator 2005</b>.</li> <li>c. Close the Internet Explorer window.</li> <li>d. In Microsoft Office Communicator, click <b>Change Sign-In Account</b>.</li> <li>e. On the <b>Options</b> dialog box, on the <b>Accounts</b> tab, in the <b>Sign-in name</b> box, type <b>matt@fabrikam.local</b>, and then click <b>Advanced</b>.</li> <li>f. In the <b>Advanced Connection Settings</b> dialog box, click <b>Configure settings</b>.</li> <li>g. In the <b>Server name or IP address</b> box, type <b>EEPool1.fabrikam.local</b>, click <b>TLS</b>, and then click <b>OK</b>.</li> <li>h. On the <b>Options</b> dialog box, click <b>OK</b>.</li> <li>i. On Microsoft Office Communicator, click <b>Sign In</b>.</li> <li>j. If the <b>Sign-in Account</b> dialog box appears, in the <b>Sign-in name</b> box, type <b>matt@fabrikam.local</b>, and then click <b>OK</b>.</li> <li>k. In Microsoft Office Communicator, in the <b>Find</b> box, type <b>Dag</b>.</li> <li>l. Notice that communicator cannot find the user Dag.</li> <li>m. On the Microsoft Office Communicator main menu, click <b>Contacts</b>, and then click <b>Add a Contact</b>.</li> <li>n. In the <b>Add a Contact</b> dialog box, click <b>Search for a contact</b>, and then click <b>Next</b>.</li> <li>o. For the <b>First Name</b>, type <b>Dag</b>, and then click <b>Next</b>.</li> <li>p. On the <b>Search results</b> page, ensure that <b>Dag Rovik</b> appears, click <b>Next</b>, and then click <b>Finish</b>.</li> <li>q. Notice that Dag is now added as a contact.</li> </ol>

	<ul style="list-style-type: none"> <li>r. Click <b>Start</b>, and then click <b>My Computer</b>.</li> <li>s. Click <b>Tools</b>, and then click <b>Folder Options</b>.</li> <li>t. On the <b>View</b> tab, click <b>Show hidden files and folders</b>, and then click <b>OK</b>.</li> <li>u. In My Computer, navigate to C:\Documents and Settings\Matt\Local Settings\Application Data\Microsoft\Communicator.</li> <li>v. Confirm that there is no file called <b>galcontacts.db</b> in the folder.</li> <li>w. Log off <b>7034A-LCSEESRV-B</b>.</li> </ul>
2. Create a share for the Address Book data.	<ul style="list-style-type: none"> <li>a. Log on to <b>7034A-LCSEESRV-B</b> as <b>FABRIKAM\Administrator</b> with a password of <b>pass@word1</b>.</li> <li>b. If the <b>Sign-In Account</b> dialog box appears, click <b>Cancel</b>, and then close the Communicator window.</li> <li>c. Click <b>Start</b>, click <b>My Computer</b>, and then double-click <b>Local Disk (C:)</b>.</li> <li>d. On the <b>File</b> menu, point to <b>New</b>, click <b>Folder</b>, and then name the folder <b>ABShare</b>.</li> <li>e. Right-click <b>ABShare</b>, and then click <b>Sharing and Security</b>.</li> <li>f. In the <b>ABShare Properties</b> dialog box, click <b>Share this folder</b>, and then click <b>OK</b>.</li> </ul>
3. Install the Address Book Service.	<ul style="list-style-type: none"> <li>a. In My Computer, navigate to E:\Demo Files\LCS2005SP1\EE\Setup\I386.</li> <li>b. Double-click <b>AbsSetup.exe</b>.</li> <li>c. Click <b>Install Files for Address Book Service</b> to start the wizard.</li> <li>d. On the <b>Welcome to the Setup Wizard for Live Communication Address Book Service</b> page, click <b>Next</b>.</li> <li>e. On the <b>License Agreement</b> page, accept the <b>License Agreement</b>, and click <b>Next</b>.</li> <li>f. On the <b>Choose Destination Location</b> page, leave the default folder location, and then click <b>Next</b>.</li> <li>g. On the <b>Ready to Install the Program</b> page, click <b>Install</b>.</li> <li>h. After the Address Book Service files install, click <b>Finish</b>.</li> <li>i. In the <b>Address Book Service Activation</b> message box, click <b>Yes</b> to activate now.</li> <li>j. On the <b>Welcome to the Activate Address Book Service Wizard</b> page, click <b>Next</b>.</li> <li>k. On the <b>Select Location for File Store</b> page, under <b>UNC Share name</b>, type <b>\\LCSEESRV\ABShare</b>, and then click <b>Next</b>.</li> <li>l. On the <b>Select Address Book Service Pool</b> page, leave the default pool in which to activate the Address Book Service in, and click <b>Next</b>.</li> <li>m. On the <b>Select Service Account</b> page, click <b>Use An Existing Account</b>, in the <b>Account Name</b> box, type <b>LCService</b>, with a password of <b>pass@word1</b>, and then click <b>Next</b>.</li> <li>n. On the <b>Start Service Option</b> page, ensure the <b>Start the service after activation</b> check box is selected, and then click <b>Next</b>.</li> <li>o. On the <b>Ready to Activate Address Book Service</b> page, click <b>Next</b> to begin the Address Book Service activation.</li> </ul>

	<p>p. In the <b>Activate Address Book Service Wizard has completed</b> page, note the comment <b>After activation, you can manually trigger an immediate address book service synchronization</b>, and then click <b>Finish</b> to close the Activation wizard.</p> <p>q. On the <b>Address Book Service Deployment Tool</b> window, click <b>Exit</b>.</p>
4. Run the Address Book server synchronization process	<p>a. Click <b>Start</b>, and click <b>Run</b>, type <b>cmd</b>, and then click <b>OK</b>.</p> <p>b. At the command prompt, type <b>CD\program files\Microsoft LC 2005\Address Book Service</b>, and then press ENTER.</p> <p>c. At the command prompt, type <b>abserver –syncnow</b>, and then press ENTER. Wait until the operation completes.</p> <p>d. At the command prompt, type <b>Exit</b>, and then press ENTER.</p>
5. Verify that the Address Book Service is running and that the Full Address Book file was created successfully.	<p>a. Click <b>Start</b>, point to <b>Administrative Tools</b>, and then click <b>Event Viewer</b>.</p> <p>b. In <b>Event Viewer (Local)</b>, click <b>Application</b>.</p> <p>c. In the Application Log, look for the following Event IDs  <b>11707 – Installation completed successfully.</b>  <b>21002 – The service was started.</b>  <b>21010 – Full Address Book file created.</b></p> <p>d. In <b>Event 21010</b>, note the file size, file name, the file compression, and the number of contacts. The latest occurrence of this event should show the number of contacts as 6, but the first occurrence may show the number of contacts as 0.</p> <p>e. In <b>My Computer</b>, navigate to <b>C:\ABShare</b>.</p> <p>f. Verify that the file from Event 21010 exists in this folder.</p> <p>g. Close My Computer and the Event Viewer.</p> <p>h. Log off <b>7034A-LCSEESRV-B</b>.</p>

## Exercise 2


# Provision the clients in the fabrikam.com domain to use the new Address Book Service

## Scenario

Now that Matt has installed the Address Book Service on LCS 2005 SP1, he needs to provision the clients to use the new Address Book Service.

## Description

In this exercise, you will provision the clients in the Fabrikam domain to use the Address Book Service on Live Communications Server 2005 SP1 Enterprise Edition.

Tasks	Detailed Steps
 <b>Important:</b> Perform part 1 of this exercise on 7034A-FabrikamDC-B, and part 2 on 7034A-LCSEESRV-B.	
<b>1.</b> Configure a Group Policy Object in the Fabrikam domain to provision the clients.	<ol style="list-style-type: none"> <li><b>a.</b> On <b>7034A-FabrikamDC-B</b>, log on as <b>Administrator</b> with a password of <b>pass@word1</b>.</li> <li><b>b.</b> Click <b>Start</b>, point to <b>Administrative Tools</b>, and then click <b>Active Directory Users and Computers</b>.</li> <li><b>c.</b> Right-click <b>fabrikam.local</b>, and then click <b>Properties</b>.</li> <li><b>d.</b> Click the <b>Group Policy</b> tab.</li> <li><b>e.</b> Click <b>Default Domain Policy</b>, and then click <b>Edit</b>.</li> <li><b>f.</b> In the <b>Group Policy Object Editor</b> console, under <b>Computer Configuration</b>, right-click <b>Administrative Templates</b>.</li> <li><b>g.</b> Click <b>Add/Remove Templates</b>.</li> <li><b>h.</b> On the <b>Add/Remove Templates</b> dialog box, click <b>Add</b>.</li> <li><b>i.</b> Navigate to <b>E:\Demo Files\Communicator ADM File</b>, and then double-click the <b>Communicator.adm</b> file.</li> <li><b>j.</b> On the <b>Add/Remove Templates</b> dialog box, click <b>Close</b>.</li> <li><b>k.</b> Under <b>Computer Configuration</b>, double-click <b>Administrative Templates</b>.</li> <li><b>l.</b> Expand <b>Microsoft Office Communicator Policy Settings</b>.</li> <li><b>m.</b> Click <b>Microsoft Office Communicator Feature Policies</b>.</li> <li><b>n.</b> On the right-hand side of the Group Policy Object editor, double-click <b>Address Book Server Inside URL</b>.</li> <li><b>o.</b> Click <b>Enabled</b>, under <b>Address Book Server Inside URL</b>, type <b>file://LCSEESRV/abshare</b>, and then click <b>OK</b>.</li> <li><b>p.</b> Close the Group Policy Object Editor.</li> <li><b>q.</b> On the <b>fabrikam.local Properties</b> dialog box, click <b>OK</b>.</li> <li><b>r.</b> Close Active Directory Users and Computers.</li> </ol>



<p>2. Verify that the provisioning process is working by logging on with a non-administrator account.</p>	<ul style="list-style-type: none"><li>a. Switch back to <b>7034A-LCSEESRV-B</b>, log on as <b>Matt</b> with a password of <b>pass@word1</b>.</li><li>b. In Microsoft Office Communicator, on the <b>Connect</b> menu, click <b>Sign Out</b>, and then close Microsoft Office Communicator.</li><li>c. If a message box appears, indicating that Communicator is still running, click it to close the message.</li><li>d. On the taskbar, in the notification area, right-click the <b>Microsoft Office Communicator</b> icon, and then click <b>Exit</b>.</li><li>e. Click <b>Start</b>, and then click <b>Run</b>.</li><li>f. In the <b>Open</b> box, type <b>cmd</b>, and then click <b>OK</b>.</li><li>g. At the command prompt, type <b>gpupdate /force</b>, and then press ENTER.</li><li>h. Close the command prompt.</li><li>i. Click <b>Start</b>, point to <b>All Programs</b>, and then click <b>Microsoft Office Communicator 2005</b>.</li><li>j. If the <b>Sign-in Account</b> dialog box appears, type <b>matt@fabrikam.local</b> as the <b>User name</b>, <b>pass@word1</b> as the <b>Password</b>, and then click <b>OK</b>.</li><li>k. Click <b>Start</b>, and then click <b>My Computer</b>.</li><li>l. On the <b>Tools</b> menu, click <b>Folder Options</b>.</li><li>m. On the <b>View</b> tab, check that <b>Show hidden files and folders</b> is selected, and then click <b>OK</b>.</li><li>n. In My Computer, navigate to <b>C:\Documents and Settings\Matt\Local Settings\Application Data\Microsoft\Communicator</b>.</li><li>o. Verify that the <b>GalContacts.db</b> file exists in the folder.</li><li>p. Leave the Explorer window open.</li></ul>
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## Exercise 3


# Use Office Live Communicator to perform queries against the Address Book Service data

## Scenario

Now that Matt has provisioned the clients to use the new Address Book Service, he can test the Address Book Service by using Office Communicator to find his co-workers.

## Description

In this exercise, you will use the Address Book Service to find another user in the Fabrikam domain.

Tasks	Detailed Steps
 <b>Important:</b> Perform this exercise on the 7034A-LCSEESRV-B virtual machine.	
1. Perform a query as Matt	<ol style="list-style-type: none"><li>In <b>7034A-LCSEESRV-B</b>, switch to the <b>Microsoft Office Communicator</b> window.</li><li>At the top of Communicator, in the <b>Find</b> box, type <b>Ant</b>, notice how Communicator displays the user <b>Antonio Bermejo</b>.</li><li>Move the pointer over Antonio and see what, if any, information is displayed about the user. You should see the words <b>From corporate address book</b> at the bottom of that tool tip.</li><li>Right-click <b>Antonio Bermejo</b>, and then click <b>Properties</b>.</li><li>Notice that there is no information regarding Phone Numbers.</li><li>Click <b>Cancel</b> to close the Properties dialog box.</li></ol>

## Exercise 4

### Force a refresh of Address Book Service data

#### Scenario

Now that Matt has tested the Address Book Service data using Office Communicator, he will update the telephone numbers for a contact and then force a refresh of the Address Book Service data.

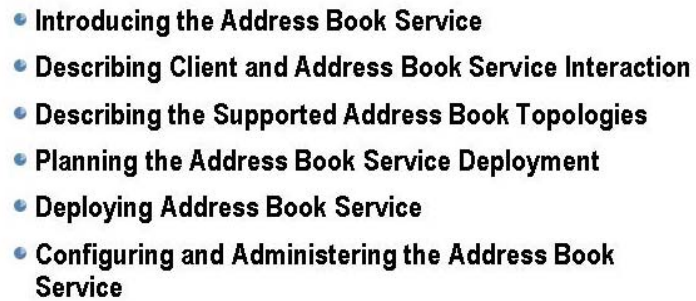
#### Description

In this exercise, you will refresh the Address Book Service data on Live Communications Server 2005 SP1 Enterprise Edition.

Tasks	Detailed Steps
1. Modify a user's properties and see if the change is visible	<ol style="list-style-type: none"> <li>On <b>7034A-FabrikamDC-B</b>, log on as <b>Administrator</b> with a password of <b>pass@word1</b>.</li> <li>Click <b>Start</b>, point to <b>Administrative Tools</b>, and then click <b>Active Directory Users and Computers</b>.</li> <li>In the <b>LCSUsers</b> OU, right-click <b>Antonio Bermejo</b>, and then click <b>Properties</b>.</li> <li>On the <b>General</b> tab, next to Telephone number, type <b>+1 425 555 1966</b>.</li> <li>Click <b>OK</b>, and then close Active Directory Users and Computers.</li> <li>Switch to <b>7034A-LCSEESRV-B</b>, open Communicator, right-click <b>Antonio</b>, and then click <b>Properties</b>.  Note that the phone information you just entered does not appear in the phone number field in the <b>Properties</b> dialog box.</li> <li>Close the Properties dialog box.</li> <li>Log off <b>7034A-LCSEESRV-B</b>.</li> </ol>
2. Refresh the Address Book Service data and verify that the changes are reflected.	<ol style="list-style-type: none"> <li>Log on to <b>7034A-LCSEESRV-B</b> as <b>FABRIKAM\Administrator</b> with a password of <b>pass@word1</b>.</li> <li>If the <b>Sign-In Account</b> dialog box appears, click <b>Cancel</b>.</li> <li>Click <b>Start</b>, and click <b>Run</b>, type <b>cmd</b>, and then click <b>OK</b>.</li> <li>At the command prompt, type <b>CD\program files\Microsoft LC 2005\Address book Service</b>, and then press ENTER.</li> <li>At the command prompt, type <b>abserver -syncnow</b>, and then press ENTER. Wait until the operation completes.</li> <li>At the command prompt, type <b>Exit</b>, and then press ENTER.</li> <li>Log off <b>7034A-LCSEESRV-B</b>.</li> </ol>

<p>3. Force an immediate refresh of the data on the client</p>	<ul style="list-style-type: none"><li>a. Log on to <b>7034A-LCSEESRV-B</b> as <b>Matt</b> with a password of <b>pass@word1</b>.</li><li>b. In Microsoft Office Communicator, click <b>Connect</b>, click <b>Sign Out</b>, and then close Microsoft Office Communicator.</li><li>c. If a message box appears, indicating that Communicator is still running, click it to close the message.</li><li>d. On the taskbar, in the notification area, right-click the <b>Microsoft Office Communicator</b> icon, and then click <b>Exit</b>.</li><li>e. Click <b>Start</b>, and click <b>My Computer</b>, navigate to <b>C:\Documents and Settings\Matt\Local Settings\Application Data\Microsoft\Communicator</b>, and then delete the <b>GalContacts.db</b> file.</li><li>f. Leave the Explorer window open.</li><li>g. Click <b>Start</b>, point to <b>All Programs</b>, click <b>Microsoft Office Communicator</b>, and then sign in.</li><li>h. Check that the new <b>GalContacts.db</b> file is in the <b>C:\Documents and Settings\Matt\Local Settings\Application Data\Microsoft\Communicator</b> folder.</li><li>i. Close My Computer.</li><li>j. In Microsoft Office Communicator, in the Find box, enter <b>Antonio</b>.</li><li>k. Right-click <b>Antonio Bermejo</b>, and click <b>Properties</b>.</li><li>l. Notice the updated telephone number information that is now displayed for Antonio.</li></ul>
<p>4. Close down the Virtual PCs</p>	<ul style="list-style-type: none"><li>a. In the virtual PC window for <b>7034A-LCSEESRV-B</b>, click the <b>Action</b> menu, and then click <b>Close</b>.</li><li>b. In the <b>Close</b> dialog box, select <b>Turn off and delete changes</b>, then click <b>OK</b>.</li><li>c. Repeat these steps on the remaining Virtual PCs.</li></ul>

## Review

- 
- **Introducing the Address Book Service**
  - **Describing Client and Address Book Service Interaction**
  - **Describing the Supported Address Book Topologies**
  - **Planning the Address Book Service Deployment**
  - **Deploying Address Book Service**
  - **Configuring and Administering the Address Book Service**

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In this module, you learned that the Address Book Service provides:

- Global address list information to Microsoft Office Communicator clients.
- Normalization for the phone numbers that are stored in Active Directory.

Without the Address Book Service, you will not be able to use the address book features of Live Communications Server 2005 with Service Pack 1 on the communicator client.

In the next Module, you will look at how to deploy an Archiving Server to archive messages on LCS 2005 with SP1.

