ThinkVantage

Access Connections Deployment Guide Version 4.0 or later

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Preface

This guide is intended for IT administrators, or those who are responsible for deploying the Access Connections™ program on computers in their organizations. The purpose of this guide is to provide the information required for installing Access Connections on one or many computers, provided that licenses for the software are available for each target computer. The Access Connections application provides application help, which administrators and users can consult for information about using the application itself.

ThinkVantage® Technologies is developed for IT professionals and the unique challenges they may encounter. This deployment guide will provide instructions and solutions for working with Access Connections. If you have suggestions or comments, communicate with your Lenovo™ authorized representative. To learn more about the technologies that can help you lower the total cost of ownership and to check for periodic updates to this guide, visit the following Web site: http://www.lenovo.com.

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Chapter 1. Overview

Access Connections is a connectivity assistant program which helps to configure various network connections including wireless LANs. Users can create and manage location profiles that help to store the network and Internet configuration settings that are needed to connect the client computer to a network from a specific location, such as home or at work. The network connection can be made using a modem, a wired network adapter, a broadband device (DSL, cable modem, or ISDN), or a wireless network adapter. Virtual private network (VPN) connections are also supported. By switching between location profiles as you move your computer from place to place, Access Connections can quickly and easily help users connect to a network without having to reconfigure network settings manually. A location profile supports advanced security settings, default printer, and automatic application launch.

Access Connections has the ability to support automatic location switching between Ethernet and wireless LAN connections.

Features

Access Connections has features that enable you to find wireless and network connections quickly and effortlessly. These features increase the portability of your wireless activity. Access Connections includes the following functions:

- **Create new location profiles**

  Access Connections provides a wizard that helps you create location profiles that define the settings required to connect to various types of networks. The Connection Status window is opened by default when Access Connections is started.

- **View location profile and connection status**

  The Connection Status window allows you to view the status of the network connection associated with each location profile defined in Access Connections allowing you to switch between location profiles. When you open the window, status is shown for the network connection and for the components used by the currently applied location profile.

- **Switch between location profiles**

  Access Connections allows you to change location profiles. You can simply choose another location profile from the list and connect to it. A progress indicator window shows the state of the connection. If the connection fails, a button appears to help you fix the connection.

- **Wireless Connectivity**

  Access Connections software accommodates wireless wide area networking (WAN) and Bluetooth Technology. With the introduction of 3G cellular technologies, wireless WAN services are emerging as effective alternatives for high-speed wireless access to networks. Access Connections provides portability when users are away from the office and not near a public WLAN hot spot.

- **Find wireless networks.**

  Access Connections can search for wireless networks that are in range of your wireless adapter. This feature is useful when you are traveling or in a public place, and you are not sure about what, if any, wireless networks are available to you. You can attempt to connect to any wireless networks that are found. If the

connection attempt is successful, a new wireless location profile will be created using the detected wireless network name and default settings. You can also manually create a location profile for a detected wireless network if you know the appropriate settings.

- **Automatic switching of location profiles**

  If a network associated with your currently applied location profile becomes unavailable, Access Connection can search for available networks and automatically switch to a matching location profile. You can automatically switch between wireless location profiles, and Ethernet location profiles. You can establish a wireless priority list that allows you to define which wireless location profile will be made active when your computer is in range of multiple wireless networks, or when more than one location profile uses the same wireless network name.

- **Create location profiles for remote deployment administrator only**

  An Access Connections administrator can define location profiles for export to the client computers.

  Access Connections provides an icon in the system tray which allows you to launch the application, view the status of the current location profile, and switch between profiles.

Considerations for deploying Access Connections

Collecting information about the various places where users might attempt to connect and the kinds of connections available in those locations will help you develop pre-configured profiles that users can import and use right away. By capturing working configurations in profiles which can be deployed with the initial image, support calls can be reduced and users can immediately take advantage of their network connections without intervention.

A new Administrator Feature Enabler tool is available with version 4.0 or later. The administrator feature simplifies the task of deploying location profiles, global settings, and control policies to individuals or groups of individuals running Access Connections in a corporate environment. The deployment of these profiles and settings can be accomplished during the initial system deployment as part of the preload image or after systems are in the field using standard remote deployment methods.

Requirements and specifications for deployment

To view the current list of supported ThinkPad® systems and wireless WLAN and WAN drivers, go to:

`http://www.lenovo.com/pc/support/site.wss/migr-4zlnjb.html#require.`

Access Connections deployment features

Following is a list of features to help IT administrators deploy and manage Access Connections:

- The Access Connections Enabler for Administrator Profile Deployment feature is required to deploy location profiles that you create for client users. The Access Connections Enabler is available to IT professionals only at:

  `http://www.lenovo.com/pc/support/site.wss/document.do?lndocid=ACON-DEPLOY`

  Note: For further instruction on how to obtain the Access Connections Enabler, see: Chapter 3, "Using the Administrator Feature," on page 7.

- Administrators can create location profiles and distribute them as part of a preload image or install them after the client systems have been deployed.
- Control policies can be set for each profile.
- Distribution control lists can be created to limit who can import various deployment packages.
- A client configuration policy can be set to configure the operation of Access Connections on the client computer.
- Deployment packages are encrypted and password protected to be sure that only authorized individuals can import the location profiles that may contain wireless security information such as WEP or static password, for example.

Chapter 2. Installing Access Connections

The following instructions provide installation procedures for the standalone version of Access Connections. For instructions on installation of the integrated Access Connections package, see Appendix B, "Integrated Packaging," on page 17.

Installing Access Connections without user interaction

To install Access Connections without user interaction, complete the following steps:

1. Start Microsoft® Windows® 2000 or Windows XP, and then log on with administrative privileges.
2. Extract the Access Connections software package to the hard disk drive. For example: C:\Drivers\W2k\Accon.
3. Click **Start**, and then click **Run**.
4. The following command can be used to install Access Connections.
   a. To install interactively, type:

      `<path>\Setup.exe`

   b. To install silently with default path for install log, type:

      `<path>\Setup.exe -s-sms-f2x`

   c. To install silently with customized setup script with log path specified, type:

      `<path>\Setup.exe -s-sms-f1<fullpath>\setup.iss-f2<path>\setup.log.`

   d. To install silently from a CD, type:

      `<path>\Silent.bat`

Uninstalling Access Connections

To uninstall Access Connections, complete the following steps:

1. Start Windows 2000 or Windows XP, and then log on with administrative privileges.
2. Click **Start**, then click **Run**.
3. The following commands will uninstall Access Connections.
   a. To uninstall interactively type,

      `<path>\Setup.exe -0x9 anything`

   b. To uninstall silently with a customized script,
      1) Create a uninst.iss file by completing the following steps:
         a) Go to the Access Connections install directory and Run setup.exe -r -remove.
         b) Click **Uninstall** when prompted.
         c) Click **No** to restart the system later. This will prevent automatic restart.
         d) Copy the script file generated at C:\Windows\Setup.iss to your local directory.
         e) Rename the script file to uninst.iss.
      2) Enter the following command:

         `<path>\Setup.exe -s-f1<fullpath>\uninst.iss anything -f2x`

Chapter 3. Using the Administrator Feature

Enabling the Administrator Feature

To enable the Administrator Feature of Access Connections, you must first have Access Connections installed on a donor computer.

When deploying location profiles that provide a wireless network connection, the donor and recipient must contain wireless adapters which support the capabilities defined in the location profile. For instance, if the location profile being deployed is configured for LEAP authentication, the adapters on the recipient systems must support LEAP authentication.

To enable the Administrator Feature, download and install the Administrator Feature Enabler. You can download the Administrator Feature Enabler from the following Web site:

http://www.lenovo.com/pc/support/site.wss/document.do?lndocid=ACON-DEPLOY

When you execute the download, this will extract the enabler application AdmEnblr.exe to the installation folder of Access Connections (default path is C:\Program Files\Thinkpad\ConnectUtilities). To enable the Administrator Feature, complete the following steps:

1. Open the folder and run the AdmEnblr.exe.
2. Click **Enable**, and then click **Exit**. This will create the deployment feature menu on Access Connection main application panel.
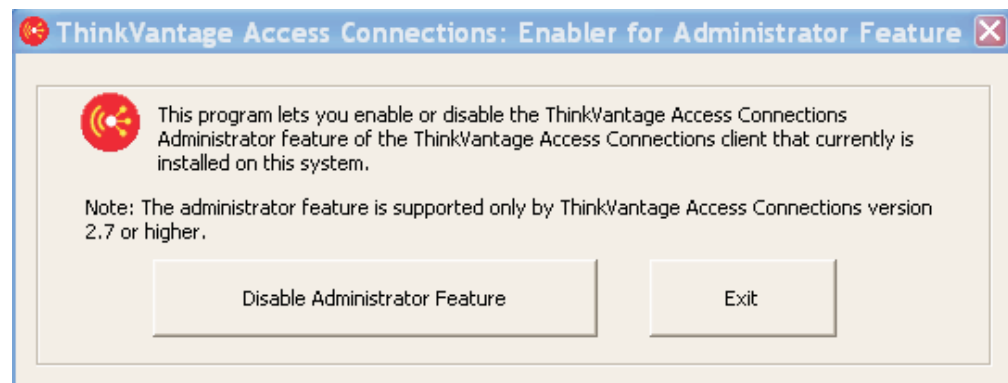
Figure 1. Enabler for Administrator Profile Deployment Feature window

3. Click **Enable Administrator Feature**.
4. Click **Exit** to close the Enabler.
5. Start Access Connections.

Using the Administrator Feature

To use the Administrator Feature, complete the following steps:

1. Create all the location profiles that users will require. Consider these and other needs as you create the profiles:
   a. Office and building connections

b. Home connections
  c. Branch-office connections
  d. Connections while traveling
  e. Hot-spot connections

2. After you have created the location profiles, click **Profile Distribution>Create Distribution Package**.

Figure 2. Create Distribution Package

3. Select the location profiles that you want to deploy. For each location profile selected, choose the appropriate user-access policy as shown in Figure 3. If a profile that is selected contains a wireless profile with encryption enabled, the administrator will be prompted to re-enter the wireless settings data to ensure sensitive data is not exposed.
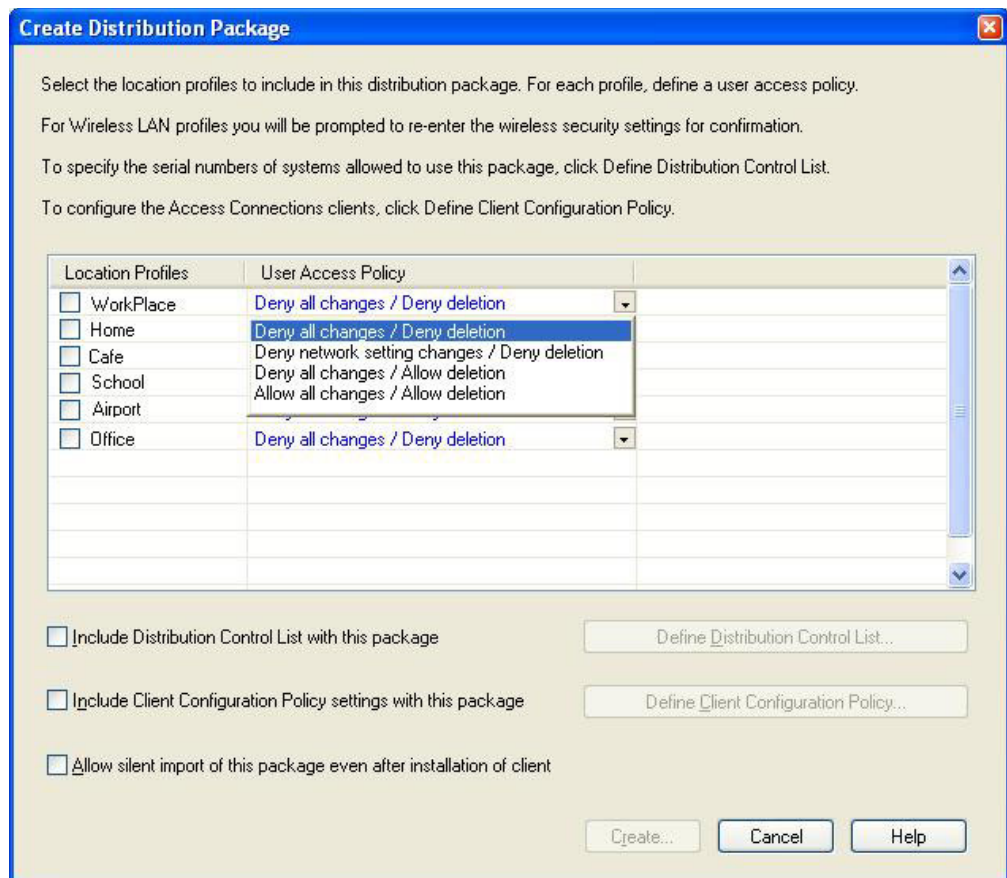

Figure 3. Create Distribution Package window

The access control policy defines the restrictions that are in place for a particular profile. Access control policies can be defined per profile and can have the following values:

a. **Deny all changes / Deny Deletion**: Users cannot perform operations such as modify, copy, or delete on the profile.

b. **Deny network setting changes / Deny deletion**: The network settings in the profile cannot be modified, deleted or copied. The non-modifiable parameters are TCP/IP settings, Advanced TCP/IP settings, and wireless settings. The profile cannot be deleted.

c. **Deny all changes / Allow deletion**: Users can not modify or copy the profile; however, users can delete the profile.

d. **Allow all changes / Allow deletion**: Users can modify, copy and delete the profile.

4. **Include Distribution Control List with this package:** Defines the Distribution Control List based on computer serial numbers. This method of distribution enables the administrator to type individual serial numbers or to create different groups of serial numbers that represent different organizations of users who need different location profiles. This optional step is designed primarily for securing the distribution of the profile location file (*.LOA), when it is being sent to remote users for manual importing. Distribution control lists ensure that individuals install appropriate network connection profiles only. The Distribution Control List helps reduce unauthorized network access.
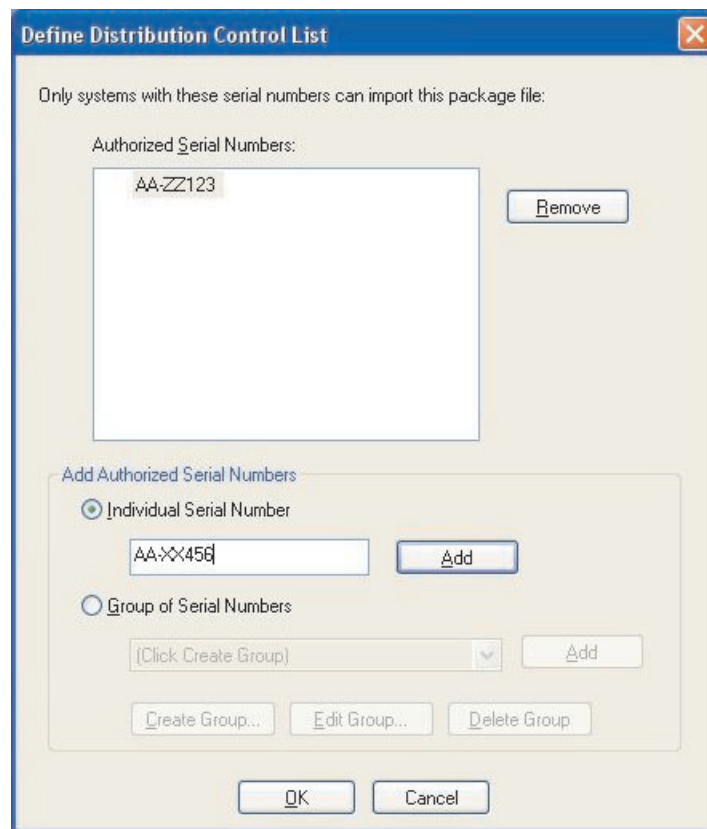

Figure 4. Define Distribution Control List

5. **Include Client Configuration Policy:** Defines the Client Configuration Policy, which will control the capabilities that will be available to the user after the *.LOA file is imported.

Note: Marking the box beside **Do not allow clients to become an administrator:** will prevent users from enabling the Administrator Feature on their installation of Access Connections. This setting is useful in large enterprise environments where IT administrators want to prevent others from creating and distributing network access profiles.
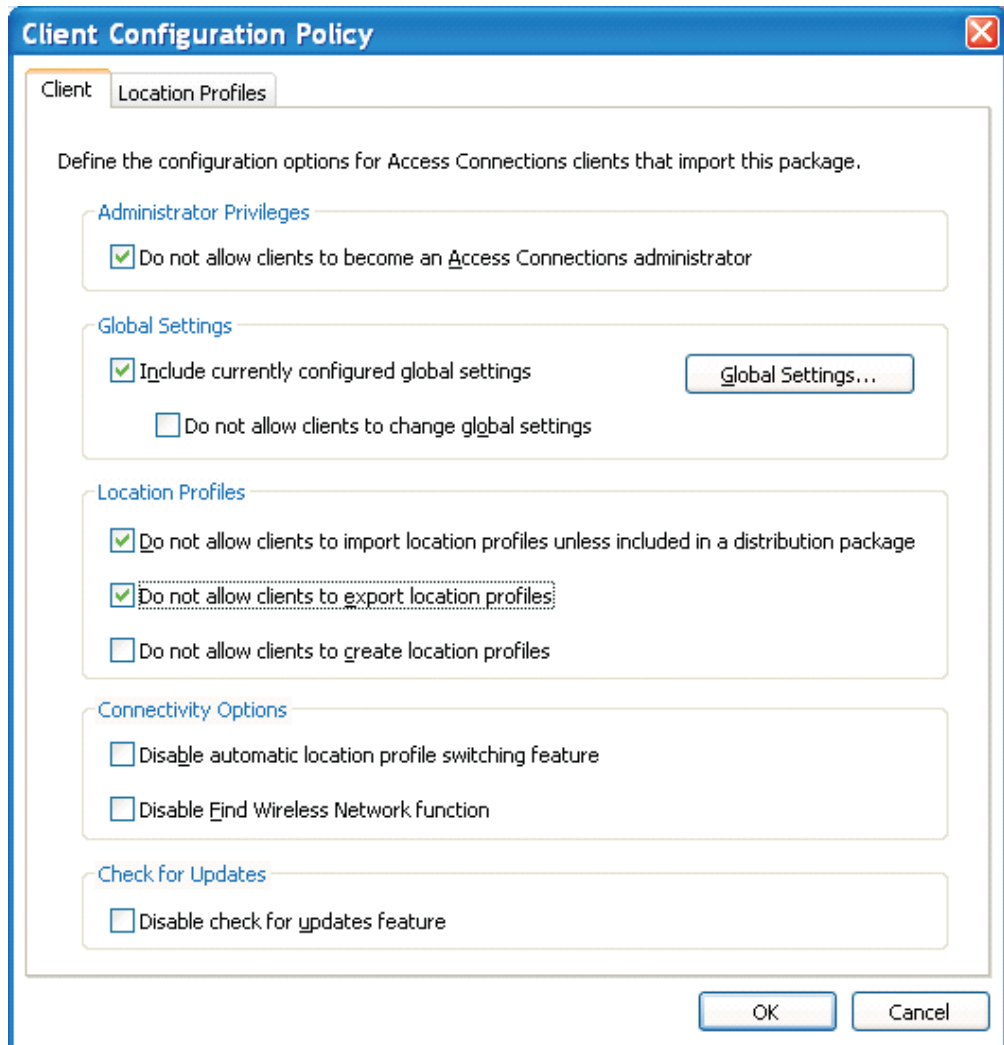
Figure 5. Define Client Configuration Policy

Note: The Client Configuration Policy panel enables the administrator to set the Global Settings for Access Connections. To give limited users the ability of creating and applying profiles, administrators should select the setting **Allow Windows users without administrator privileges** to create and apply location profiles under Global Settings and select **Include currently configured global settings** in client configuration policy as part of the deployment (.LOA) package.

6. **Creating Groups:** When creating groups of serial numbers, flat text files can be imported which contain the group of serial numbers. The file must be formatted such that each line contains a single serial number. These text files can be created by exporting a list that has been created with the Administrator Feature or by an asset management system if it has such capabilities. This

simplifies the process of controlling distribution to a large number of computers based on their serial number.
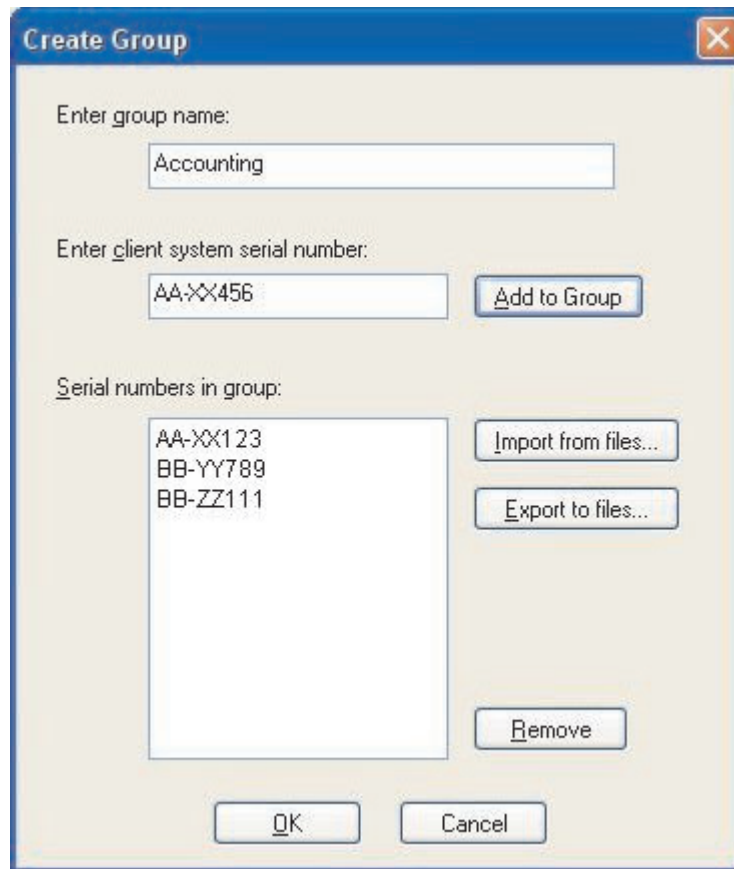
Figure 6. Create Group

7. **Allow silent import of this package even after installation of client:** By default any profiles in a *.LOA file can not be imported silently by Access Connections once it has been installed. Deployment packages (consisting of *.LOA and *.SIG files) created with the check box on Figure 3 on page 8 can be copied to the installation folder of Access Connections and will be detected and imported silently on the next reboot.

8. Under the Location Profiles section, you can disable the clients ability to set the browser home page or proxy settings by checking the options for **Set browser home page** and **Set proxy settings**.
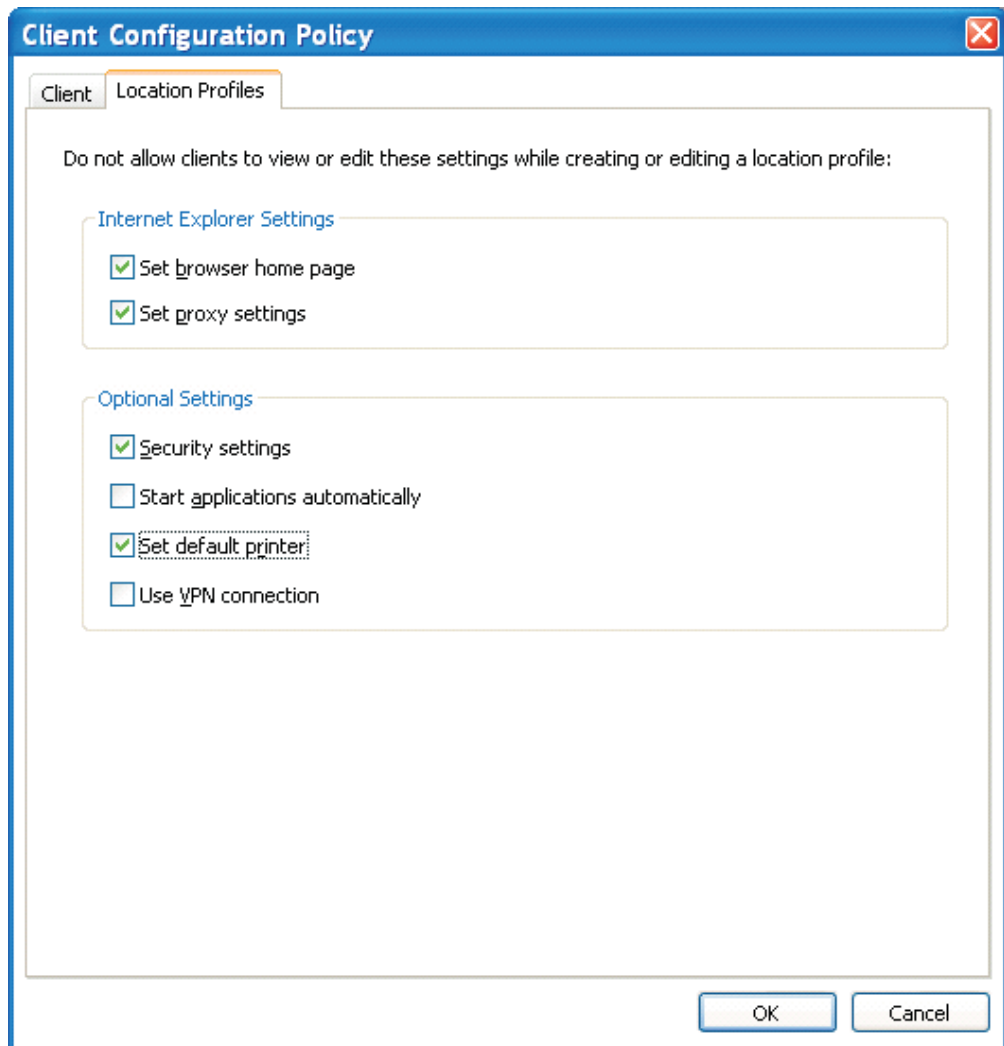
Figure 7. Define Location Profiles

9. The Optional Settings under the Location Profiles section allows you to disable the ability of the client to set the Security settings, start certain applications automatically, set the default printer, and enable the use of a VPN connection.

10. After you have specified all the necessary settings in the Define Client Configuration Policy window, click **Create**. A passphrase prompt will be displayed. The passphrase is used to encrypt the *.LOA file. This same passphrase will be required to import the deployment package (*.LOA) on client systems. The passphrase is also encrypted in a *.SIG file which is needed to import the deployment package silently.

11. By default, the .LOA and .SIG files which are required for deployment are saved in C:\Program Files\Thinkpad\ConnectionUtilities\Loa directory.

   Attention: For image deployment, the *.LOA file must reside in the Access Connections install directory - (C:\PROGRAM FILES\THINKPAD\ CONNECTUTILITIES).

Chapter 4. Deploying Access Connections

After creating the location profiles required for client users, you can also manage and deploy new, updated, or revised location profiles to client computers. The following examples describe deployment scenarios used in deploying Access Connections:

- Deploy Access Connections and Location Profiles on new client computers.
- Deploy Location Profiles and Client Policy on existing client computers running Access Connections.
- Upgrade existing Access Connections and migrate Location Profiles on existing client computers.

Deploy on new computers

To deploy Access Connections Location Profiles on new computers that does not have Access Connections installed, do the following:

1. Create an Access Connections distribution package (*.LOA and *.SIG) with the Location Profiles that contain the desired user access policy and client configuration policy as described in Chapter 3, "Using the Administrator Feature," on page 7. For unattended import, enable the setting **Allow silent import of this package even after installation of client** while creating the .LOA file.
2. Create an integrated package as described inAppendix B, "Integrated Packaging," on page 17 with Access Connections, Wireless LAN driver/application, Hotkey Fn+F5 utility, and Power Management driver.
3. Include the distribution package .LOA and .SIG files in the CONWIZ folder of the integrated package. You can choose not to include the distribution package in the integrated package and instead after the installation of the integrated package or Access Connections, copy them into the Access Connections installed directory (default installed directory is C:\Program Files\ThinkPad\ConnectUtilities).
4. Install the integrated package as desired for attended or unattended mode, as described in Appendix B, "Integrated Packaging," on page 17.
5. After restarting the system, Access Connection is runs automatically, detect and import the distribution package silently. If the silent import option was not selected, a user can select import from the manage profiles window and manually import the package by providing the same passphrase at the prompt that was used to create the package by administrator.

Deploy on existing client computers

To deploy Access Connections location profiles on existing computers that have Access Connections already installed and running, complete the following steps:

1. Create an Access Connections distribution package (*.LOA and *.SIG) with the location profiles that contain the desired user access policy and client configuration policy as described in Chapter 3, "Using the Administrator Feature," on page 7 earlier. If only the client configuration policy needs to be modified, you can create a distribution package without exporting any profiles but only include the modified client configuration policy. For unattended

import, enable the setting **Allow silent import of this package even after installation of client** while creating the .LOA file.

2. Copy the distribution package (*.LOA and *.SIG) into the Access Connections installed directory (default installed directory is C:\Program Files\ThinkPad\ConnectUtilities) of the existing client computer.

3. After restarting the system, Access Connection runs automatically and detects the distribution package and import the package. The import can be forced by using the following commands:

```
<path> \qctray.exe /importsilently
<path> \qctray.exe /killac
<path> \qctray.exe /startac
```

Deleting locked profiles

There are two ways to delete a locked Access Connections profile.

1. Uninstall Access Connections with profiles from Add/Remove programs on the client system.

2. To delete locked profiles remotely complete the following steps:
   - Create another unlocked .LOA profile which has the same name and passphrase as the originally deployed .LOA.
   - Deploy this newly created .LOA profile to client systems.
   - Use following command to delete the profile:
     ```
     <path>\qctray.exe/del<location profile name>
     ```

Updating deployed Profiles

To update your currently deployed profiles to new encryption and security settings, you will have to create another .LOA profile with the same name and passphrase of the originally deployed .LOA profile. Deploy this newly created .LOA to client systems.

Upgrade Access Connections on existing computers

To upgrade Access Connections to newer version and migrate the existing location profiles on existing client computers, complete the following steps:

1. Create an integrated package as described in Appendix B, "Integrated Packaging," on page 17 with the new version of Access Connections, recommended version of wireless LAN driver/application, Hotkey Fn+F5 utility, and Power Management driver.

2. Install the integrated package as desired in attended or unattended mode and described in Appendix B, "Integrated Packaging," on page 17. This will overinstall the older version without removing the location profiles and keeps all other existing settings.

3. After restarting the system, Access Connection runs automatically and will detect the existing location profiles and automatically migrate to the newer version.

Appendix A. Command line interface

Access Connections can accept command line input to switch between location profiles and to import or export locations profiles. You can input these commands interactively within a command prompt window, or you can create batch files for use by other users. Access Connections does not need to be running before these commands are executed.

- Apply Location Profile.

  <path>\qctray.exe/set <location profile name>

- Disconnect Location Profile.

  <path>\qctray.exe/reset <location profile name>

- Delete Location Profile.

  <path>\qctray.exe/del <location profile name>

- Import Location Profile (valid only for files with .LOC extension)

  <path>\qctray.exe/imp <location profile path>

- Perform silent imports of all profiles.

  <path>\qctray.exe/importsilently

- Export Location Profiles (valid only for files with .LOC extension.)

  <path>\qctray.exe/exp <location profile path>

- Apply a dummy SSID profile for wireless cards (regardless of which profile was most recently active) and return immediately. Do not turn off the Wireless Radio

  <path>\qctray.exe/disconnectwl

- Close AcMainFUI, Ac Tray, AcWIIcon modules.

  <path>\qctray.exe/exit

- Enter a special monitor mode in which all roaming is blocked, Ethernet as well as Wireless. Also when the third party application that has called this API is closed, reset the monitor mode

  <path>\qctray.exe/setmonitormode

- Reset the monitor mode

  <path>\qctray.exe/resetmonitormode

- Kill all Access Connections processes. Since this requires administrative privileges, the command will be routed through AcPrfMgrSvc to close all other Access Connections processes except for profile manager service.

  <path>\qctray.exe/killac

- Restart all Access Connections processes. Since this requires administrative privileges, the command will be routed through AcPrfMgrSvc.

  <path>\qctray.exe/startac

- Find Wireless networks.

  <path>\qctray.exe /findwInw

- Display QCTRAY help information.

  <path>\qctray.exe /help

Appendix B. Integrated Packaging

Designed for the challenging deadlines of IT professionals, Lenovo provides Integrated Packaging for Access Communications. Integrated Packaging is used to simplify the installation process by bundling installation files.

The integrated Access Connections package

This scenario provides information on how to complete an integrated package installation for Access Connections that requires no user interaction. For this integrated package installation, obtain Access Connections version 3.82. Access Connections version 3.82 can be obtained under the Previous version downloads section at the following Lenovo Web site:

`http://www.lenovo.com/pc/support/site.wss/migr-4zlnjb.html`

1. Download the following package:

   `Access Connections version 3.82 with wireless drivers`

   This package includes an earlier version of Access Connections and relevant drivers and setup utility files needed to create the integrated package installation. Extract the package by running the download executable. The default directory where modules are extracted is C:\Drivers\W2K\ACCONWLD.

2. Download and extract each of the following:
   - **Access Connections** (latest version)

     The latest version of Access Connections can be downloaded from the Lenovo Web site at:

     `http://www.lenovo.com/pc/support/site.wss/migr-4zlnjb.html`
   - **Hotkey utilities**

     The Hotkey utilities can be downloaded from:

     `http://www.lenovo.com/pc/support/site.wss/document.do?&lndocid=MIGR-38953`
   - **Power Management driver**

     The Power Management driver can be downloaded at:

     `http://www.lenovo.com/pc/support/site.wss/document.do?&lndocid=MIGR-4GXPEG`
   - **Wireless LAN drivers**

     Refer to the wireless driver table on the following Lenovo Web site for the Wireless LAN driver required for your system:

     `http://www.lenovo.com/pc/support/site.wss/document.do?&lndocid=MIGR-4ZLNJB`

3. Delete the following folders from the C:\Drivers\W2k\ACCONWLD directory:
   - CONWIZ
   - IBMPM
   - OSD sub-folder from the Hotkey Utilities package
   - Wireless LAN drivers such as WLANCX2, WLLANATH, or WLLANINT.

4. Copy the following folders from the extracted location and place into the C:\Drivers\W2k\ACCONWLD directory.
   - **CONWIZ** for Access Connections.
   - **IBMPM** for Power Management.
   - **OSD** for the Hotkey utilities package and On screen display.

- All **Wireless LAN drivers** that you extracted during Step 2. such as WLANCX2, WLLANATH, or WLLANINT. You do not need to replace all of the drivers in the directory, only the drivers required for your wireless system.

   Note: This package is ready for customization to prepare for installation and contains the Software Installer. The Software Installer searches your sub directories for up-to-date versions of wireless drivers, Access Connections, and Power Management.

5. The following commands will install the integrated Access Connections package:

   a. To install interactively, type:

   ```
   <path>\setup.exe
   ```

   b. To install silently, all the relevant packages with prompt for system restart at the end of installation type:

   ```
   <path>\Setup.exe /D /H /R
   ```

   c. To install silently, all the relevant packages with no restart. A restart is required to complete the installation type:

   ```
   <path>\Setup.exe /S /H /R:0
   ```

   d. To install silently, all the relevant packages with forced system restart at the end type:

   ```
   <path>\Setup.exe /S /H /R:2
   ```

.

Directory structure

The following files are placed inside the folder where you extracted the downloaded package. When the integrated package is extracted, the following subdirectory under ACCONWLD containing each of the following packages is created:

- CONWIZ is the folder that contains the main Access Connections application files.
- IBMPM is the folder that contains the Power Management driver files.
- OSD is the folder that contains the On screen display utilities including the Fn+F5 Hotkey utilities setup.
- WLANCX2 is the folder that contains the Intel® Pro/Wireless Driver (11a/b/g and 11b/g).
- WLLANATH is the folder that contains the ThinkPad Wireless LAN Adapter Software (11a/b, 11b/g, and 11a/b/g) setup.
- WLLANINT is the folder that contains the Intel Pro/Wireless LAN 2100 3B Mini PCI Adapter Driver Setup (Intel 11b).

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