

Wyse® Winterm™ 3 series, Based on Microsoft® Windows® CE

Local Smart Card Administrators Guide

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Winterm™ 3 series Local Smart Card Administrators Guide

Wyse Local Smart Card Add-on is a feature-specific software component that can be installed on a Winterm™ 3 series Thin Client without touching the underlying operating system files located in flash memory.

 **Caution**

The procedures presented in this document are intended for use by system administrators. Untrained persons should not attempt to use these procedures.

 **Note**

Wyse Local Smart Card (LSC) requires the Wyse Personal Computer/Smart Card (PC/SC) 2.0 Add-on. Be sure that the Wyse PC/SC 2.0 Add-on is installed *prior* to Wyse LSC installation. For Wyse PC/SC 2.0 installation procedures, refer to *Wyse® Winterm™ 3 series, Based on Microsoft® Windows® CE: Add-on Administrators Guide*.

Introduction

This guide is intended for administrators of the Winterm™ 3 series Thin Client. It provides instructions on preparing to install the Local Smart Card Add-on as well as instructions on obtaining and verifying the Add-on. It also provides detailed procedures for installing, removing, and using the Add-on.

For Winterm™ 3 series Thin Client instructions on installing Add-ons using Rapport Administrative Software, Remote Administrator 3000 (RA3000), or FTP Pull, refer to *Wyse® Winterm™ 3 series, Based on Microsoft® Windows® CE: Add-on Administrators Guide*.

For Winterm™ 3 series Thin Client instructions on removing Add-ons using Local Controls or Rapport Administrative Software, refer to *Wyse® Winterm™ 3 series, Based on Microsoft® Windows® CE: Add-on Administrators Guide*.

Wyse Technical Support

To access Wyse technical resources, visit AskWyse.com. If you still have questions, you can submit your questions using the Wyse [Support Request Form](#), or call Customer Support at 1-800-800-WYSE (toll free in U.S. and Canada). Hours of operation are from 7:00 am to 7:00 pm CST, Monday through Friday.

To access international support, visit <http://www.wyse.com/worldwide>.

Related Online Resources Available at Wyse

If you need to upgrade your operating system, contact Wyse customer Support at: <http://www.wyse.com/serviceandsupport>.

The *Wyse® Winterm™ 3 series, Based on Microsoft® Windows® CE: Users and Administrators Guide* explains how to use and administer the Winterm™ 3 series Thin Clients. It is available for download from the Wyse Products Quick Reference site at: <http://www.wyse.com/products/winterm/reference/3series>.

The *Wyse® Winterm™ 3 series, Based on Microsoft® Windows® CE: Add-on Administrators Guide* provides instructions on preparing for installing the Add-ons as well as obtaining and verifying the Add-ons for the Winterm™ 3 series Thin Client. It also provides detailed procedures for installing and removing the Add-ons. In addition, this guide provides the Add-on Bundle for Winterm™ 3 series ReadMe documentation. It is available for download from the Wyse Products Quick Reference site at: <http://www.wyse.com/products/winterm/reference/3series>.

Preparing for Installation

Before you begin installing an Add-on, be sure that you have addressed the following:

- The Add-on procedures work only for Winterm™ 3 series Thin Clients with firmware version 4.0 or later. If your Thin Client has an older version of firmware, you must first upgrade to version 4.0 or later.
- Ensure that your Thin Client will have at least 200 kB of flash memory free *after* the Add-on is installed. To determine free flash memory, refer to “Determining the Amount of Free Flash Memory” on page 3.
- If there is insufficient free flash memory available, you may choose to remove existing Add-ons (including those that may have been installed by the factory or bundled with a firmware upgrade) to make room for others (available from Wyse Technology) to be installed.
- Replacing an Add-on with one of the same type but from an older software build will cause user settings specific to the Add-on to be lost.
- If you install an Add-on and later downgrade installed firmware, and if the Add-on is not bundled with the downgrade image, it will be lost.

Determining the Amount of Free Flash Memory

The amount of flash memory currently free is shown in the Flash Memory tab of the Add-on dialog box.

To determine the amount of free flash memory, complete the following procedures:

1. Log on to the Thin Client as administrator.
2. Click **Start | Settings | Control Panel** to open the Control Panel window (see Figure 1).



Note

If you are not using the New Desktop option, you can open the Control Panel window by clicking the Control Panel command button in the Connection Manager.

Figure 1 Control Panel window



3. Double-click the **Add-on** icon to open the Add-on dialog box.

4. Click the **Flash Memory** tab to view the total and free amounts of flash memory (see Figure 2).

Figure 2 Add-on dialog box - Flash Memory tab



Obtaining the Add-on Package from Wyse Technology

For availability, pricing, and ordering information in the United States and Canada, call 1-800-GET-WYSE (1-800-438-9973) or visit us at <http://www.wyse.com>. In all other countries, contact your Wyse sales representative.

Verifying an Add-on Package Contents

Generally, an Add-on package is downloaded from Wyse in self-extracting compressed (.exe) format. It is recommended that you extract it into its own folder and verify the contents.

In most cases, an Add-on package contains four Rapport scripts. Two scripts are for the installation of the Add-on, and two scripts are for the removal of the Add-on.

In some cases, an Add-on package contain two Rapport scripts. One script is for the installation of the Add-on, and one script is for the removal of the Add-on (these scripts are denoted with `CEN` in the script filename).



Note

The Add-on package may be extracted to a shared folder but the sub-folder must be present in this folder.

The Wyse Local Smart Card Add-on package contains the following:

Installation Files

Installation files include the following:

- ADDON_<ADD-ON NAME>_BXXXX_CEN.RSP
(This script is used for all CE .NET products - OS version 4.0 or later - on Rapport 4.0.)
- Two sub-folders, each containing the following:
 - <add-on image file name>.bin
 - params.ini
(This is the initialization file associated with the binary file. It cannot be used with other Add-ons.)
 - bootstrap212.exe
(This bootstrap file is needed for installing Add-ons to Model 3350SE Thin Clients using RA3000 or FTP pull only, and may not be present in all Add-on packages.)

Removal Files

Removal files include the following:

- RM_ADDON_<ADD-ON NAME>_BXXXX_CEN.RSP
(This script is used for all CE .NET products - OS version 4.0 or later - on Rapport 4.0.)
- Two sub-folders, each containing the following:
 - Z.TXT
(This is a place holder for the extraction package.)



Note

It is necessary to include an empty text file (Z.txt) in the sub-folder so that the sub-folder extracts. This file may be deleted after extraction; however, no harm will be done if the file remains.

Wyse Local Smart Card

Wyse Local Smart Card (LSC) is a utility that allows Winterm™ 3 series Thin Client users to implement Smart Card technology. With Wyse LSC Thin Client users can quickly access Terminal Server applications while maintaining the high security of Smart Card technology. Users of Wyse LSC do not need to remember usernames and passwords to login, nor do they need to logout when ending a session. With LSC, all user credentials are stored on the Smart Card and all active terminal sessions are securely closed when the Smart Card is removed from the Smart Card reader. This Add-on software release for the Winterm™ 3 series uses the CE .NET 3.5.1 with Service Pack 1 operating system or later.

About the Add-on

Version: 2.0

Wyse build: 0014

Compatible Winterm™ 3 series Thin Client Version(s): 4.x

Known Issues and Workarounds: You must uninstall the Local Smart Card Add-on (scmcardaddon.bin) build 0012 and earlier before upgrading to version 2.0.



Note

Wyse Local Smart Card (LSC) requires the Wyse Personal Computer/Smart Card (PC/SC) 2.0 Add-on. Be sure that the Wyse PC/SC 2.0 Add-on is installed *prior* to Wyse LSC installation. For Wyse PC/SC 2.0 installation procedures, refer to *Wyse® Winterm™ 3 series, Based on Microsoft® Windows® CE: Add-on Administrators Guide*.

About the Wyse LSC Manager

Version: 2.0

Wyse build: 0015

Features

Wyse LSC includes the following features:

- **Smart Card Client Software** - Executes the user credentials stored on the Smart Card. It is responsible for reading and writing data onto the Smart Card as well as automatically typing login information into the User Login dialog box.
- **Smart Card Manager Software** - Allows administrators to create Smart Cards for use with Winterm™ 3 series Thin Clients. Administrators can program the Smart Card with particular user credentials (for example, the PIN, username, password, and domain). Smart Card Manager software writes data to the Smart Card using a custom format developed by Wyse, which can then be read by the Smart Card Client software running on a Thin Client.
- **Smart Card Profile** - Contains specific data stored on the Smart Card file system. The Smart Card Profile contains enough information to provide user authentication for

various session types (for example, ICA or RDP) and also the connection name to the server providing the service (for example, MetaFrame Server).

- **Complete file package** - All the files needed to use Wyse Local Smart Card are provided, including Registry files (setting.reg and factory.reg), Smart Card reader drivers, Smart Card file system access drivers, and Smart Card GUI modules (between the WBT Login and the Connection Manager).

Requirements and Recommendations

Wyse LSC requirements and recommendations include the following:

- You must be running CE .NET version 4.0 or later.
- Wyse Personal Computer/Smart Card (PC/SC) 2.0 must be installed prior to installing Wyse Local Smart Card.
- Supported platforms include Microsoft Windows 2000 Professional and Microsoft Windows 2000 Server (Microsoft Windows XP Professional and Microsoft Windows 2003 Server is NOT supported).
- A supported Smart Card reader must be attached to a Winterm™ 3 series Thin Client USB port (for a list of supported Smart Card vendors and models, refer to “Supported Smart Card Vendors and Models” on page 8).
- Only one active Terminal Server session at a time can access the Smart Card reader. The first Terminal Server session retains access until the session is disconnected. Subsequent Terminal Server sessions do not disturb the first Terminal Server session while the first is connected. Subsequent Terminal Server sessions must be reconnected if Smart Card reader access is desired and the first session has already been closed.
- Multiple Smart Card readers on the same Winterm™ 3 series Thin Client are not supported.

Important Feature Information

This section provides important information on the following features:

- Smart Card Client Software and Manager Software
- Supported Smart Card vendors and models

Smart Card Client Software and Manager Software

Smart Card Client software executes the user credentials stored on the Smart Card. Each Smart Card contains a single instance of the following data set, called the Smart Card Profile:

- Thin Client Username
- Thin Client Password
- One or more Session Credentials (consisting of the Session Name, Session Username, Session Password, and Session Domain).

When a Smart Card is initially programmed using the Smart Card Manager software, the administrator sets a default PIN and provides this PIN to a user. This default PIN is then used for the initial Smart Card access to a Thin Client. However, before the Connection Manager opens, the user is prompted for a new User PIN to personalize the Smart Card. From that moment forward, the default PIN is replaced with the personalized User PIN

and the user is never prompted for a new User PIN again (unless the card is re-programmed by an administrator).

Wyse Local Smart Card also includes an Administrator PIN which can be used to gain access to a Smart Card Profile. This Administrator PIN is necessary if an administrator must re-program a Smart Card or access Smart Card information.

For security purposes, the Smart Card has a maximum PIN verification count. That is, if a PIN is incorrectly entered for a number of consecutive attempts (the number is programmed by the administrator), the Smart Card becomes “Blocked”. When a Smart Card is “Blocked”, it is inoperable. To recover Smart Card usage an administrator must use the Un-Block PIN.

Supported Smart Card Vendors and Models

Wyse Local Smart Card supports several Smart Card vendors and models. The software that you purchase to use with the LSC compliant readers will determine the type of actual Smart Cards that comply with your hardware. As long as the software you purchase uses LSC standards, Wyse Local Smart Card is supported.

Wyse Local Smart Card supports the following Smart Card vendors and models (see Table 1):

Table 1 Supported Smart Card Vendors and Models

Vendor	Model	Description	Web Link
SCM Microsystems	SCR301	Smart Card Reader USB	http://www.scmmicro.com/security/smart.html
Schlumberger	Reflex USB P/N 901251	SC Reader USB	http://www.axalto.com/infosec/reflex_usb.html and http://www.scmegastore.com
Axalto	Cryptoflex e-gate 32K cards, no plug 5-pk ID.401025	Smart Card	http://www.axalto.com/infosec/cryptoflex_win.html and http://www.scmegastore.com
Axalto	Cyberflex Access 8K Smart Card	Smart Card	http://www.axalto.com/infosec/cyberflex_access.html and http://www.scmegastore.com
Active Card	Active Card v2.0 Part Number ZFG-9800-A	Smart Card Reader USB	http://www.activcard.com/products/usb_reader.html?m=2
OmniKey	Cardman 3121	Smart Card Reader USB	http://www.omnikey.com/en/produkt_details.php3?produkt=1&variante=47

Table 1 Supported Smart Card Vendors and Models, Continued

Vendor	Model	Description	Web Link
OmniKey	Cardman 2020	Smart Card Reader USB	http://www.omnikey.com/en/ produkt_details.php3?produkt=1&variante=3
Cherry Integrated Keyboard	RS 6700USB Part Number G83-6702 Smart Board	USB Keyboard with Integrated Smart Card Reader	http://www.cherrycorp.com

Guidelines for Installing the Smart Card Manager

After Smart Card Manager installation, the operating system detects the card reader automatically upon connection. A Microsoft® wizard will guide you through the hardware installation.



Note

User names and passwords on the Smart Card must match user names and passwords for local security on the Thin Client.

If you would like to autostart a connection, make sure that the connection is autostart enabled for the user.

The name(s) of the connection(s) on the Smart Card must match the name(s) of the connection(s) on the Thin Client.

Installing Smart Card Manager from Downloaded Files

To install the Smart Card Manager from downloaded files, complete the following procedures:

1. After you receive a shipment confirmation e-mail that includes the sales key and download instructions, complete the download instructions.
2. Launch the self-extracting compressed file that you downloaded from the Wyse Web site; WSCM_100_BLDxxxx.exe (where xxxx is the build number of the Smart Card Manager).
3. Expand the contents to your desired directory (path).
4. Run setup.exe from the path you designated in step 3. For example, desired directory\Winterm Smart Card Manager\apps.

Guidelines for Using the Smart Card Manager

Before running the Add-on for the first time, you will be prompted to enter your license key number before gaining access to the main Local Smart Card program.

The Local Smart Card program consists of a Tab-type user interface with menus and command buttons.



Note

Whenever the Exit command button is used, a confirmation dialog box appears. The Help command button invokes a standard Window Help file.

This section provides information and general guidelines on:

- “Selecting Connections” on page 10
- “Configuring Security” on page 11
- “Selecting Users” on page 11
- “Creating Smart Cards” on page 12

Selecting Connections

The Local Smart Card Manager allows you to create and save any number of connections, as well as the local username and password. Results are saved to a binary file, referred to as a template file. The maximum allowed connections that can be defined per card is 12 connections (assuming the Smart Card has enough file space).

You can either enter new data or load existing data from a template file. A template file allows data from Select Connections and Security screens to be saved for use at a later time (to create more cards with the same data). If you want to load an existing file, you must select the Open Template menu and use the windows Open File dialog box. To create a new template, you must select the New Template menu and save to a unique template filename. By default, the program starts with a new untitled template.

All template filenames end in the extension `.tpl`. If no directory path is specified (that is, only a filename is provided) then the program uses the current path where the program is installed (default path is `C:\Program Files\Wyse Technology\Winterm Smart Card Manager` - however, this path can be modified during installation).



Note

The Local Username and Local Password edit fields, which will be used to logon to the Thin Client, can remain blank.

The Connections list displays a list of all available connections that can be used. You can enter a new Connection by using the Add command button (to open the Add New Connection dialog box), or edit an existing connection by selecting a connection from the list and then using the Edit command button (to open the Edit Connection dialog box).



Note

Connection Name and Type must match those on the Thin Client.

You can delete one or more connections by selecting the connections and using the Delete command button.

The Options command button allows you to select ICA specific options, and invokes an ICA Options dialog box when you have selected an ICA connection from the Connections list.

**Note**

The Connections list can also be optional and can remain blank.

Configuring Security

The Local Smart Card Manager allows you to configure security requirements for end-user Smart Cards. The security dialog box contains a number of check boxes for configuring the security of the Smart Cards.

The Save Session Passwords On Smart Card check box is used to determine whether or not the passwords for each connection will be stored on the Smart Card and entered automatically by the Smart Card. If this check box is cleared, the Smart Card will only enter the username field automatically; the end-user must manually enter the password for each use.

The Enter PIN Number check box is used to determine whether or not the end-user must enter a PIN Number. If this check box is checked, the following options appear:

- User must change PIN on first login - This check box determines whether or not the user must change the PIN Number on first login to the Thin Client.
- PIN allows non-numeric characters - This check box determines whether or not all non-numeric characters are allowed in the PIN.
- PIN must contain both numeric and non-numeric characters - This check box determines whether the PIN must contain a mix of alpha and numeric characters. This option is available only if the PIN allows non-numeric characters option is checked.

The following PIN text boxes are mandatory if PIN security is used:

- The Minimum PIN Length text box must include a number between 1 and 8.
- The Maximum number of PIN retries before card is blocked text box must include a number between 1 and 99.
- The Default User PIN text box must contain at least the number of characters specified in the Minimum PIN Length text box.

**Note**

As long as the Smart Card remains inserted in the reader, there is no time limit after an end-user is prompted for a PIN.

Selecting Users

The Local Smart Card Manager allows you to select usernames from different domains. For each end-user that is selected there will be one Smart Card created. However, you can choose not to select end-users so that the Smart Cards will be generic and any number can be created. On the initial login using these generic Smart Cards, the end-user will be prompted to enter their username. This username is then saved to the Smart Card.

The Select Users Manually check box determines whether or not the administrator can select usernames individually. By default, this check box is not checked and the selection controls are disabled. If this check box is checked, the selection controls are enabled.

The Select Domain text box allows you to select one of the domains from your local network. You can also type in a domain.

The Available Users list displays a list of all the end-users in the currently selected domain. You can enter a new end-user by clicking **New User** and completing the New User dialog box.

The Selected Users list displays a list of the end-users that you have added from the Available Users list. Each of the end-users in this list can then have a Smart Card created for them.

You can add end-users by selecting one or more of the end-users from the Available Users list and clicking **Add**. After saving the end-users (clicking **Save**), the Available Users list displays a list of all the end-users entered.

**Note**

The Username and Domain text boxes are both mandatory when adding a new end-user.

You can remove end-users by selecting one or more of the end-users from the Available Users list and clicking **Remove**.

Creating Smart Cards

The Local Smart Card Manager allows you to write the data you have configured to the Smart Cards for use with the Winterm™ 3 series Thin Client. The data is stored in two files on the Smart Card.

The Smart Card Reader text box displays a list of the available Smart Card readers for you to use. The Smart Card Type text box displays a list of the supported Smart Card types.

The Authentication Transport Key is used as the Administrator PIN. It is automatically populated with a default Authentication Transport Key. However, you can create your own Authentication Transport Key by checking the Change Transport Key check box (enabling the New Key command button), clicking **New Key**, and completing the Change Transport Key dialog box.

Clicking **Create Card** performs the following tasks in the order presented:

1. Connects to the Smart Card reader (this is done before creating the first Smart Card only).
2. Verifies the Authentication Transport Key (If this verification fails, you will be prompted to re-enter the Authentication Transport Key).
3. If custom Wyse directory/files exist, formats the Smart Card.
4. Writes all configured data to the Smart Card (and to the custom files).
5. Displays a Success message notifying you that a Smart Card was successfully created and updates the Created <number of> Cards message.

Clicking **Finish** exits the program. However, if all of the requested Smart Cards have not been created, an exit confirmation dialog box is displayed to ensure that you want to exit the program without creating all of the requested cards.

The Format Card and Identify Owner command buttons (located in the Smart Card Tools area) can be used as follows:

- **Format Card** - This tool is used to remove all Wyse related files from the Smart Card. Clicking **Format Card** opens a dialog box which allows you to enter the Authentication Transport Key and remove the Wyse files. After formatting the card, a message appears confirming success.
- **Identify Owner** - This tool is used to identify the owner of a Smart Card (for example, when a lost Smart Card is found). Clicking **Identify Owner** displays a message containing the owner name or error message.

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