METTLER TOLEDO

DSM InSite®

Configuration Tool

User's Guide

www.mt.com

(01/2010).05

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Introduction

This documentation is provided solely as a guide for individuals who have received Technical Training in servicing the METTLER TOLEDO terminal & software products.

For information, locate the closest authorized METTLER TOLEDO representative at the METTLER TOLEDO website, www.mt.com

This documentation correctly describes the operation and functionality of the InSite® software versions as follows:

Revision	Date
5.00	November, 2009
5.01	January 2010

CUSTOMER FEEDBACK

Your feedback is important to us! If you have a problem with this product or its documentation, or a suggestion on how we can serve you better, please fill out and send this form to us. Or, send your feedback via email to: quality_feedback.mtwt@mt.com. If you are in the United States, you can mail this postpaid form to the address on the reverse side or fax it to (614) 438-4355. If you are outside the United States, please apply the appropriate amount of postage before mailing.

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		Part / Model Number:
		Serial Number:
		Company Name for Installation:
Phone Number: ( )	Fax Number: ( )	Contact Name:
E-mail Address:		Phone Number:

Please check the appropriate box to indicate how well this product met your expectations in its intended use?	
	Met and exceeded my needs
	Met all needs
	Met most needs
	Met some needs
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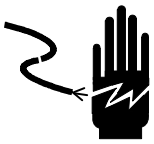
PRECAUTIONS

- READ this manual BEFORE operating or servicing this equipment and FOLLOW these instructions carefully.
- SAVE this manual for future reference.



WARNING!

FOLLOW ALL WARNINGS AND PRECAUTIONS DOCUMENTED IN THE MANUALS FOR THE CONNECTED EQUIPMENT BEFORE PREFORMING ANY SERVICE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

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Chapter 1.0

Installation

This chapter covers:

- System requirements
- Installation procedure

This chapter contains general information on InSite® system requirements and the installation procedure and its options.

System Requirements

This section contains details on the system requirements and recommendations, including details on the required hardware and other software needed to run InSite®.

O/S requirements

InSite® runs on any of the following Windows operating systems

Microsoft® Windows® 2000 Service Pack (SP) 2 or later, or Windows XP Professional , Windows Vista

Hardware requirements

Hardware requirements match those of the chosen O/S. In addition, InSite® requires:

- ~ 57 MB free disk space required (not including .NET)
- Appropriate space for configuration file storage
- Network / Internet access

Software requirements

Microsoft® .Net Framework Version 2.0 (or 3.5 which contains 2.0)

Installation Procedure

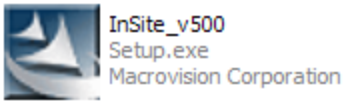
There are two methods of installing the InSite software application.

When using the CD media, a screen like the one shown in Figure 1-1 will appear when the CD is inserted into the CD drive:

Figure 1-1: InSite Setup from CD-ROM

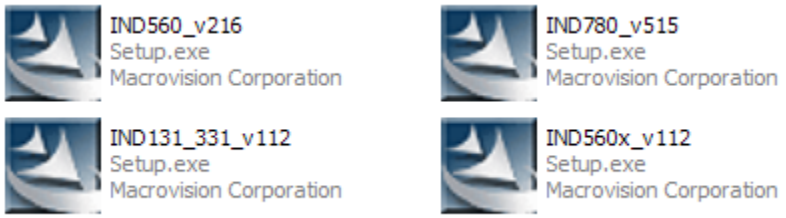
From this application, any of the individual installations (.NET or Adobe Reader) can be launched; the Help or ReadMe files can be read; and the InSite software installation begun. The InSite software installation procedure will check for .NET installation and ask which product modules should be included. Click on the "Click to Install" button beside the appropriate description to begin the desired installation procedure. Once the installation is complete, click the "Click to Exit" button to stop the installation application.

The second method is used if separate installation files were provided, instead of the CD. If the InSite software is not already installed, the main installer must be run first:



This will install the core software and any products you have selected during the procedure. At least one product must be selected for the InSite software to be operational.

Once the InSite software is installed, any uninstalled product modules may be installed separately by clicking its installation file:



InSite Install Script Procedure

With either installation method, an installation script is launched. The script leads through a series of dialog windows for the installation process, giving several opportunities to cancel the process before it begins.

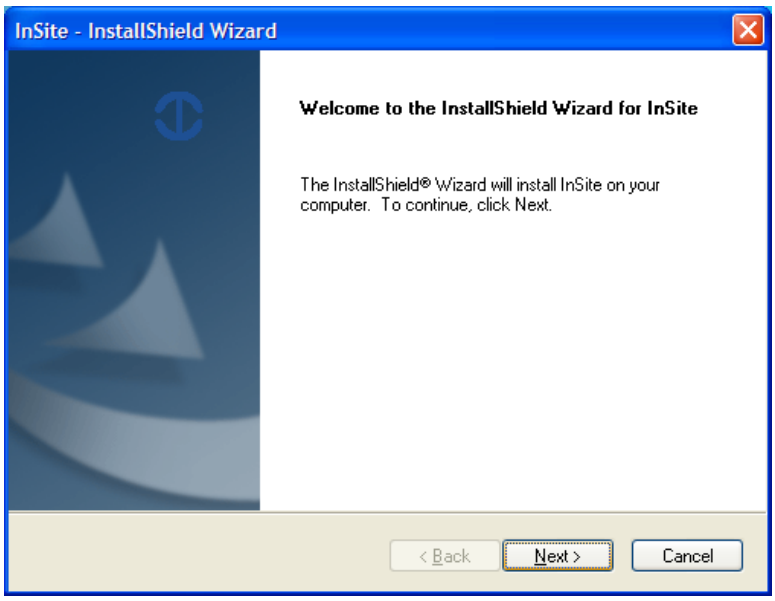


Figure 1-2: Welcome screen

Figure 1-3: EULA Acceptance Screen

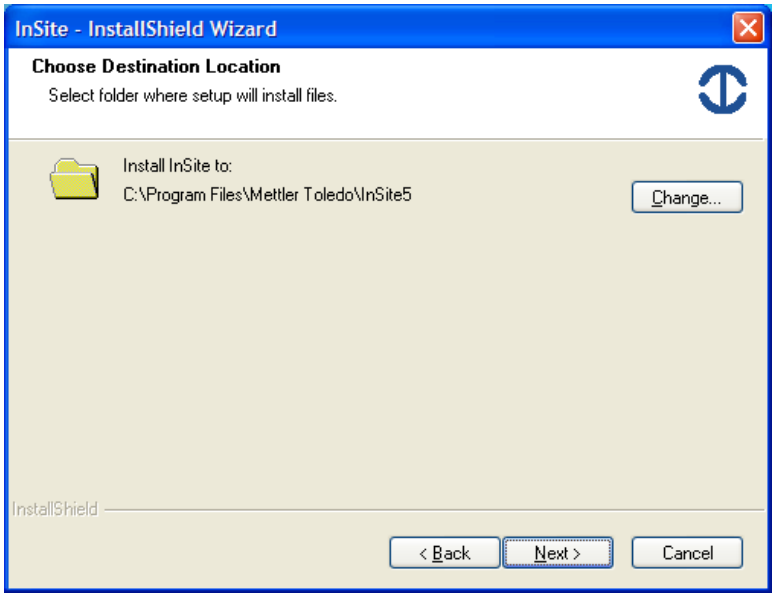


Figure 1-4: Installation Location Path Option

The screen shown in Figure 1-5 allows the selection of products to include. At least one product must be selected.

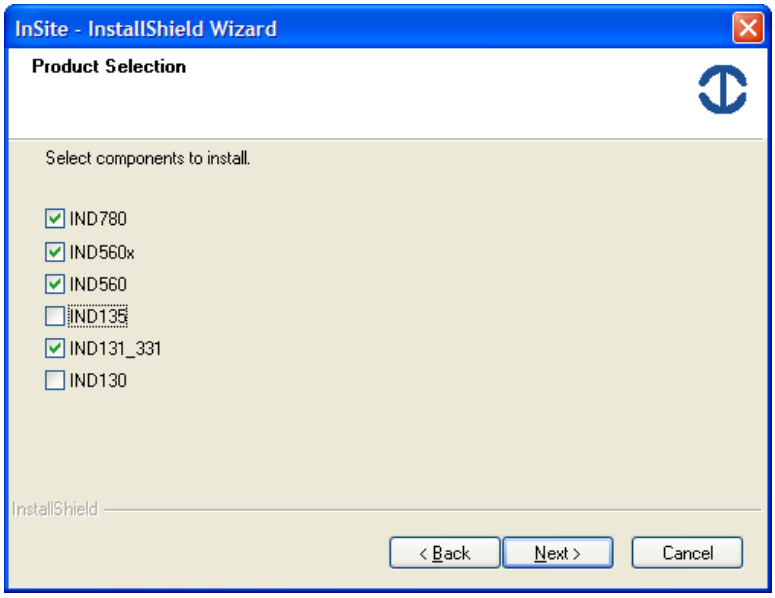


Figure 1-5: Product Module Selection Option

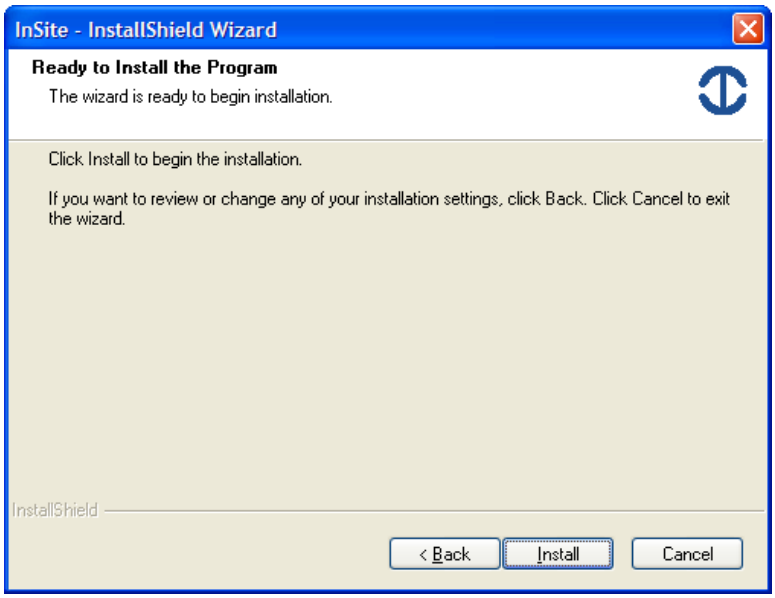


Figure 1-6: Final Installation Confirmation Screen

Once installation begins, a progress screen is shown (Figure 1-7). This screen will also indicate which component or file is currently being installed.

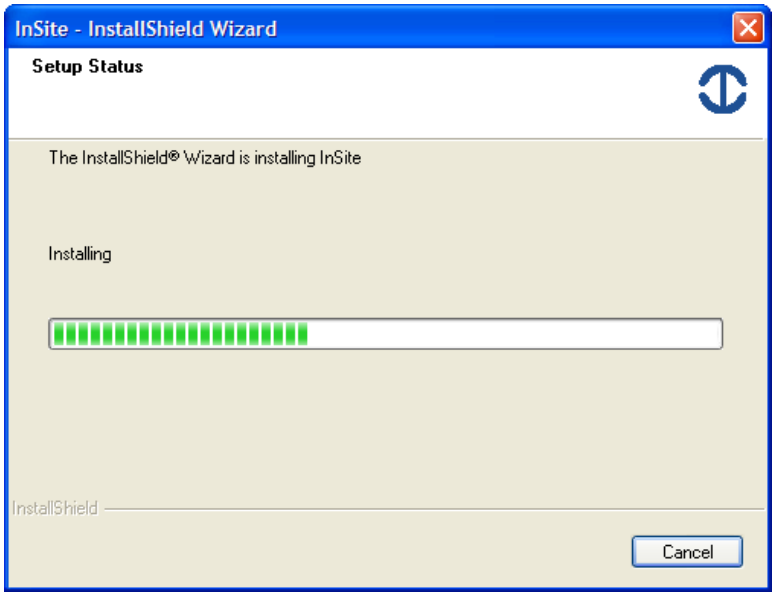


Figure 1-7: Installation Progress Screen

Once installation is complete, click Finish to close the install script dialog.

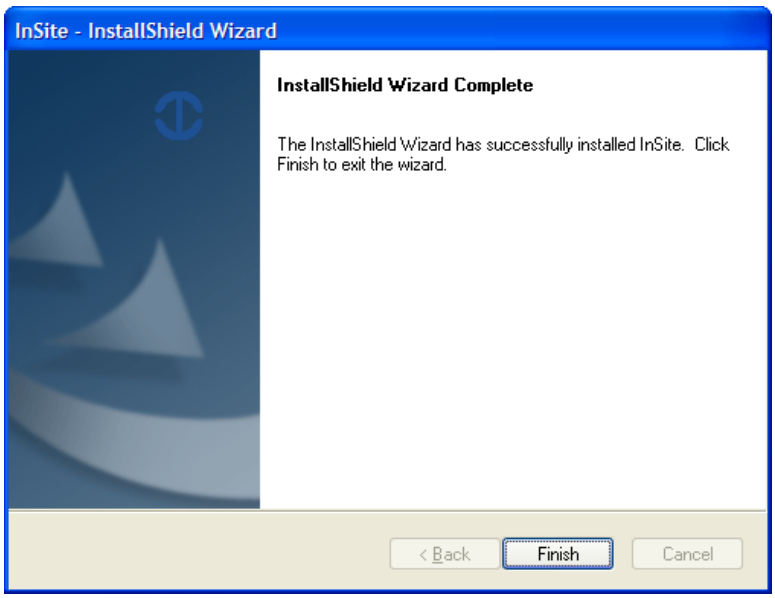


Figure 1-8: Installation Complete Screen

After Installation is Complete

After the installation is complete, InSite and the selected product modules should be installed on the system. It can be accessed via **Start | Program Files | Mettler Toledo | InSite 5.00** menu. A shortcut icon is also placed on the desktop for quick access.

Figure 1-9: InSite Desktop Icon

Support Information

Please contact your local Mettler-Toledo Inc. service office for support.

Chapter 2.0

InSite Configuration Tool

This chapter covers:

- InSite - purpose and features
- List of supported devices
- Detailed operation

The InSite application is used to manage industrial terminal product configuration information. This service tool is used to provide configuration of the setup parameters for the IND130, IND131/331, IND135, IND560, IND560x, and IND780 from a PC. Only one instance of this application may be running at a time.

InSite Overview

The InSite Configuration Tool is an application for the PC that can be used to save the values of various setup parameters in the terminal and restore them at a later date or copy configuration into other terminals. A typical screen from the InSite Configuration Tool is shown in Figure 2-1.

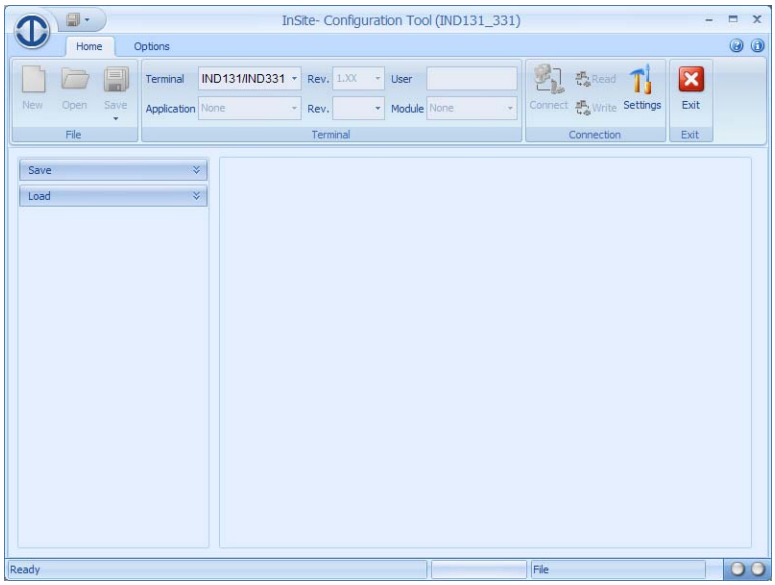


Figure 2-1: Configuration Tool

In addition, once authenticated by the DSM (Device Service Management) server, (Figure 2-2) InSite can be used to perform special service operations not supported by the unlicensed version of the tool.

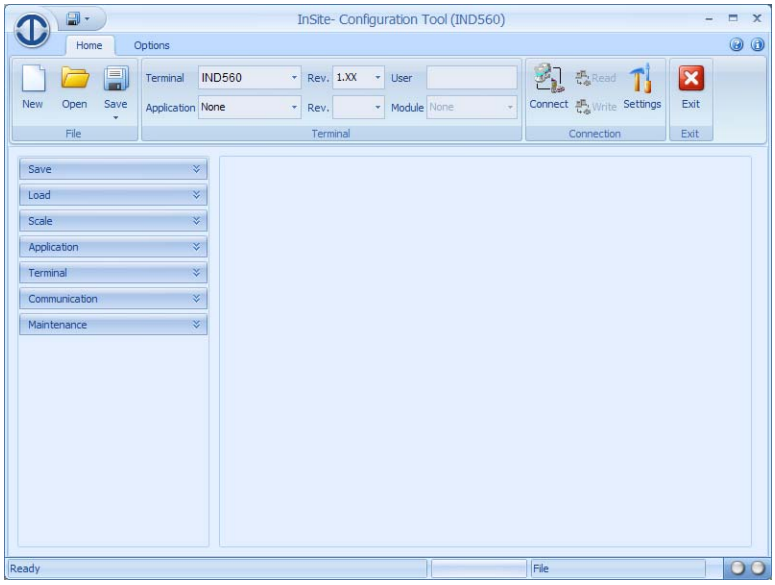


Figure 2-2: Authenticated version

The authenticated Configuration Tool is used to perform the following:

- Extract the current configuration from a connected terminal and save it as a file locally
- Load a saved configuration into a connected terminal
- Load new firmware
- Create a configuration offline
- Connect to a terminal and change configuration
- Modify templates with special editor
- Access protected diagnostic service

Supported Devices

The following terminals are supported by the current version of InSite:

Table 2-1: Supported Devices

Model Name	Connection type
IND130	Serial
IND131/331	Serial
IND135	Serial, USB
IND560x	Serial, Ethernet
IND560, IND560Fill	Serial, Ethernet
IND780, IND780Drive	Ethernet

Connection to the terminal is restricted by the individual terminal's hardware requirements. Please refer to the specific device's technical documentation for any information regarding wiring and use.

Starting the software

Starting InSite application is similar to starting any other Windows application. Select the menu item **Start | Programs | Mettler Toledo | InSite5 | InSite** to launch the application. The desktop shortcut (Figure 2-3) can also be used to launch the application.

Figure 2-3: InSite Desktop Icon

Screen layout overview

Figure 2-4 gives an overview of layout of InSite5. The various areas used in the tool are indicated.

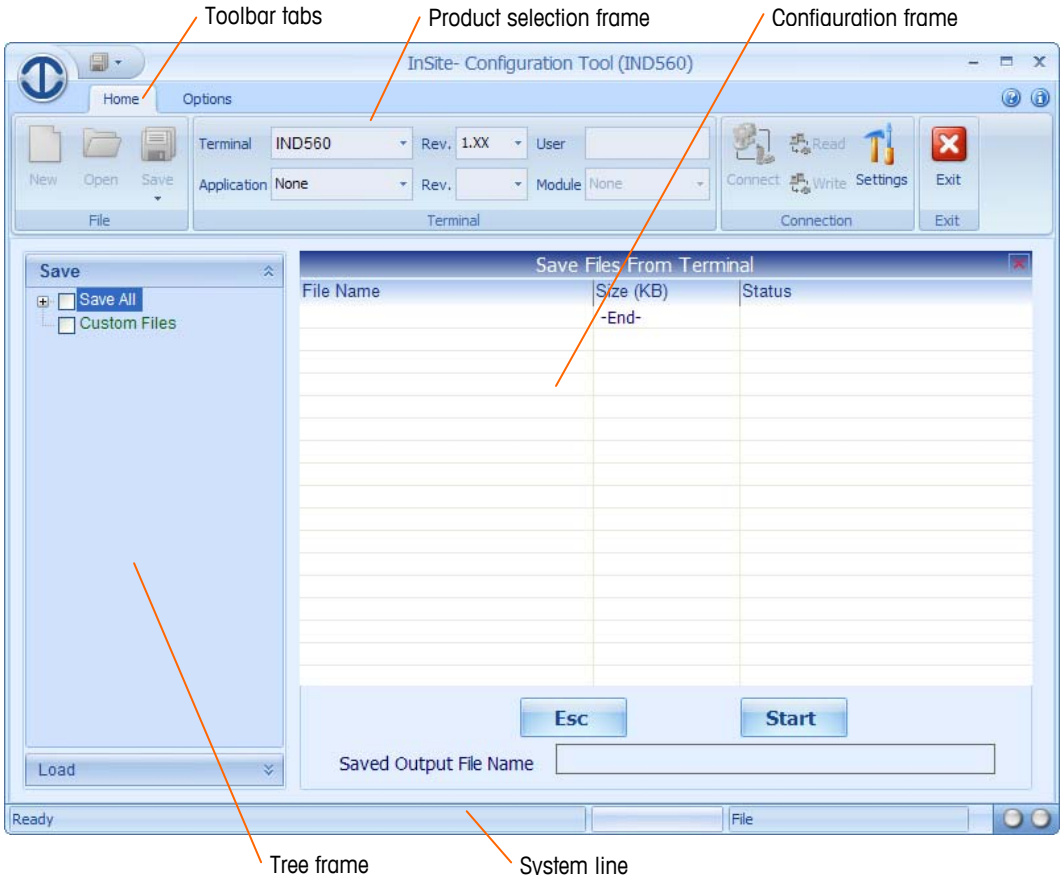


Figure 2-4: Configuration Tool Overview

The following sections describe the use of each of these areas.

Toolbar tabs

The toolbar tabs (Figure 2-5) allow selection of different tool button frames. The home tab contains **File**, **Terminal**, and **Connection** tool button frames.

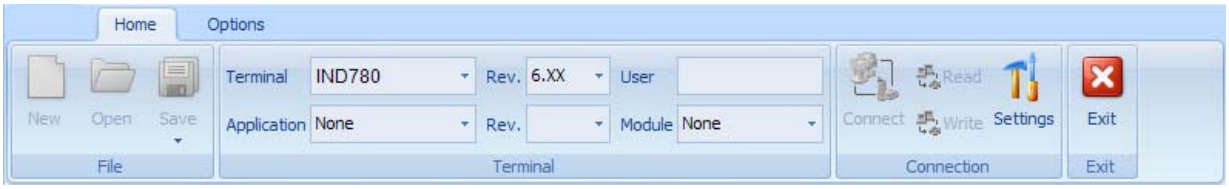


Figure 2-5: Toolbar tabs - Home

The options tab (Figure 2-6) contains the **Others** tool button frame. This frame contains tool buttons for firmware upgrade, access to DSM authentication, and other special features. The Print frame is used to configure and print the configuration report.

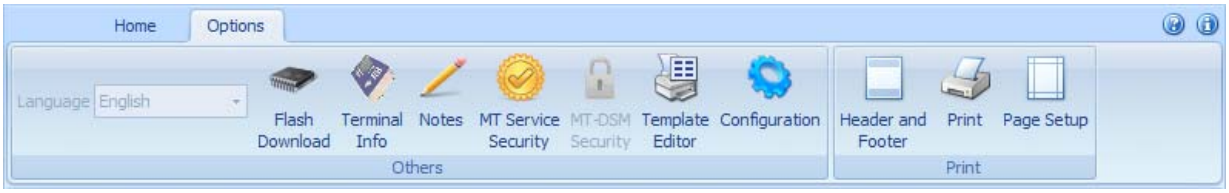


Figure 2-6: Toolbar tabs - Options

Product selection frame

The **Terminal** frame (Figure 2-7) includes a drop-down menu for selecting the terminal type. The Application drop-down menu allows selection of any currently available optional application programs installed on the terminal. The user security access level is displayed based on the login performed during the connection procedure. Selection of the connected product is required before a Save procedure in order for InSite to determine what communication method must be used.

Figure 2-7: Product selection frame

Tree frame

The Tree frame (Figure 2-8) changes content based on the product selected and the features available. At a minimum it will show 2 tree items:

- Save
- Load

Once the tool is authenticated, additional items will be shown based on the product selection. Typically this includes:

- Scale
- Application
- Terminal
- Communication
- Maintenance

Selecting each of these items displays the relevant information in the tree and configuration frame. These are used to navigate to associated screens in the Configuration frame.

Figure 2-8: Tree Frame

Configuration frame

The **Configuration** frame (Figure 2-9) displays information related to the selection in the tree frame and / or the toolbar tool button function.

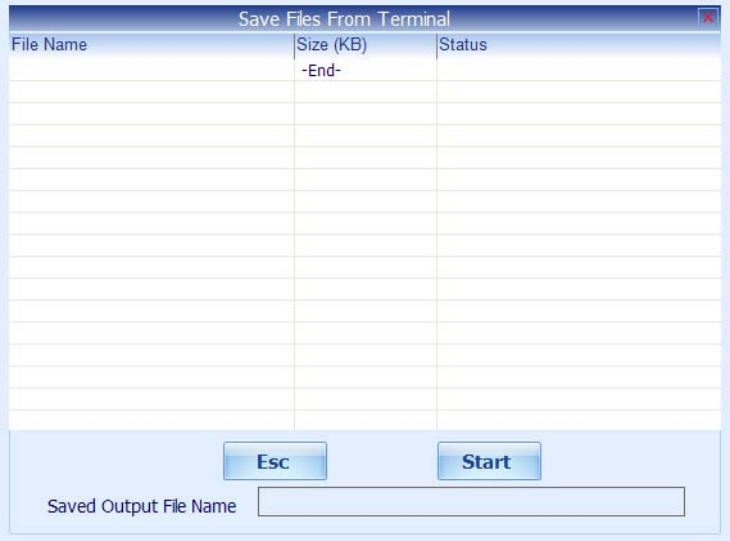


Figure 2-9: Configuration Frame

The content of the Configuration frame varies for different InSite operations.

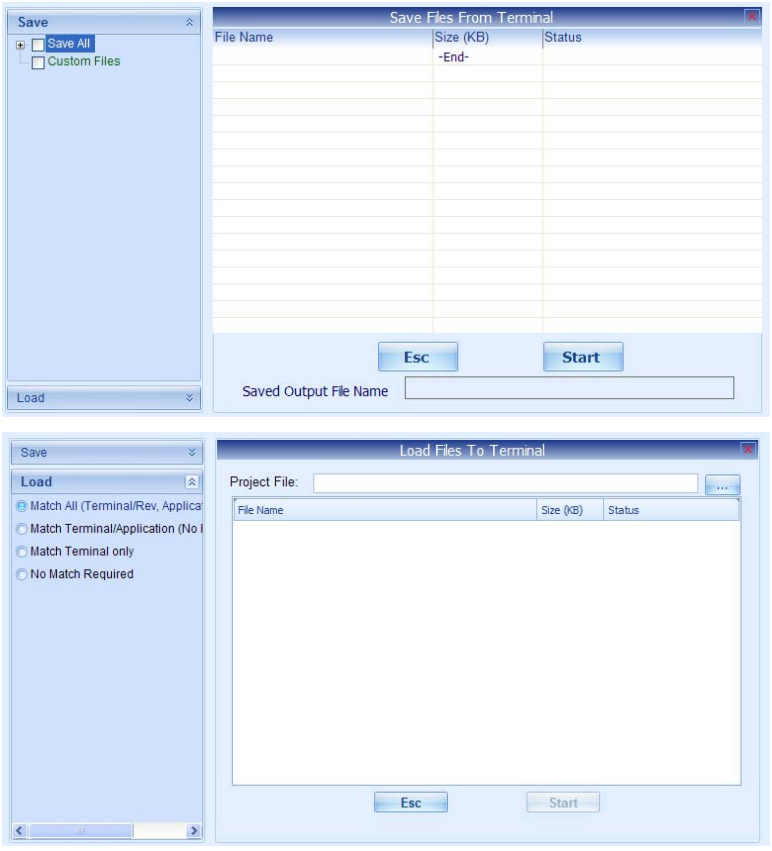


Figure 2-10: Save and Load Configuration Frames

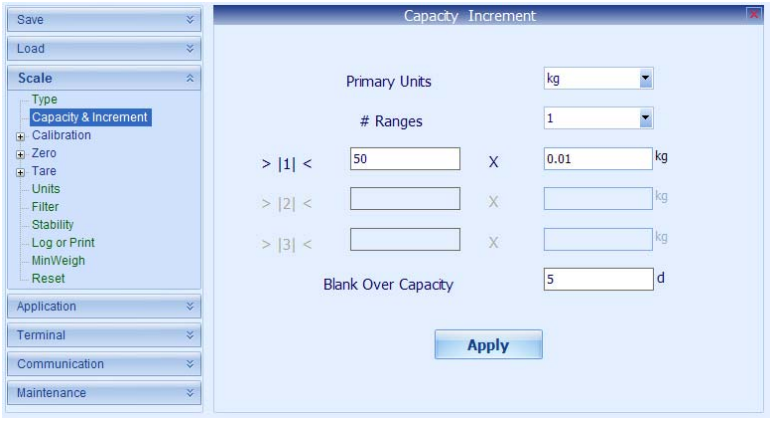


Figure 2-11: Scale Capacity Configuration Frame

System line

The first section in the system line (Figure 2-12) shows the operation status. The second section shows the progress bar of operations performed. The third section shows the connection parameters while connected (example: IP address of the terminal or the offline filename). The TX and RX lights blink when data is written to or read from the terminal, respectively.

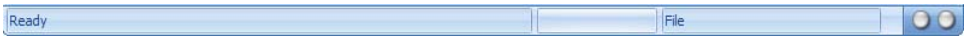


Figure 2-12:System Line

Chapter 3.0

InSite DSM Authentication

This chapter covers:
- DSM Overview
- DSM login
- DSM options

The DSM (Device Service Management) platform provides rights management, authentication and file management services for METTLER TOLEDO service tools, including this version of the InSite tool. In order to use the advanced features of InSite and the file management functions of DSM, the user must connect and successfully login to the DSM server periodically.

DSM Overview

The DSM platform manages METTLER TOLEDO PC based service tools and technician information. It uses the service tools to exchange information with devices that are isolated from direct, external communications for various reasons.

DSM Features

In this version of the InSite tool, the 1.0 version of the DSM api.dll has been implemented. This version has the following features:

- Administration of user rights
- Client login and rights transmittal
- Storage of device configuration files
- Search and retrieval of device configuration files (limited access)

InSite DSM Access

The user interface for DSM version 1.0 is supplied by the tool. The InSite tool has a separate user interface section for DSM access. In order to login and gain access to the DSM server, the following steps should be taken:

1. Click on the **Options** tab – this will provide access to the Others tool buttons in the Toolbar frame.

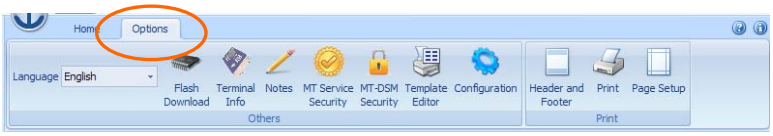


Figure 3-1: Options Tab

2. Click on the MT- DSM Security button.

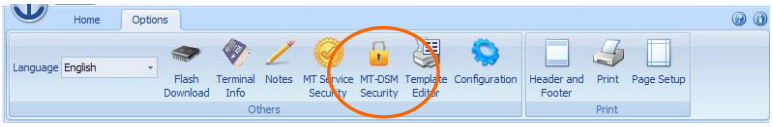


Figure 3-2: MT-DSM Security button

3. The tree frame and configuration frame should now switch to provide DSM selections. The InSite tool will also begin to attempt to establish a communication connection to the DSM server in the background. A network (or Internet) connection for the PC is required in order to successfully connect to the DSM server.

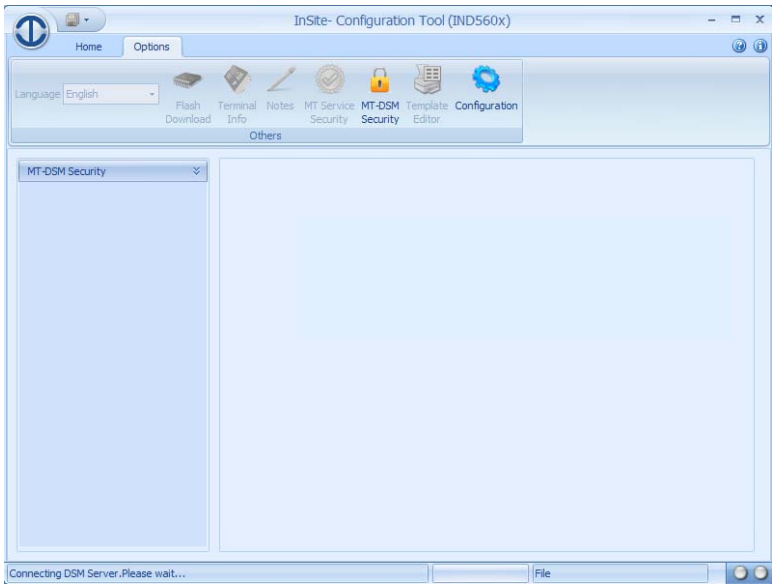


Figure 3-3: DSM Connection Message

4. Once InSite successfully establishes a connection to the DSM server, it will present a login screen for the user. This information is used to pass credentials to the DSM server for user authentication verification. There are two groups of users: Mettler Toledo employees who have Active Directory (AD) user credentials in the Mettler Toledo corporate network and non-Mettler Toledo users (who have no METTLER TOLEDO corporate network ID). A checkbox at the top of the screen is used to select the appropriate type of user.

Note: If the password and/or password key are lost, please contact your local DSM administrator to generate a new password key, and follow the initial login procedure.

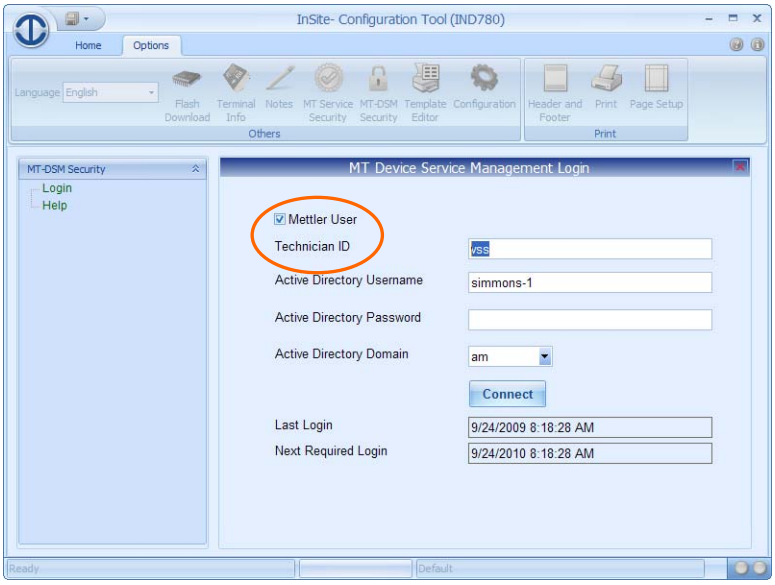


Figure 3-4: DSM Login (Mettler-Toledo User)

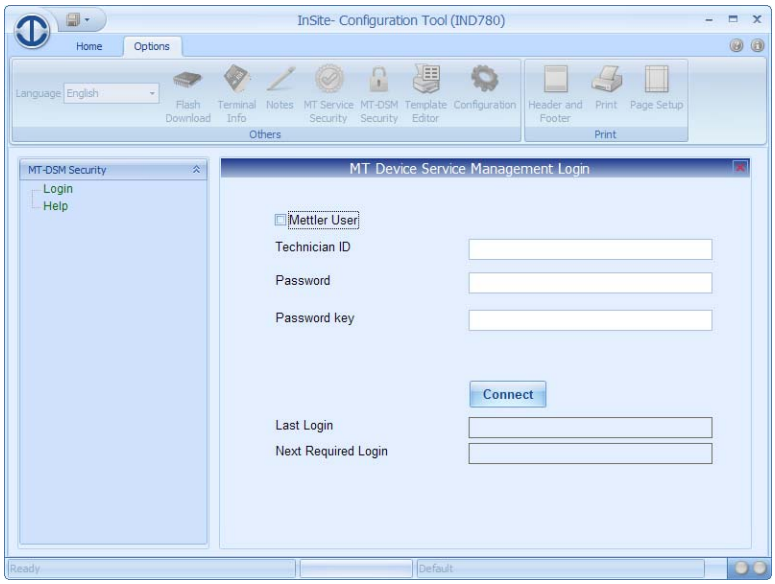


Figure 3-5: DSM Login (non-Mettler-Toledo User)

5. Once the right user type is selected, InSite will present the user information required. A Mettler-Toledo user will need to enter his Technician ID, AD username, AD password, and AD domain (examples: am, eu, or ap). A non-Mettler user will need to provide his Technician ID, a password, and the password key provided by the DSM administrator for the initial login. The password key is a one-time use key that is replaced by the private password entered by the user. After the first login, the non-Mettler user would only use his Technician ID and password. Click on connect to send the user credentials to the DSM server for validation.

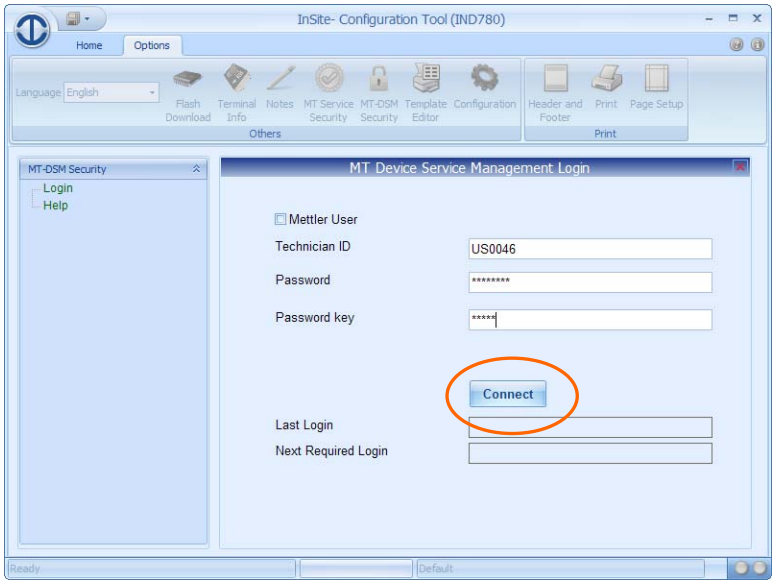


Figure 3-6: DSM Login Connect

6. After a successful login, the following message will appear:

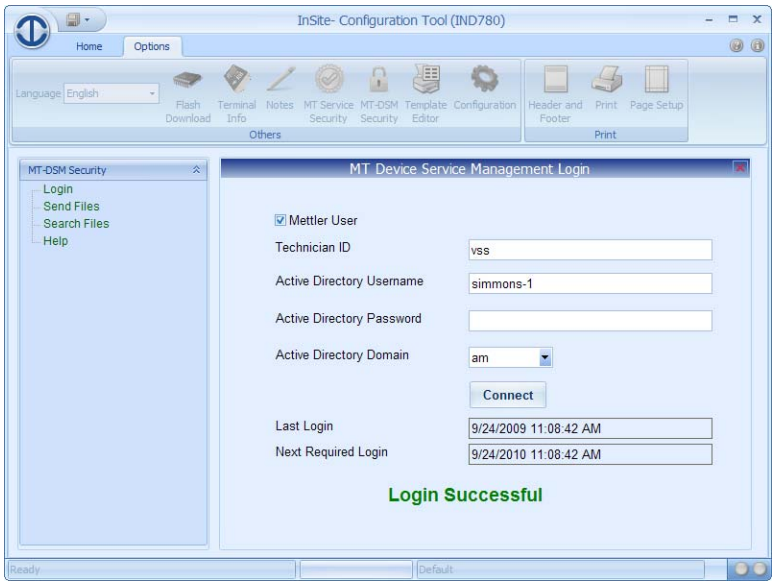


Figure 3-7: DSM Login Success

When login is successful, InSite has successfully verified the user's credentials with the DSM server. These credentials include InSite user rights (skill sets & permissions), authentication period, and send file period. If this is not the initial login and the user has previously saved files that have not yet been sent to the DSM server, InSite will detect their presence and inform the user that he has files to send. He is given the choice to send them now or later, as long as his send file period has not yet expired.

Once InSite has been authenticated with the DSM server, functionality based on the user's rights may be unlocked within the InSite tool. There are options to restrict access as follows:

- No restrictions (full access to all terminals and features)
- No access to MT Service Security (access to all terminals and other features)
- Customized access (access to selected terminals / features)

Customized access allows user rights to be defined for specific products and/or features. Selections for these rights include:

- Individual terminals and terminal applications access
  - Selection of terminals allows the user to perform disconnected / connected configuration of the terminal. (Save / Load of all terminals is always permitted.)
- MT Service Security access
- Firmware Upgrade access (Flash Download)

Periodically the user will be required to re-authenticate InSite based on his authentication period. Failure to do so will cause InSite to revert to the initial, restricted operation (Save / Load only).

Warnings are provided when approaching the expiration of the period. Occurrence of these warnings is based on the user's authentication period. Weekly authentication will be warned two days before expiration and then again one day before expiration. All other authentication periods are warned one week before expiration and then again one day before expiration.

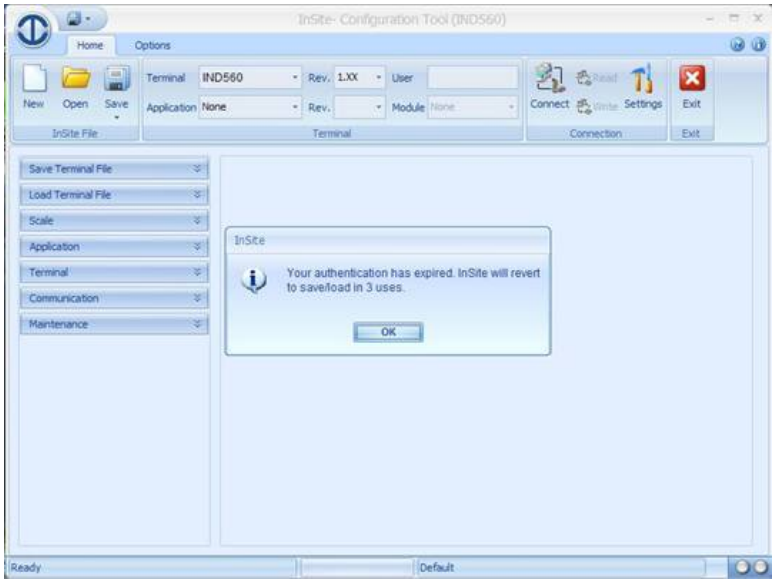


Figure 3-8: Authentication Expiration Notice

In addition, once the authentication period has expired the user is given 3 grace uses of the InSite tool. After the three uses, InSite reverts to Save / Load operation only until the user authenticates again.

InSite DSM File Storage

Connectivity between InSite and the DSM server provides file management benefits. As configuration files are saved, a backup copy for the DSM server is stored until a DSM connection is made again. Once this connection is established, the user is informed that he has files to send to the DSM server. As long as he has not passed the required send file date, he is given a choice to send the files at this point or to wait until a more convenient time.

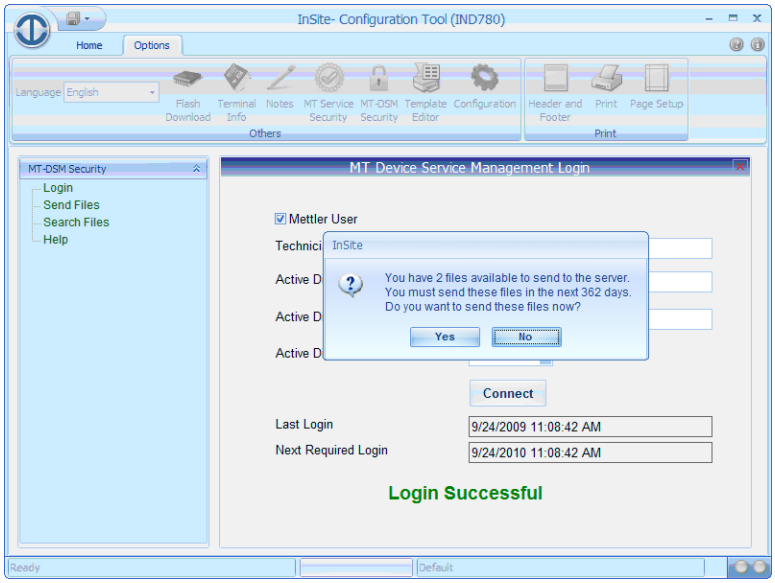


Figure 3-9: Files Ready for Send Notification

If the user chooses to send the files, InSite will automatically provide a screen that lists the files.

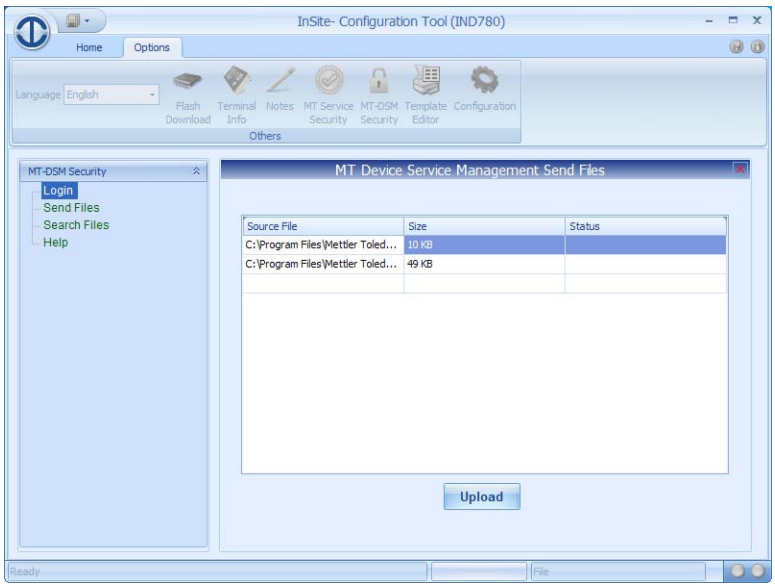


Figure 3-10: File List Screen

The Upload button is used to begin the file transfer process, which is handled by a DSM component called STM.EXE. This application handles the FTP to the server and reports back the status of each file's transfer to InSite.

Files sent to the DSM server use a specific naming convention:

Product_serialnumber_datetimestamp.ipz

So, for example, a configuration file saved at 12:00:00 on October12, 2009 for an IND780 terminal with a serial number 1234566KK would be named:

IND780_1234566KK_20091012120000.ipz

This naming convention is used ONLY for the copy of the file that is stored on the DSM server – it has been designed so that multiple configuration files for the same terminal can be archived safely. However, the user can rename the copy of the configuration file stored locally.

The configuration file itself is a zipped file of all configuration data selected during the save terminal file process. Any zip utility can be used to unzip it and extract files (change the file extension from .ipz to .zip) if InSite is unavailable for some reason.

InSite DSM File Retrieval

Once files have been stored on the DSM server by a user, they can be searched and retrieved at any point. A connection to the DSM server must be made first, but once this is done the user can select the Search files function.

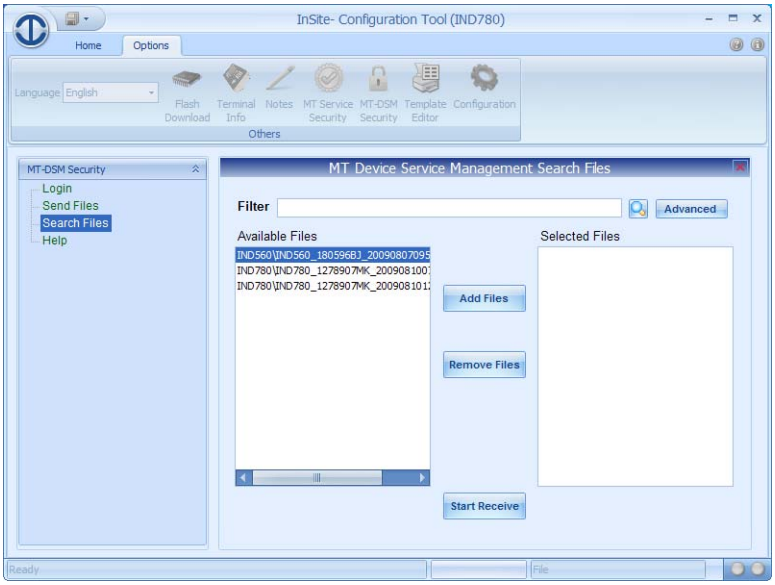


Figure 3-11: Search Files Function

A list of files that the user has saved on the DSM server will appear in the Available files section. These may be added to the Selected Files list by scrolling through the

selections and clicking on Add Files. The Advanced Filter may be used to refine the search list to a more manageable size or selection.

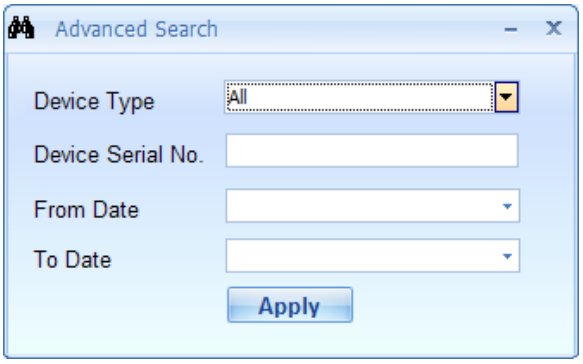


Figure 3-12: Advanced Search Filter

Wildcards may be used in the device serial number field if a range of serial numbers are wanted. Once all desired files are selected, use the Start Receive button to begin the file retrieval process.

In DSM version 1.0 you may only retrieve your OWN files (those stored under your technician ID). Future releases of DSM will also provide access to the files stored by other technicians within your specific service organization.

Chapter 4.0

InSite Save/Load

This chapter covers:

- Save operation
- Load operation

The InSite Save and Load operations allow the user to transfer the configuration contents from the terminal to a file on the PC. Once saved, the information stored in this file may be restored into the same terminal or loaded into other terminals.

Save Terminal File

InSite's Save operation establishes a connection with a terminal, retrieves the configuration data, and stores this data as an .ipz file on the PC. The contents of the saved file are dependent on the terminal's typical configuration data. For example, the IND780 uses .dmt files to store configuration shared data. It also has .csv files for tables & logs.

Save Procedure

To begin the save, follow these steps:

1. Select the terminal type for this save.

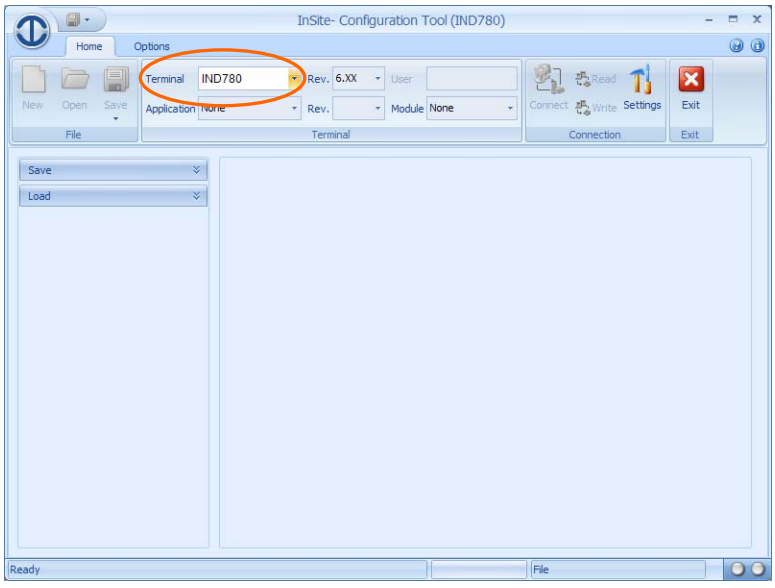


Figure 4-1: Terminal Selection

2. Configure the connection settings that should be used to communicate to the terminal. This is product-dependent, and can involve either COM port settings and/or IP address information. The COM port selects which port is used by InSite on the PC and should be used for serial communications. The IP address should be entered to match the connected terminal's IP address and should be used for Ethernet communications. Not all terminals support both communication methods.

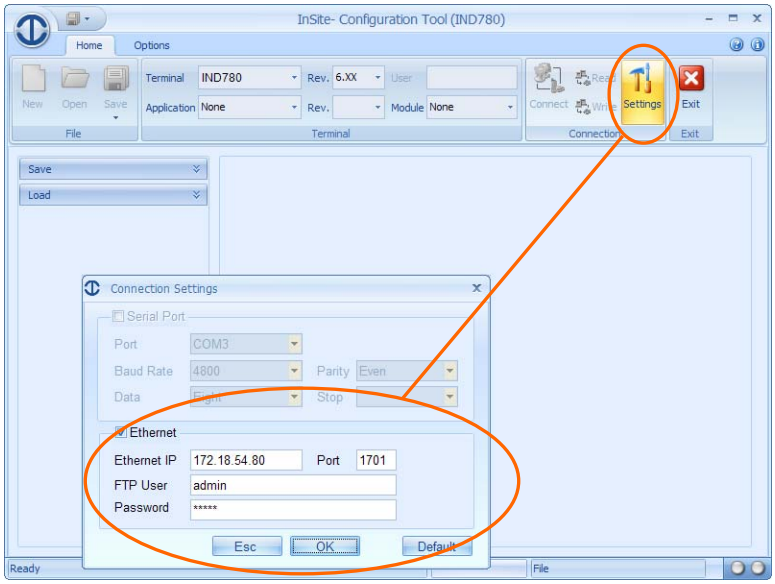


Figure 4-2: Port Configuration

3. Open the Save tool in the tree frame.

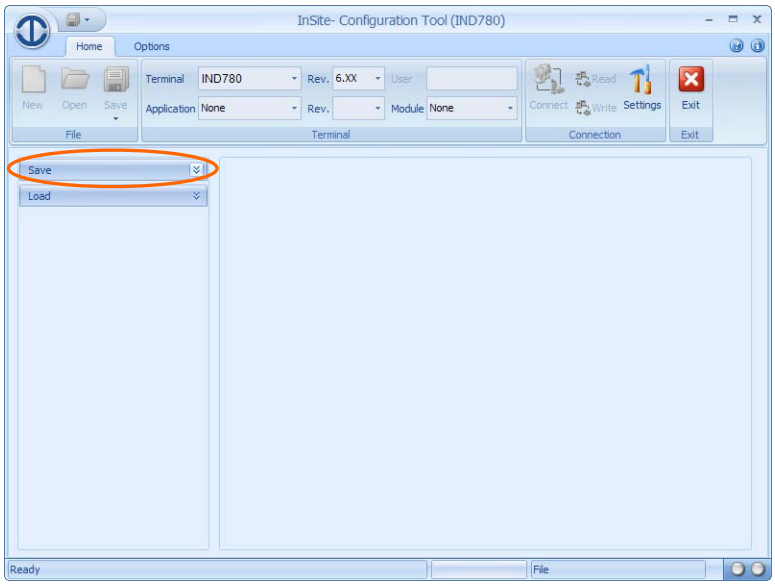


Figure 4-3: Save Tool in Tree Frame

Don't forget to unlock the terminal with the MT Service Security **before** saving if you wish to include special diagnostic data – like the PDX_Performance log – in the saved information!

4. Select the information desired for the save. As items are selected they will appear in the configuration frame to the right. Selections in the tree are product dependent so this view will vary based on the product selection.

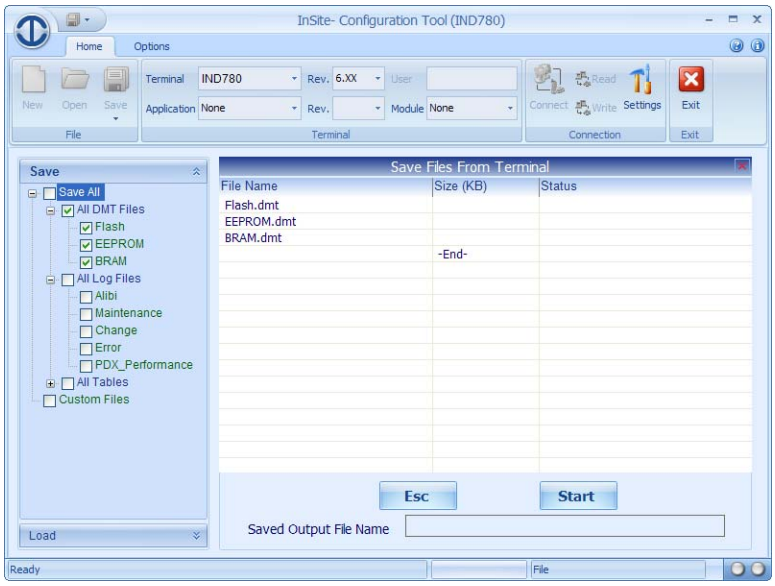


Figure 4-4: Selecting Items to Save

5. Once the save items are selected as desired, start the save process by clicking Start.

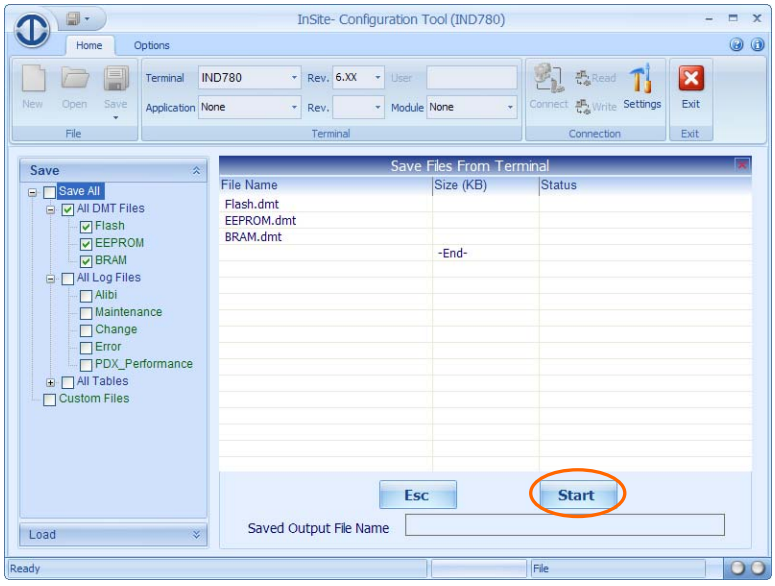


Figure 4-5: Starting the Save Process

6. A dialog window will appear, prompting for a name to give the file generated by the Save process, and to save it. Enter the name and select a location, then click Save to begin.

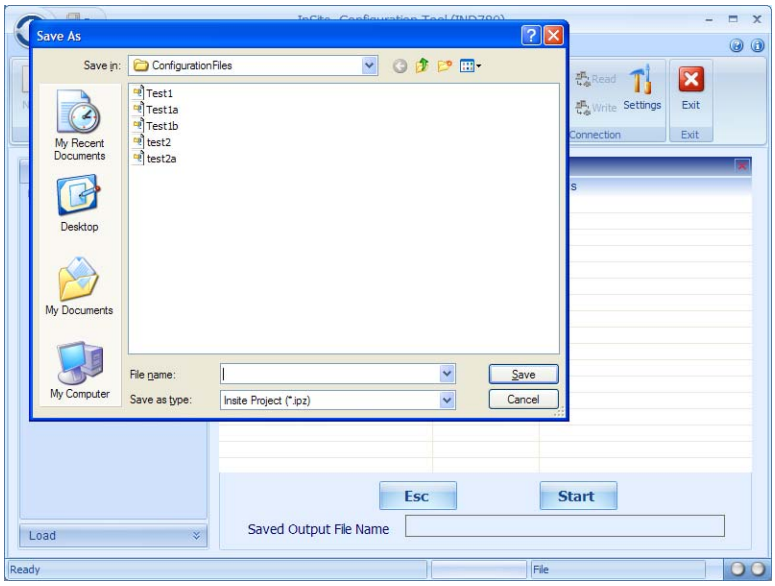


Figure 4-6: Filename Entry

7. InSite will begin the process to collect the required data for the Save. A login screen may be presented if the terminal requires user / password information to access setup. As information is transferred from the terminal to InSite, the status will be updated in the view in the configuration frame. Once all information is received, the save file will be created.

8. Once the Save is completed, close the Save window in the configuration frame to use other InSite features.

Using Saved files

Files created by the Save process are named with the extension .ipz. This unique extension is used so that InSite can identify them and use them for its Load process. However, they are in fact .zip files, and can be opened with software that manages files of that type.

Load Terminal File

InSite's Load operation takes a saved file and sends its contents to a connected terminal. The Load process has a variety of selectable levels of terminal checking. These selections establish what set of rules InSite uses when it compares the saved file to the connected terminal.

Table 4-1: Load Selection Options

Load Selection	InSite Check
Match All	Terminal firmware revision, application, & module settings must match
Match Terminal / Application	Terminal & application settings must match, but revision & module may be different
Match Terminal only	Only the terminal type must match
No match required	No match is required

Load Procedure

To begin the load operation, take the following steps:

1. Select the terminal type for this load (this is only to establish the connection settings that will be used).

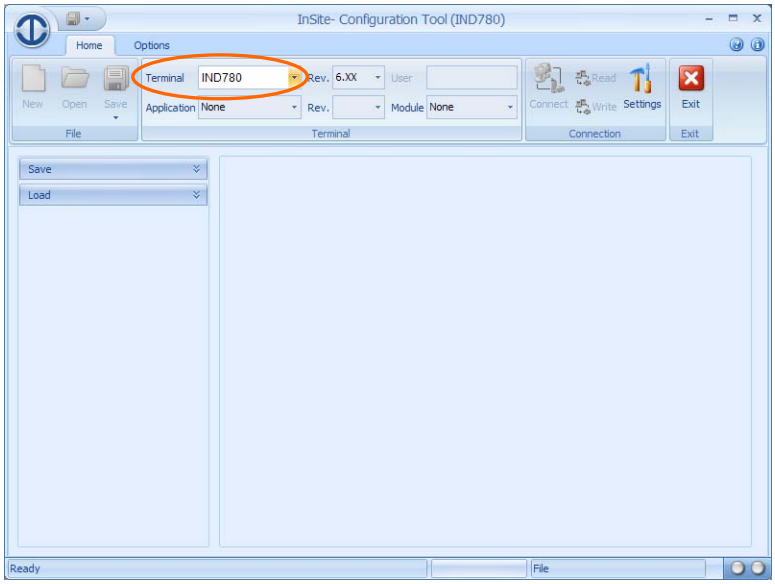


Figure 4-7: Terminal Selection

2. Configure the connection settings that should be used to communicate to the terminal (this is product dependent and can involve either COM port settings and/or IP address information). The COM port selects which port is used by InSite on the PC and should be used for serial communications. The IP address should be entered to match the connected terminal's IP address and should be used for Ethernet communications. Not all terminals support both communication methods.

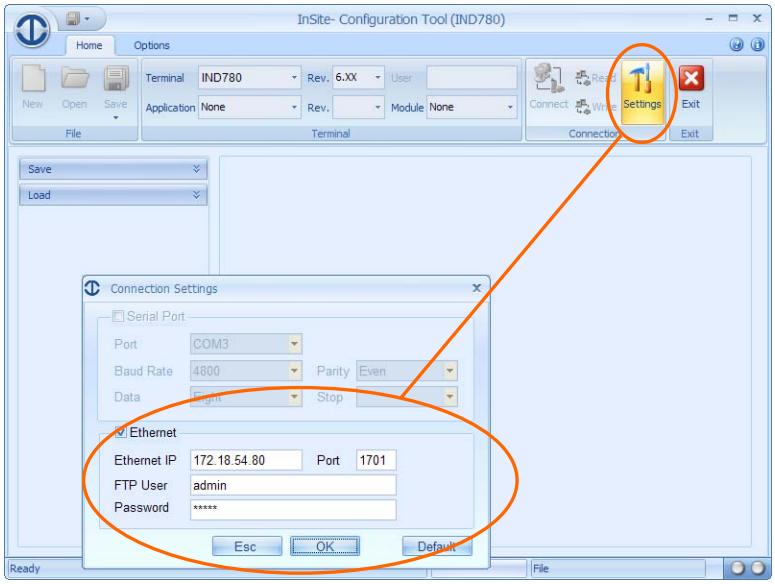


Figure 4-8: Port Configuration

3. Open the Load tool in the tree frame.

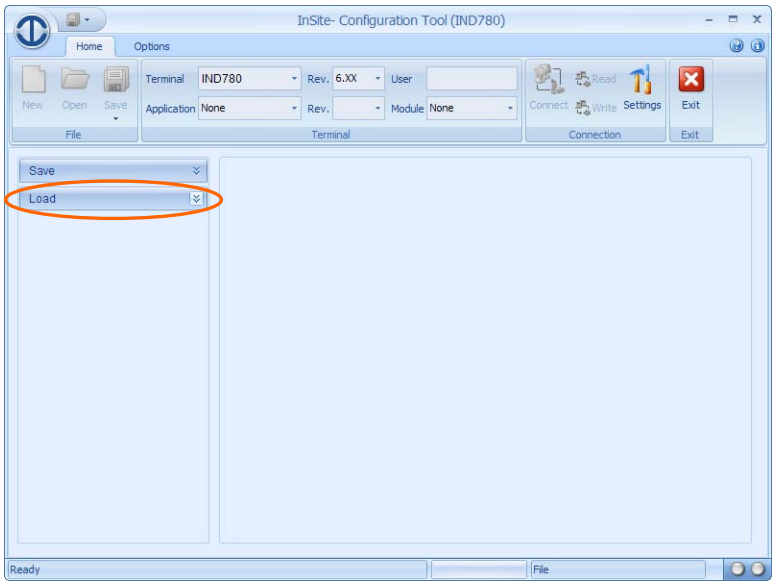


Figure 4-9: Load Tool in Tree Frame

4. Select which type of load selection is required, and select the Project file (stored .ipz file) to use.

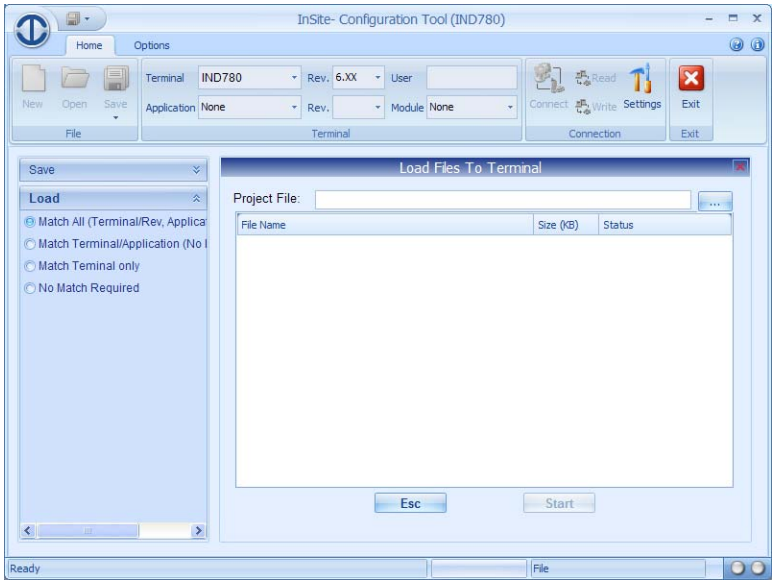


Figure 4-10: Selecting Load Selection Option

5. InSite will then open the Save file and list its contents in the Load view in the configuration frame. Click on Start to begin the Load process.

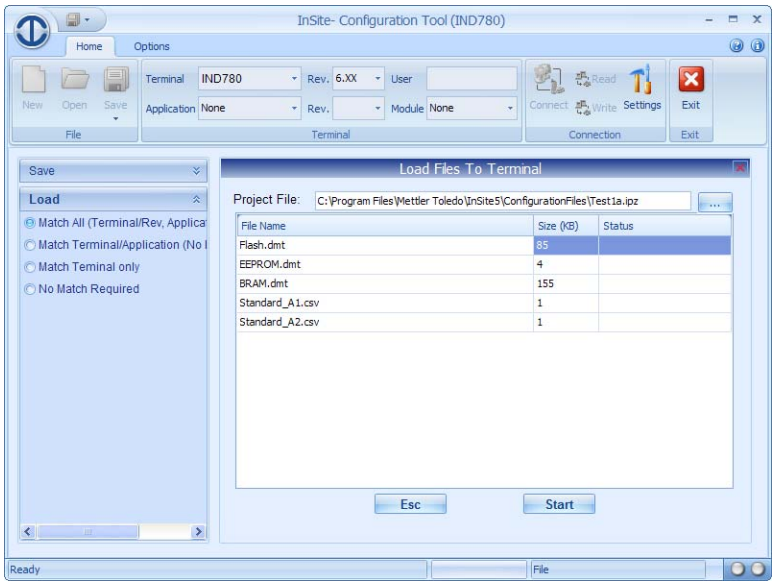


Figure 4-11: Starting the Load Process

6. A login screen may be presented if the terminal requires user / password information to access setup. As the configuration data is sent to the terminal, the status information will be updated in the Load view. If all information is sent successfully, the view will be cleared. Once the Load is completed, close the Load window in the configuration frame to use other InSite features.

IT IS STRONGLY RECOMMENDED THAT POWER TO THE TERMINAL BE CYCLED AFTER LOADING NEW CONFIGURATION DATA TO INSURE THAT ALL CHANGES ARE APPLIED AND TAKE AFFECT TO ITS OPERATION.

Chapter 5.0

InSite Disconnected Mode

This chapter covers:

- Disconnected mode features
- Recommended usage

Once authenticated, the InSite tool can be used to create configuration files without a terminal. In order to unlock access to these special features, the user must connect and successfully log in to the DSM server periodically, and the user credentials must include rights to this functionality (based on product selections).

Disconnected Functionality

If authenticated for access to this functionality, the InSite tool will include the configuration tree selections in addition to the Save Terminal File / Load Terminal File choices for a particular product. This access can be provided on a product-by-product basis.

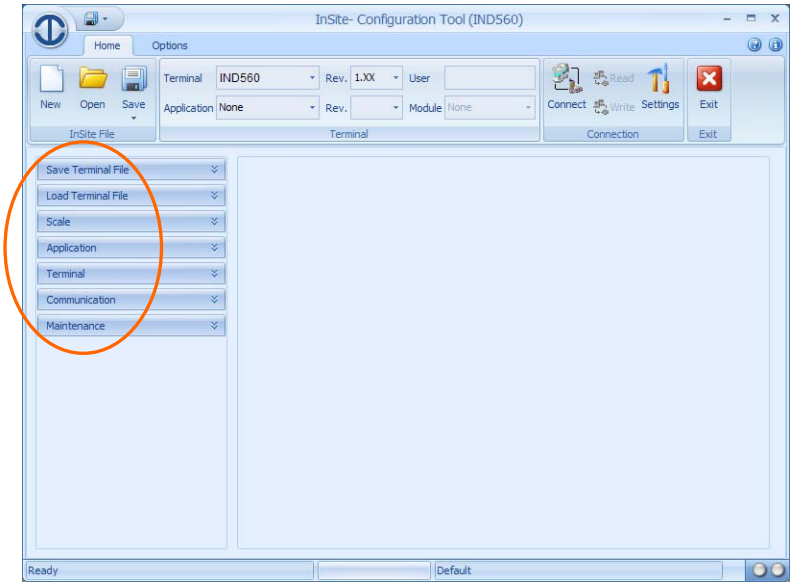


Figure 5-1: Configuration Tree Selections

To use InSite in the disconnected mode, use the navigation frame to select the desired configuration section. Once the section is expanded, a view of the tree is shown (Figure 5-2). From the tree, individual configuration branches may be selected. These pages are then shown in the configuration frame.

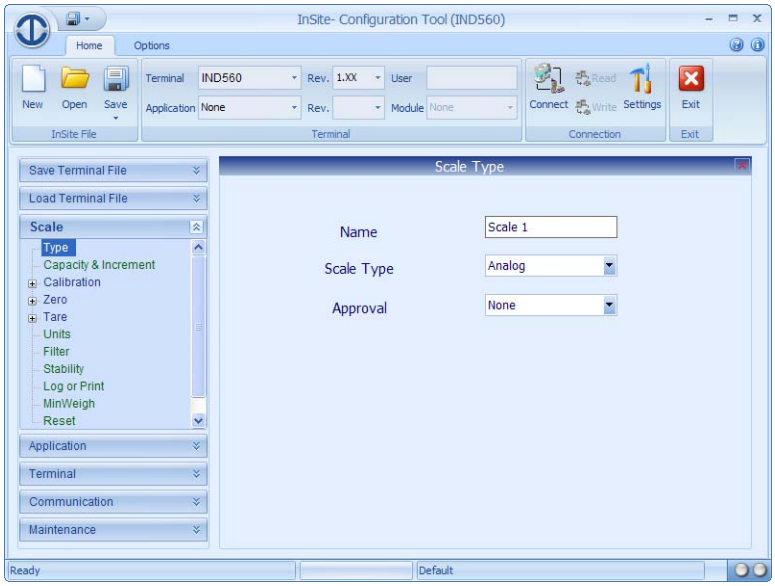


Figure 5-2: Tree View

All configuration tree and frame contents are based on specific product definitions. Configuration information, configuration selections and operation are detailed in the specific product's technical documentation.

Any configuration parameter with a white background can be changed; those with a light or slightly darker blue background are read only – either because of access rights or restricted use as defined by another parameter selection. Many configuration fields have qualified entry checks. InSite may reject unacceptable data entries or selections in those cases.

Unique Disconnected Mode Features

Because the InSite tool cannot verify the terminal's hardware in the disconnected mode, the configuration information includes extra parameters to define what optional hardware is available for some terminals. For example, in products that support multiple scale types, there will be a selection (as opposed to a read only field when connected) to choose the type of scale on which the configuration should be based. This selection can affect several other configuration parameters. It is up to the user to ensure that the appropriate hardware selections are made for disconnected configurations.

IT IS IMPORTANT TO NOTE THAT INSITE DOES NOT SAVE AN ENTIRE CONFIGURATION IMAGE IN THE DISCONNECTED MODE – ONLY THE CHANGES ARE SAVED.

As changes are made to the disconnected configuration, InSite keeps track of **all** changes, and **only** the changed information. Once the changes are complete and the user saves the InSite file, only the changes to the configuration are saved.

Disconnected Mode Usage

The disconnected mode is useful for creating configuration files when the terminal is not available. The user may pre-configure any known setup information without access to hardware. Then, when the terminal is available, the saved information can be written to it using connected mode. This allows users to create configuration data at their own convenience.

In addition, saved InSite files can be used to clone common application data for terminals with different hardware. Because portions of the configuration data will be different, a complete save/load would not be appropriate. Since the disconnected mode saves only the changed information, a file containing only the appropriate changes could be made and written into all terminals.

Chapter 6.0

InSite Connection Settings

This chapter covers:

- Connection settings information

In order to communicate to a connected terminal, InSite must be configured to use either a COM port for serial communications or an Ethernet IP address and port for an Ethernet socket connection. The section provides details on the steps needed to make these selections.

Settings

The Settings tool button provides access to the communication parameters used by InSite for the product selected in the Terminal frame. Some terminals can only support one method of communication based on hardware and software capabilities.

Changing Settings

To define the connection parameters to use, take the following steps:

1. Select the terminal type for this connection.

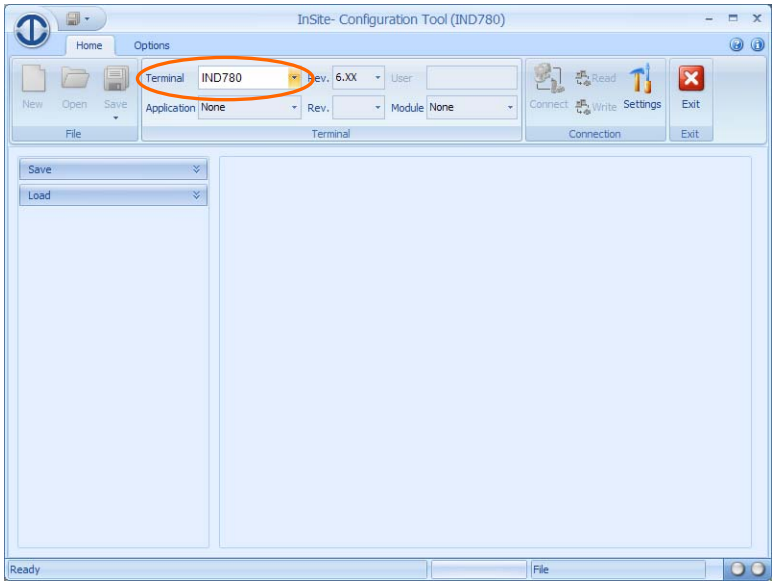


Figure 6-1: Terminal Type Selection

2. View the current settings by clicking on the Settings tool button.

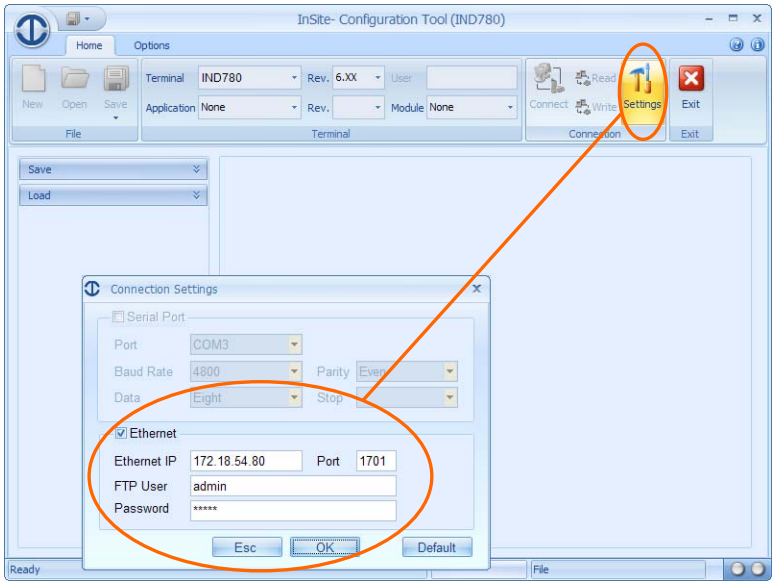


Figure 6-2: Port Settings

3. If Serial / Ethernet selections are both available, chose which type of communication should be used.

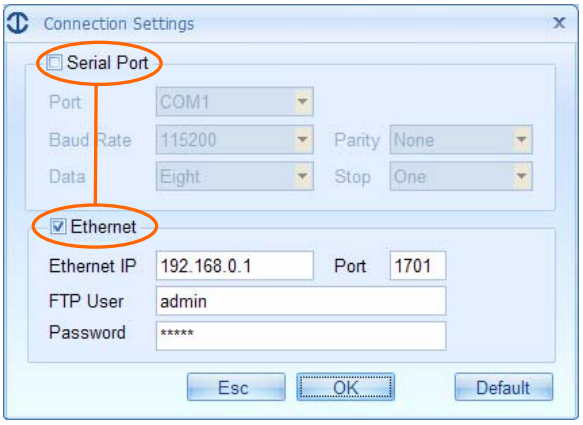


Figure 6-3: Connection Type Selection

4. For an Ethernet connection, enter the IP address and port of the **terminal**. InSite will use this to establish the socket connection to it. The FTP user/password information is used when FTP access is required for file transfers. The default user/password is admin/admin.

5. For a serial connection, select the **PC** com port and port configuration data. InSite will use this information to control the PC COM port during serial communications with the terminal. InSite can use USB to serial port adapters that have been configured on the PC. It will display any serial port it can use in its selection list. Typically, the USB driver must be installed (rather than using the generic one) in order for the connection to work.

Terminal Connection types

Table 6-1 indicates the communication method/s InSite can use for each terminal:

Table 6-1: Communication Methods, by Terminal

Terminal	Communication Type
IND130	Serial only
IND135	Serial only
IND131/IND331	Serial only
IND560	Serial or optional Ethernet
IND560x	Serial or optional Ethernet
IND780	Ethernet only

Chapter 7.0

InSite Connected Mode

This chapter covers:

- Connected mode features
- Recommended usage

Once authenticated, the InSite tool may be used to connect to the terminal directly and change its current configuration, read its current configuration and save it as an InSite configuration file, or write saved InSite configuration files into the connected terminal. In order to unlock access to these special features, the user must connect and successfully log in to the DSM server periodically. The user's credentials must include rights to this functionality (based on product selections).

Connected Functionality

Like the disconnected mode, if authenticated for access to this functionality, the InSite tool will include the configuration tree selections in addition to the Save Terminal File / Load Terminal File choices for a particular product. This access can be provided on a product-by-product basis. Any product that can be used in the disconnected mode can also be used in the connected mode. To use InSite in the connected mode, use the terminal toolbox frame to select the desired terminal selection. Make sure the settings are correct for the connection (see chapter 6 for details), then click on the Connect button in the Connection toolbox frame to establish communication with the terminal.

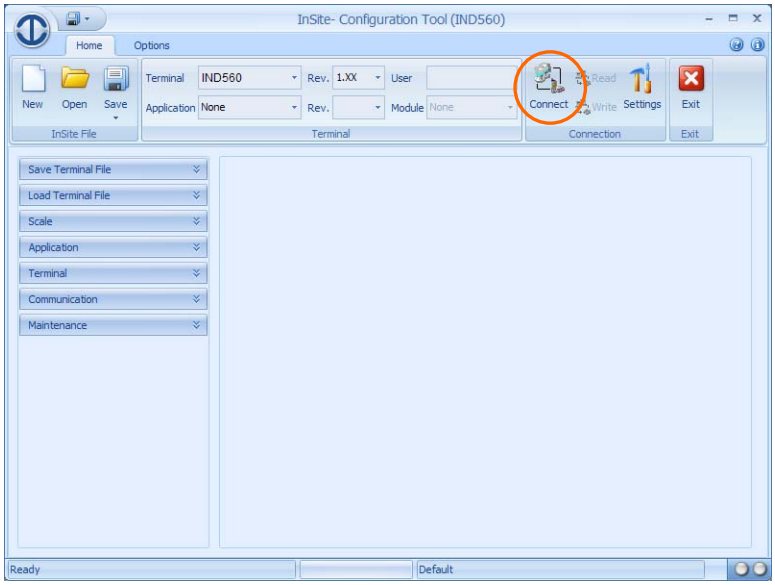


Figure 7-1: Connect Button

Some products may request login information before the connection is completed.

Figure 7-2: Login Dialog

Either valid username/password information (as previously configured in the terminal) or the default username must be entered to advance to the next step in the connection process. The default username for a factory-configured IND560/IND560x or IND780 is admin (all lower case) with no password.

Once connected, use the tree view in the navigation frame to view or make changes to the current configuration of the connected terminal.

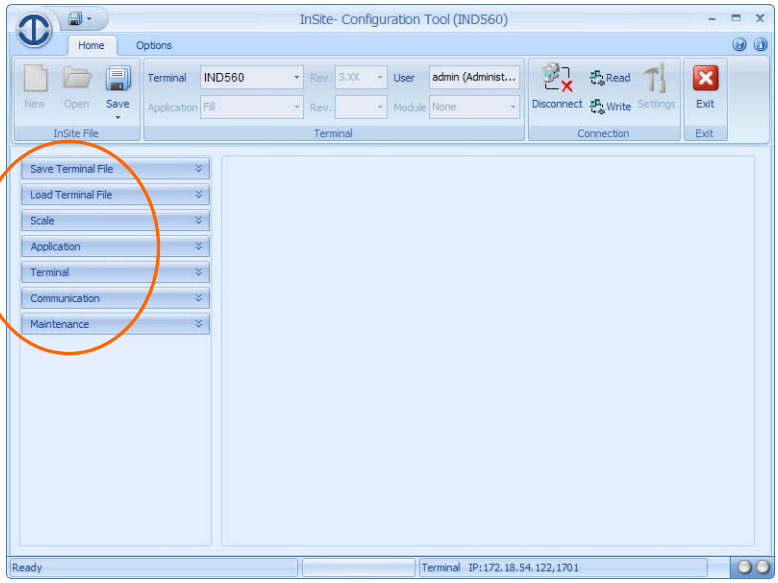


Figure 7-3: Navigation Frame

Contents of the tree and configuration frame window are product-specific but typically follow the same general organization with five main sections: Scale, Application, Terminal, Communication, and Maintenance.

Reading Configuration from a Terminal

Not all parameters are read when a terminal is connected to the tool: only relevant parameters are read as the user navigates through the nodes in the tree frame. This was done as a concession to those who wish to connect and change only a few parameters, since reading all configuration data can be quite time-consuming. However, after connecting the user can choose to read all the values from the terminal.

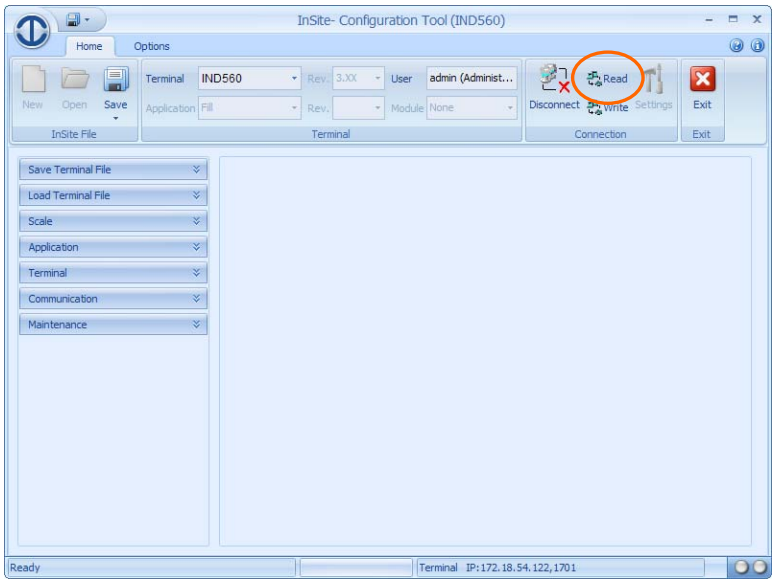


Figure 7-4: Read Button

The Read tool button in the Connection section can be used to initiate the read all data operation. It is important to remember to do this when it is desirable to save the entire terminal configuration to a file.

User & FTP Tables:

- To prevent the loss of secure information, InSite™ never reads password information in the connected mode.

For the IND560/IND560x and IND780, for security reasons the user and FTP tables are not read. The default values for these tables are kept as part of the saved file. If the terminal has special configuration in these tables, the saved file must be modified to include this special configuration as part of the saved file otherwise the configuration file may have the typical terminal defaults saved here in its place.

Review / Change Configuration

Often, the InSite tool must send the terminal both the changed information and a trigger to make the new configuration take effect. The new terminal values are written after the changed parameter loses focus. In order to "write" to the terminal, navigate away from the changed data by clicking on another parameter or another page.

There are a few exceptions to this: Read/write tables are updated every time the user leaves the table view. In some special, the use of an "apply" button is required. InSite also writes when the page is switched if the page contains a single setup parameter.

Saving Terminal Configuration (InSite File)

To save the connected configuration of a terminal, follow these steps:

1. Connect to the terminal
2. Read all data
3. Save the configuration (as the required filename)

This saved file does **not** contain the user and FTP data unless modified via the tool. These files are saved as InSite files with the '.bcf" file extension and cannot be restored via the USB backup/restore process. The write method must be used when InSite is in its connected mode.

Writing Terminal Configuration

User & FTP Tables:

- When the Write All command is used, InSite confirms whether the user & FTP tables should be included

When a terminal is connected, parameter values in a saved configuration (.bcf) file can be uploaded to the terminal using the **Terminal I Write all data to terminal** menu command.

The operator will be given the option for the IND560 and the IND780 to write the configuration file with or without the user and FTP tables.

IT IS STRONGLY RECOMMENDED THAT POWER TO THE TERMINAL BE CYCLED AFTER LOADING NEW CONFIGURATION DATA TO INSURE THAT ALL CHANGES ARE APPLIED AND TAKE AFFECT TO ITS OPERATION.

Special Operations

The connected mode allows the user to perform some special operations like using the template editor, editing softkeys in a special window, performing firmware upgrades, accessing special service information, and printing the configuration information.

The username and passwords for the Users and FTP tables are handled differently from other configuration data in IND560 and IND780. These tables cannot be read from the terminal. However, they can be reset or modified – the write operation is allowed. When the "read all" operation is performed, the password information is not included. When the "write to terminal" operation is performed, the user is asked whether these tables should be included. "Yes" will overwrite the terminal's existing tables with those stored in the offline file (either the default tables or the modified tables if they have been changed in the offline file). "No" will restore everything except these tables.

Template Editor

The Template Editor can be accessed from inside the InSite tool in two ways: through the Template Editor tool button on the Options tab or through the tree "view" selection of the output templates.

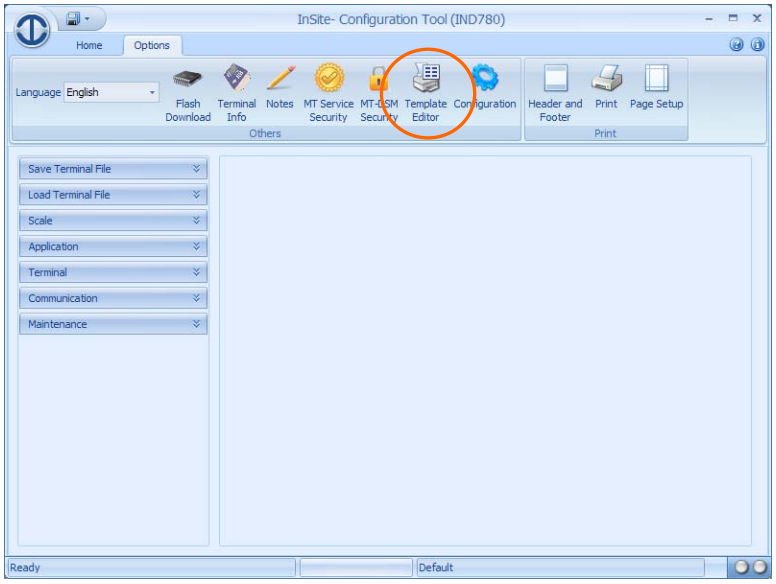


Figure 7-5: Template Editor Button

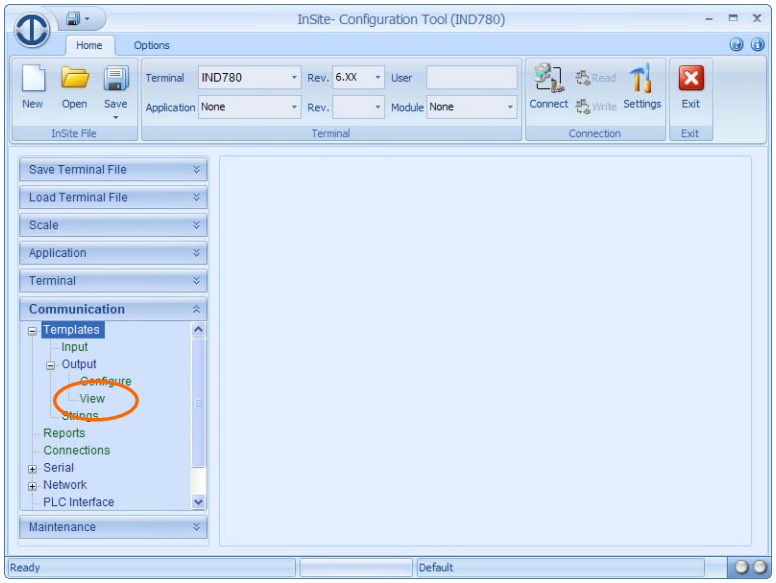


Figure 7-6: Template View in Tree

Once selected, the Template Editor replaces the navigation frame and toolbar frame with its own contents.

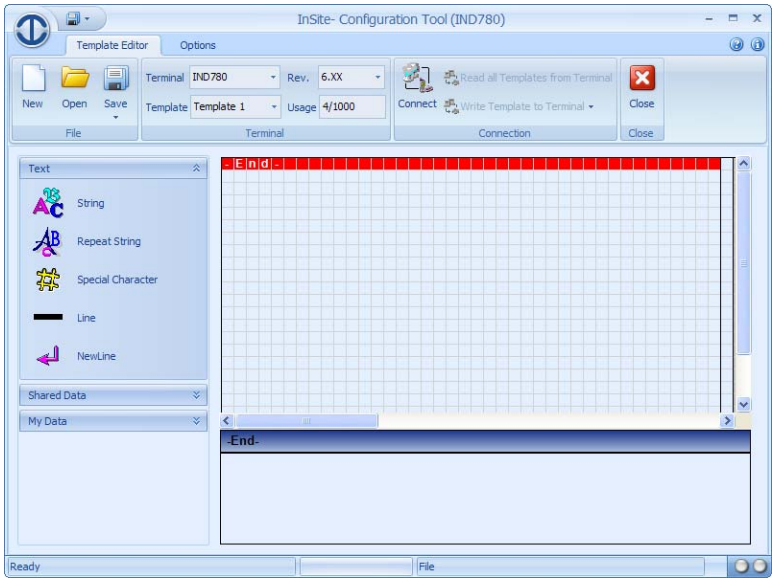


Figure 7-7: Template Contents Viewed

Please refer to Chapter 8 for details on using the Template Editor.

Softkeys

Softkeys can be dragged and dropped into the empty softkey locations in the special softkey layout window found in the Softkeys node in the Terminal tab of the tree frame.

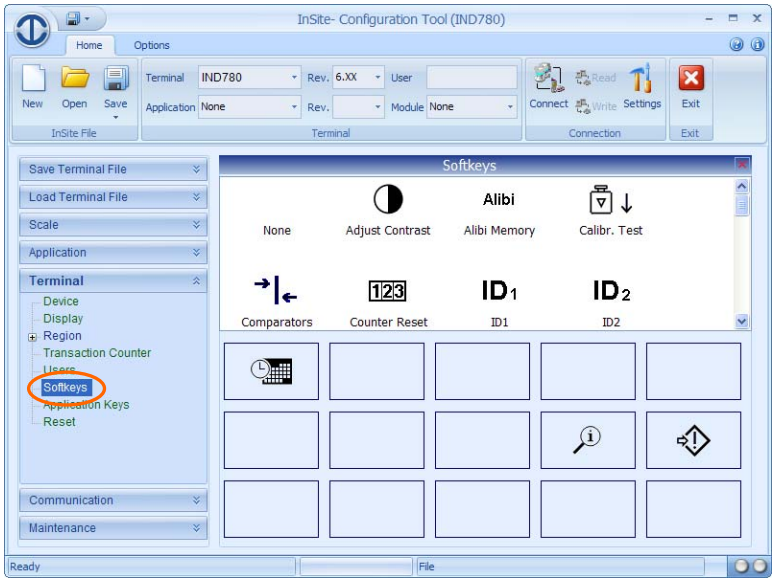


Figure 7-8: Softkeys View

Firmware Upgrades

The various terminals' Firmware can be upgraded using the Flash Download function found on the Options tab.

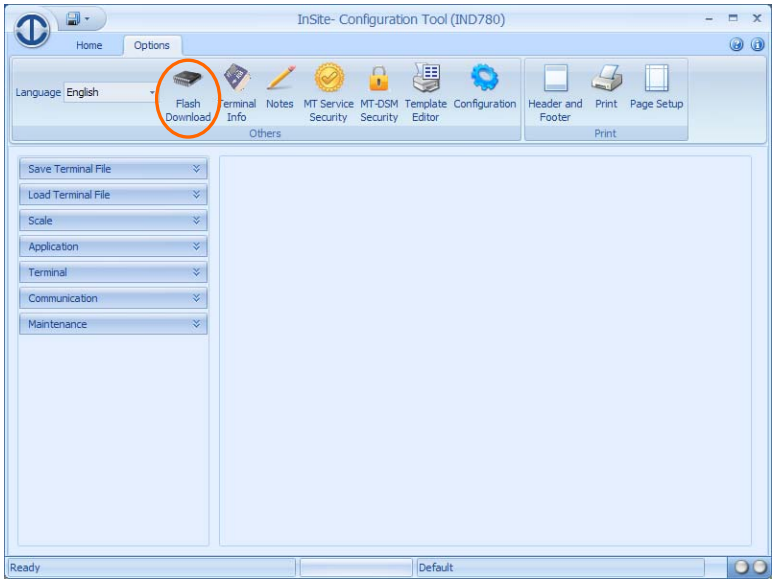


Figure 7-9: Flash Download Button

Depending on the type of terminal, this procedure may launch a separate application, Flash Magic (Figure 7-10), that handles the upgrade process, or it may start a dialog in the configuration frame to control the firmware file selection and communication to the terminal.

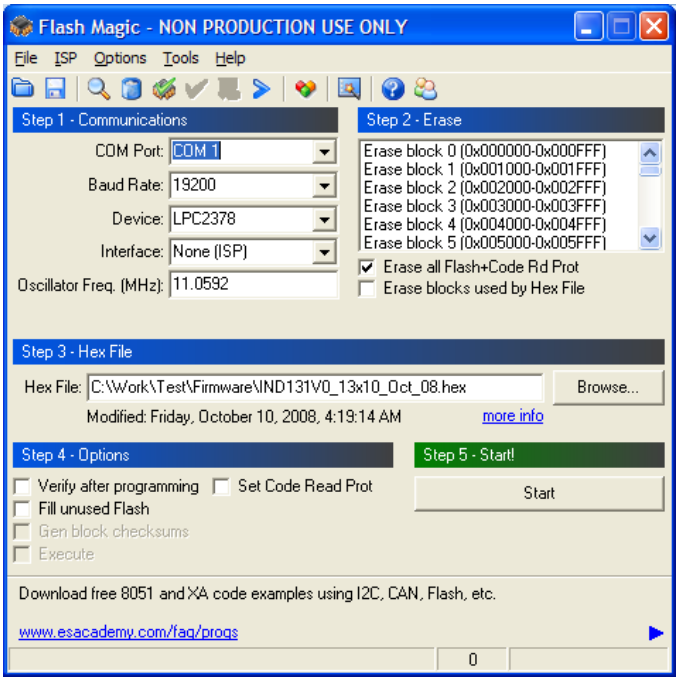


Figure 7-10: Flash Magic Window

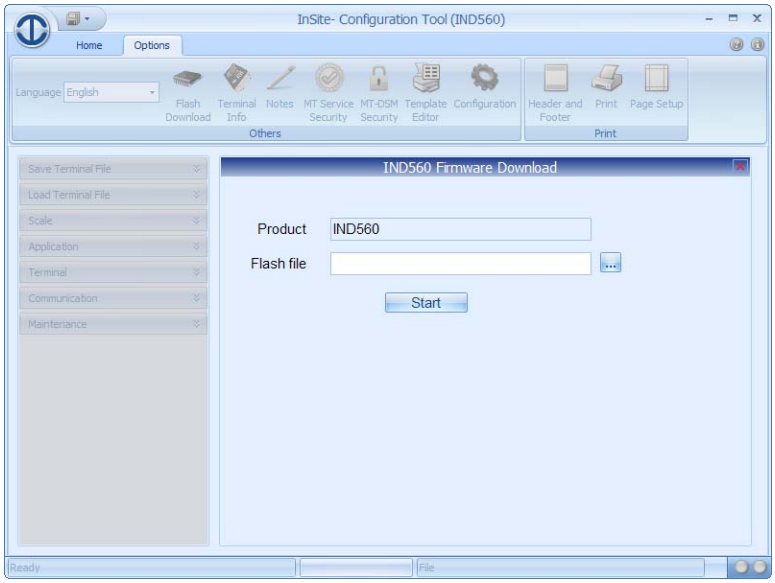


Figure 7-11: Firmware Upgrade Dialog

For products that use FTP to load their firmware – IND780, for example – make certain that the appropriate FTP user name and password are entered in the connection section before beginning the FTP process.

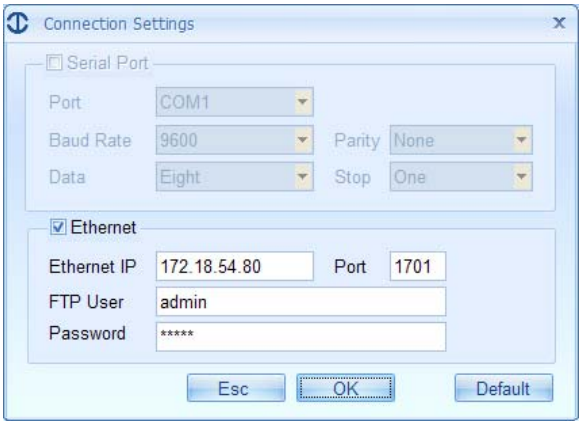


Figure 7-12: Ethernet Connection Information for FTP Login

It is also important to remember that many terminals require a special switch setting and power cycle operation in order to make the terminal ready to accept firmware upgrades. Consult the technical documentation of the specific terminal for details on the required process. Once the operation is complete, close the firmware upgrade window to exit it and access other configuration functions.

DON'T FORGET TO BACK UP THE TERMINAL'S CONFIGURATION BEFORE PERFORMING THE FIRMWARE UPGRADE. USE THE SAVE/LOAD PROCESSES TO SAVE AND THEN RESTORE THE SETUP INFORMATION.

MT Service Security

For products that support it, the new MT Service Security section of the InSite tool is used to unlock access to special diagnostic service information. This is information that is NOT available via open communications and requires an encrypted exchange of information between the InSite tool and the terminal before the terminal will permit access to its protected data.

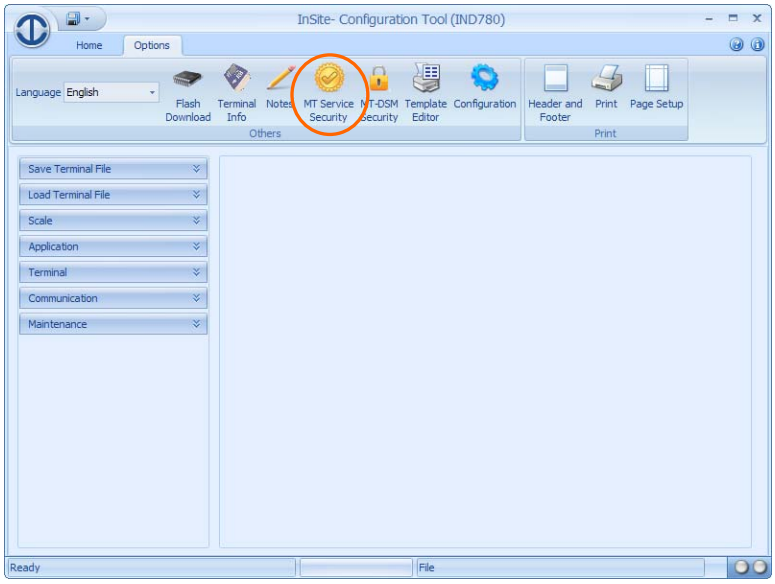


Figure 7-13: MT Service Security Button

Please refer to Chapter 9 for details on the MT Service Security operation.

Configuration Reports

Once the terminal has been configured, the configuration data can be printed from the InSite tool. The configuration report is generated from the Options tab, Print section in the toolbar frame.

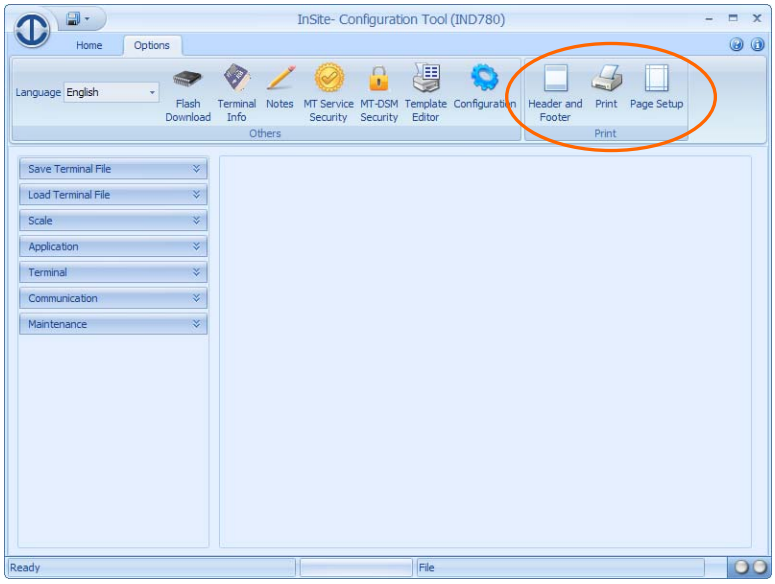


Figure 7-14: Print Options

There are options to customize the header and footer information and configure page settings. Once these are set up, the print function is used to generate to print view, which can be saved as a file or sent to a printer connected to the PC.

The header and footer can include system information like time, date, and number of pages. Custom text can also be inserted. Be careful when choosing the header and footer size – this can make the print report very large for the more advanced terminals.

Figure 7-15 shows an example of a configuration report printout from an IND131/IND331 terminal.

My Custom Report

Setup Tree

Product	**IND131/IND331**		
Application	**None**		
Version	**1.XX**		
Notes			
Tab	**Branch**	**Parameter**	**Value**
Save Terminal File			
Load Terminal File			
Scale			
	Type		
		Name	Scale 1
		Approval	None
	Capacity & Increment		
		Primary Units	kg
		> |1| <	1000
		X	0.1
		x10 Always	Disabled
	Calibration		
		Base Serial Number	000000
		Linearity Adjust	Disabled
	AZM & Display		
		Auto Zero	Gross
		Auto Zero Range	0.5
		Under Zero Blanking	Disabled
	Ranges		
		Pushbutton Zero	+/- 2%
	Types		
		Pushbutton Tare	Enabled
		Net Sign Correction	Disabled
	Rate		
		Weight Units	None

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Figure 7-15: Sample Printout Page from IND131/IND331

Connected Mode Usage

The connected mode is required when loading a saved InSite file created in the disconnected mode (Write) to complete cloning from another terminal or loading the pre-configuration data.

This mode allows instant access to read or change individual setup parameters quickly. It also has several special operations for terminal configuration:

- Template Editor with visual layout
- Softkey layout
- Firmware upgrades
- MT Service Security
- Configuration reports

While connected sessions can be used to save the entire configuration if the Read All function is used, InSite will not include the secure FTP and User tables with its data. Use of the Save function is strongly recommended to archive the complete configuration. This process should work for **any** version – even those not yet supported in the connected / disconnected modes

Templates and configuration files created in the prior version of the InSite tool (version 4) can be used and saved into the new version of the tool.

Chapter 8.0

InSite Template Editor

This chapter covers:

- Layout and detailed operation of InSite Template Editor

The InSite Template Editor allows the user to build a Print Template. Print Templates are custom-tailored reports defined using Shared Data elements, text, and formatting commands.

The Template Editor is used to perform the following:

- Lay out the template data in a grid-based WYSWYG view
- Select one of the three possible grid widths (40 columns, 80 columns, 132 columns) based on number of characters supported by the printer
- Drag-and-Drop location / selection of items inside the template
- Insert text (fixed strings)
- Insert special characters for control codes (CR, LF, SO, SI, STX, ETX, etc.)
- Provide usage information to reflect the amount of space used in the current template
- Configure a terminal's template while connected to it
- Configure a terminal's template offline and then download it to a terminal when connected
- Extract the current templates from a connected terminal and save it as a file locally

Starting the Template Editor

The Template Editor may be accessed from inside the InSite tool in two ways: Through the Template Editor tool button on the Options tab or through the tree "view" selection of the output templates.

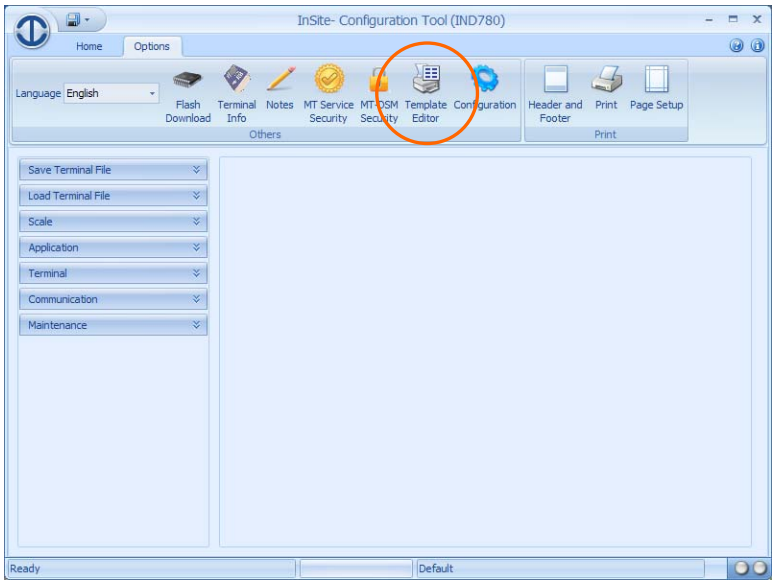

Figure 8-1: Template Editor Button

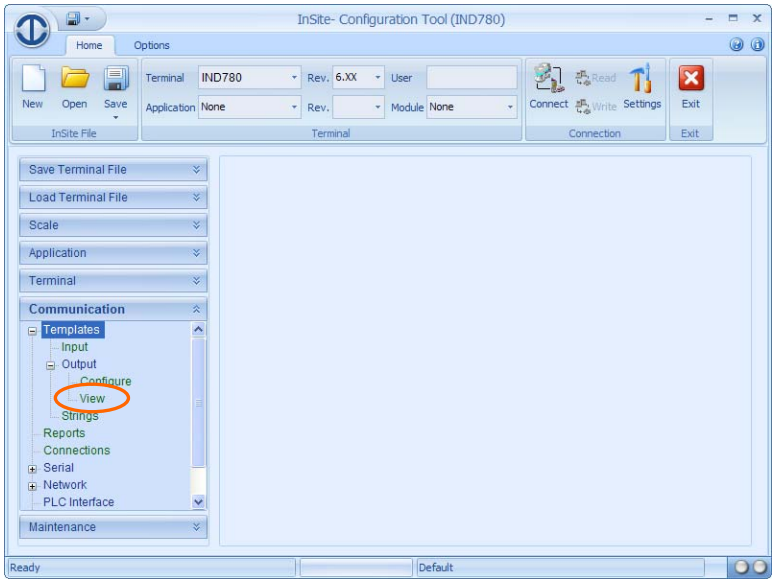

Figure 8-2: Template View in Tree

Once selected, the Template Editor replaces the navigation frame and toolbar frame with its own contents.

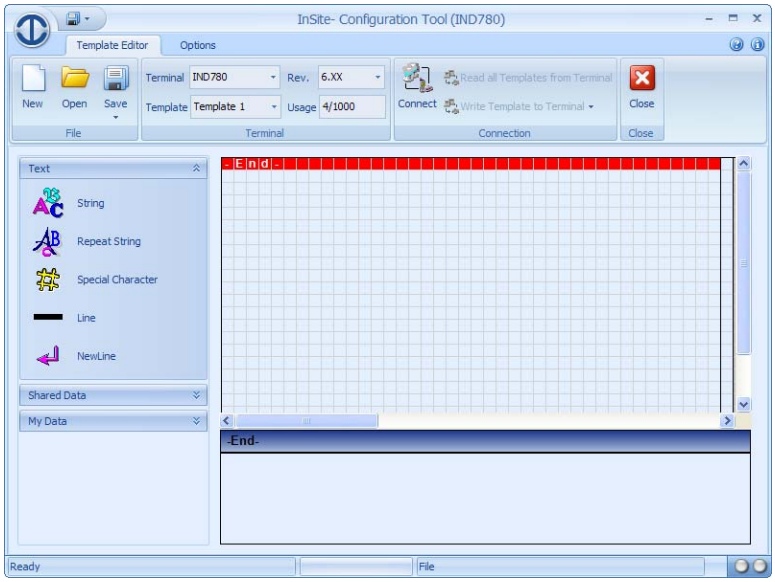

Figure 8-3: Template Contents View

The Template Editor tab contains toolbar frames to handle file operations, terminal information, connection functions, and a Close button to return to the normal InSite configuration functions.

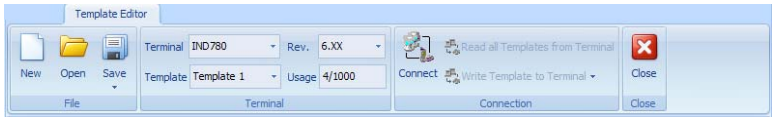

Figure 8-4: Template Editor Tab

The File section in the Template Editor allows templates to be created and opened, or their structure **only** to be saved as a ".tpr" file. The Terminal section contains selections for the terminal type and template. It also indicates how much of the template space has been used for the current template. The Connections section provides methods to connect / disconnect from the terminal (based on the InSite tool settings) and Read or Write templates to the terminal once connected.

The Options tab contains toolbar frames to handle view options, edit operations, and miscellaneous template information.

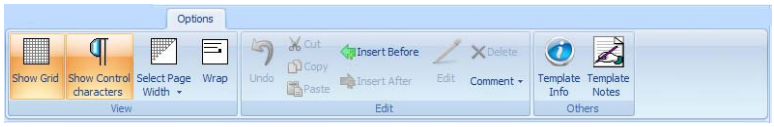

Figure 8-5: Template Editor Options Tab

The View section controls the visual layout window view options. The user can choose to display the grid, display control characters, and control data wrapping. In addition, the window's number of characters (page width size) can be configured for 40, 80 or 132 "columns". This determines how many character positions are available inside the printable (blue) vs. non-printable (grey) areas.

Keep in mind that this constraint is for design purposes – the terminal and its template do not have such restrictions. This is always controlled by the connected printer (and its characters-per-line capabilities).

The Edit section controls the editing options in the design window. The Others section contains the miscellaneous information about the template and a place to record user notes.

Once the design window options are configured as required, the toolbox selections that replaced the tree in the navigation frame are used to populate the template with text and shared data reference variables.

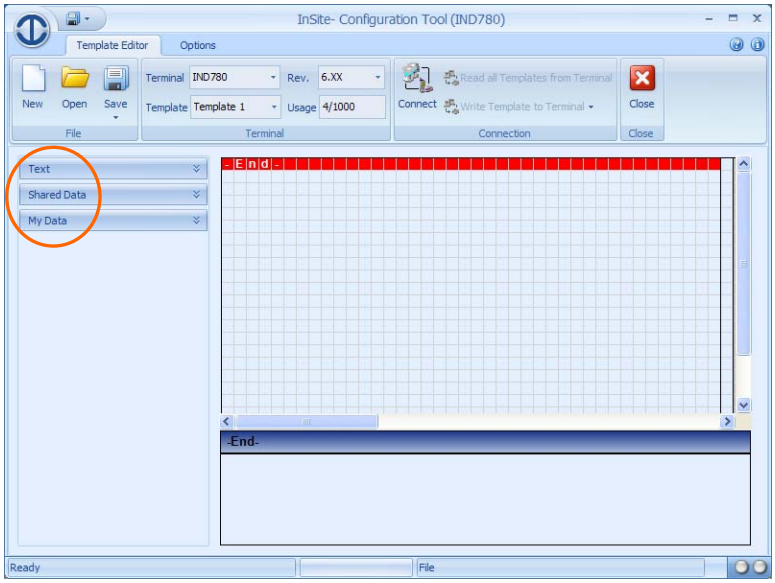

Figure 8-6: Template Editor Toolbox Selections

Adding Text to a Template

There are two ways of placing text or shared data into the template:

- Click on the object in the toolbox; the InSite Template Editor will place that object in the current focus location of the template.
- Drag and drop an object into any "valid" position in the template.

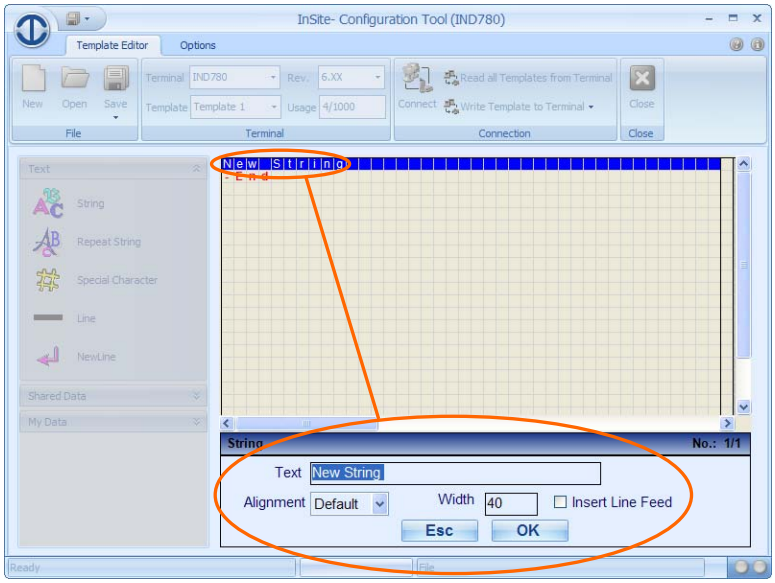

Figure 8-7: Template Text Entry, Object Parameters Displayed

Once the object has been placed in the layout grid, its parameters will appear below the grid. This information is object-dependent, but includes formatting information like alignment and width. It is also possible to include line feed characters after the object. Once the parameters are configured as desired, the OK button is used to confirm and complete the object entry. ESC is used if the object's entry should be ignored and the template returned to its prior state.

Text Object Types

The InSite Template Editor has five different types of text objects:

- String
- Repeat String
- Special Character
- Line
- New Line.

The String object allows a user-specified string of text to be defined. The Repeat String is identical to the String object except it includes a field to indicate how many times the string should be repeated. The Special Character object is used for non-printable control characters like SOH, SI, SO, and FF. The Line object is used when a divider line of characters (such as dash or star) is needed. The New Line object is used when extra line feeds (CR/LF) are desired.

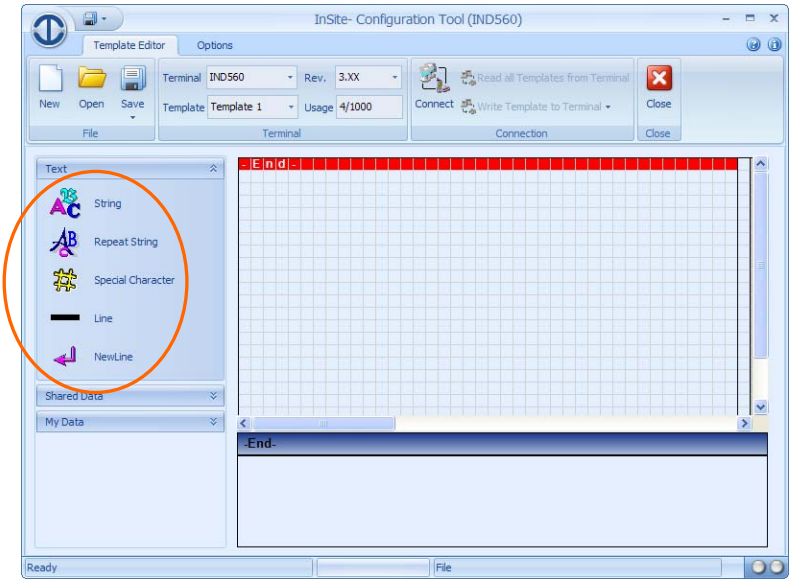

Figure 8-8: Text Objects

String

The String object for InSite Template Editor has three parameters:

- Text
- Alignment
- Width.

A line feed can also be included at the end of the string.

Figure 8-9: String Parameters

Text is used to enter the desired string. Alignment options are left, center and right. The width is used to pad or trim the desired data. The InSite Template Editor will default the width value to the size of the entered text and will display the entered text in the layout window once the object has been added. An inserted line feed object is indicated by the paragraph symbol (¶).

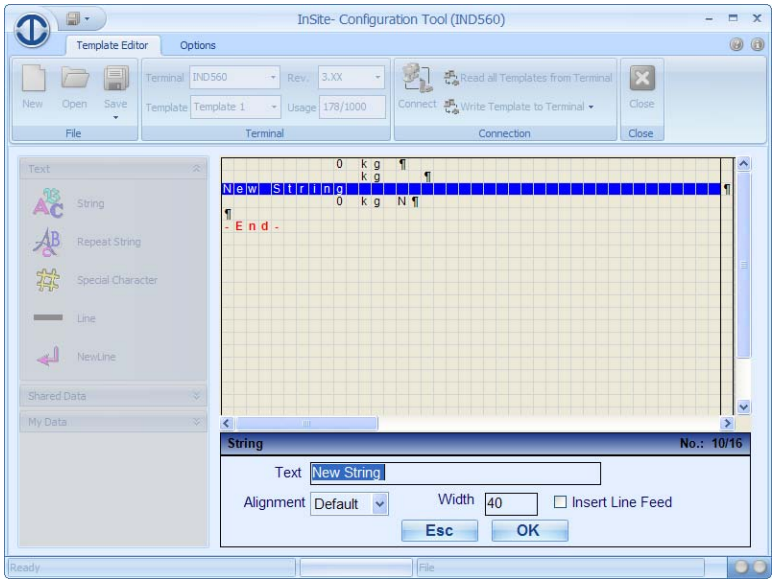

Figure 8-10: String Objects with Line Feed Objects Displayed

Repeat String

The Repeat String object for InSite Template Editor has three parameters:

- String
- Alignment
- Width

A line feed can also be included at the end of the string.

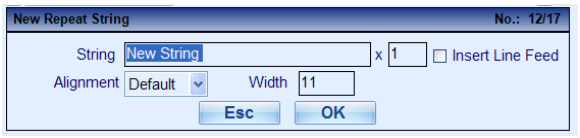

Figure 8-11: Repeat String Parameters

String is used to enter the desired text and number of times it should be repeated. Alignment options are left, center or right. The width is used to pad or trim the desired data. The InSite Template Editor will default the width value to the size of the entered text and will display the entered text in the layout window once the object has been added. An inserted line feed object is indicated by the paragraph symbol (¶).

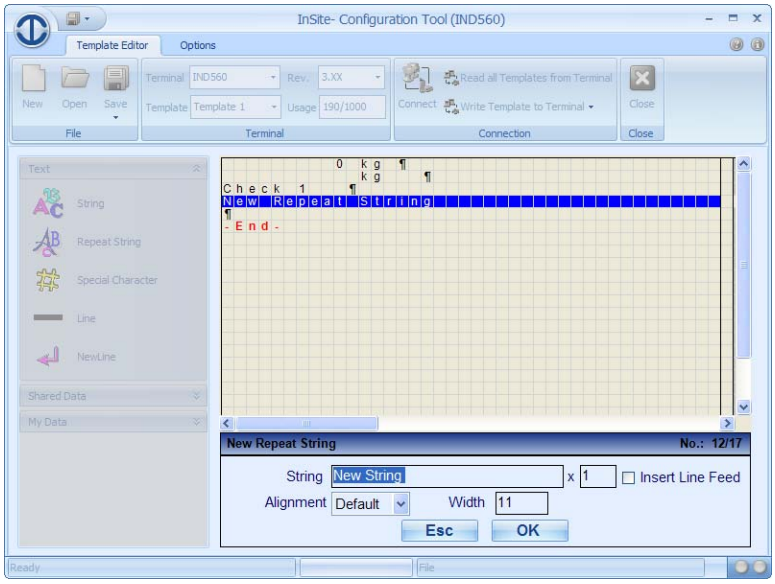

Figure 8-12: Repeat String Object

Special Character

The Special Character object for InSite Template Editor has one parameter:

- Character.

A line feed can also be included at the end of the string.

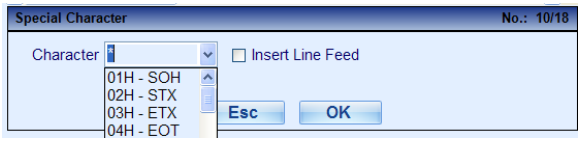

Figure 8-13: Special Characters Parameter

The Character selection box is used to pick from the available special characters. This list includes hex values and an abbreviated character name. An inserted line feed object is indicated by the paragraph symbol (¶). The special character is indicated by a box symbol (□) in the design window once it has been added.

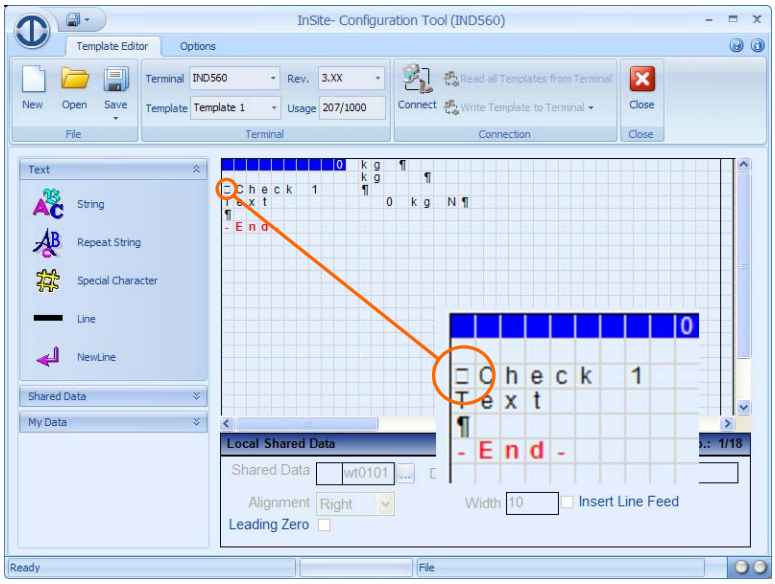

Figure 8-14: Special Character Indicated by Box Symbol

Adding Shared Data to a Template

The Shared Data toolbox contains objects to place a new shared data variable reference in the template. In addition, as shared data fields are used, the toolbox will keep a few of the most recent ones.

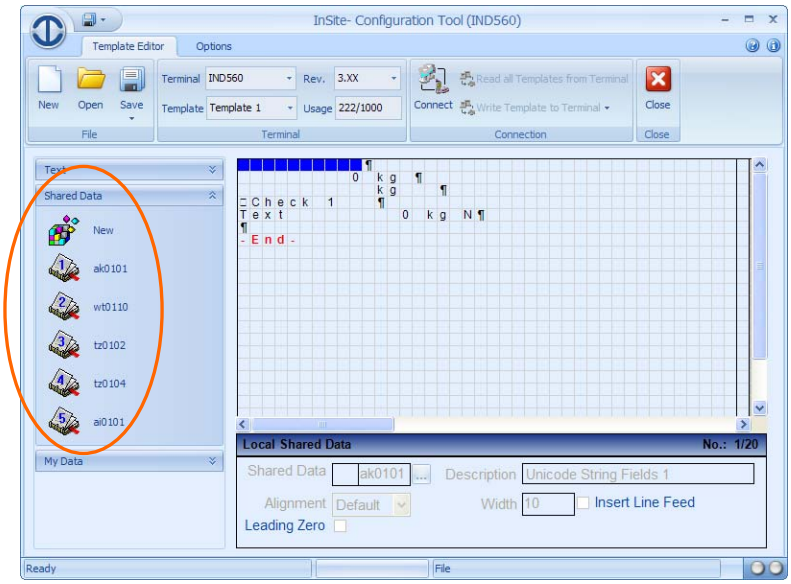

Figure 8-15: Shared Data Objects

The Shared Data object has several parameters:

- Shared Data
- Alignment
- Width

A description of the shared data is included for the template designer. Alignment options are left, center or right. The width is used to pad or trim the desired data. The InSite Template Editor will default the width value to the maximum character size of the shared data variable. **Warning**: In some cases, this can be quite long! A line feed can also be included at the end of the string. An inserted line feed object is indicated by the paragraph symbol (¶).

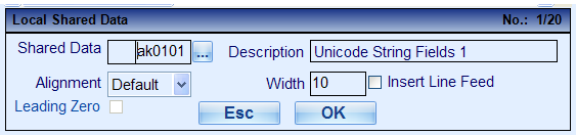

Figure 8-16: Shared Data Parameters

A shared data name selection window can be opened by clicking on the ellipsis button (...) beside the shared data entry box. This provides a list of available shared data variable names and their descriptions for users who are uncertain which variable to use.

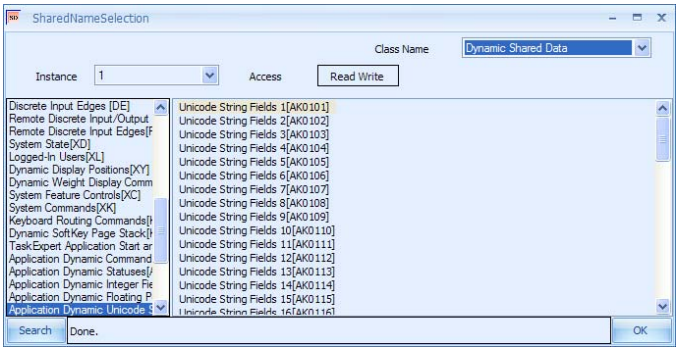

Figure 8-17: Shared Data Selection Window

Using My Data

The My Data toolbox contains copied or cut sections of template data that can be saved and pasted into other templates in the InSite Template Editor.

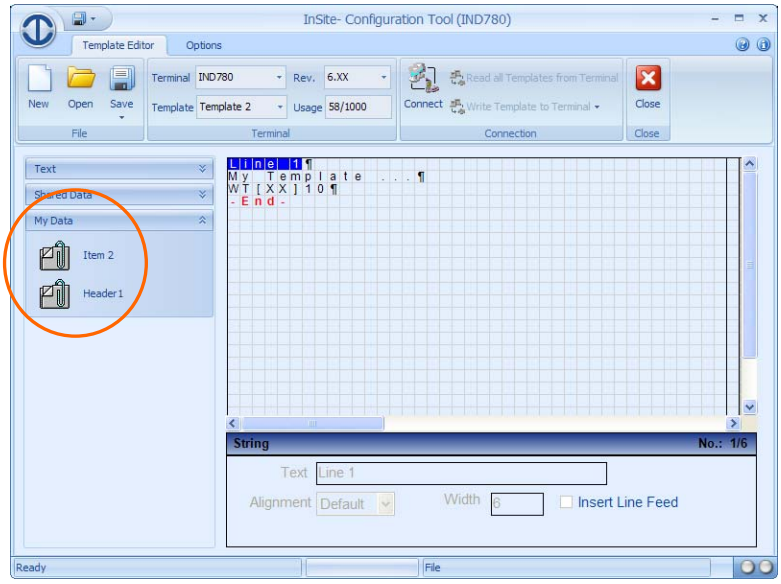

Figure 8-18: My Data Objects

These items can be renamed by right clicking them and selecting rename from the menu options.

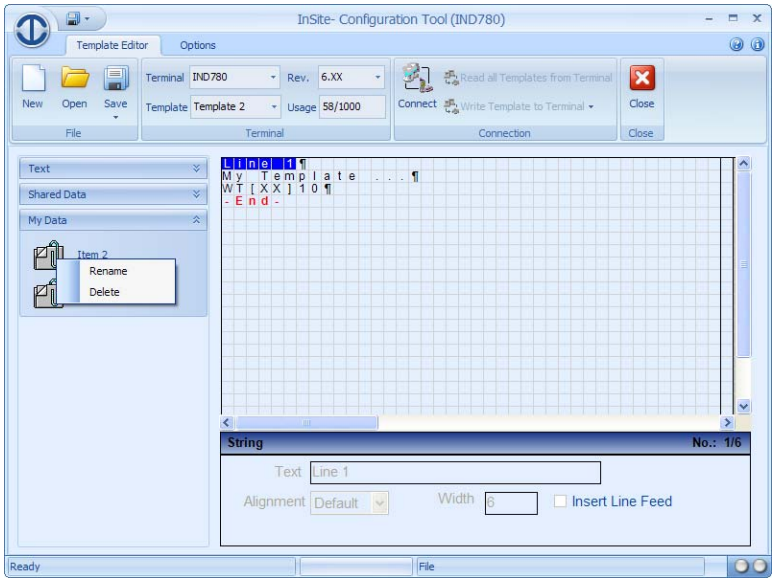

Figure 8-19: Renaming a My Data Object

- Note that only the last 10 items are stored in the My Data toolbox, so if more than 10 cut or copy operations are performed, the earliest clipped data will be overwritten.

Chapter 9.0

InSite MT Service Security

This chapter covers:

- MT Service Security features

Once authenticated, the InSite tool may be used to unlock access to terminals' special diagnostic features. Not all terminals support this feature – only those like the IND780 with protected diagnostic data.

For products that support it, the new MT Service Security section of the InSite tool is used to unlock access to special diagnostic service information. This is information that is NOT available via open communications and requires an encrypted exchange of information between the InSite tool and the terminal before the terminal will permit access to its protected data.

Using MT Service Security

MT Service Security can be used in both connected and disconnected mode. Operation differs slightly between the two modes. In both cases, click on the MT Service Security button in the Others section of the Option tab to access these features.

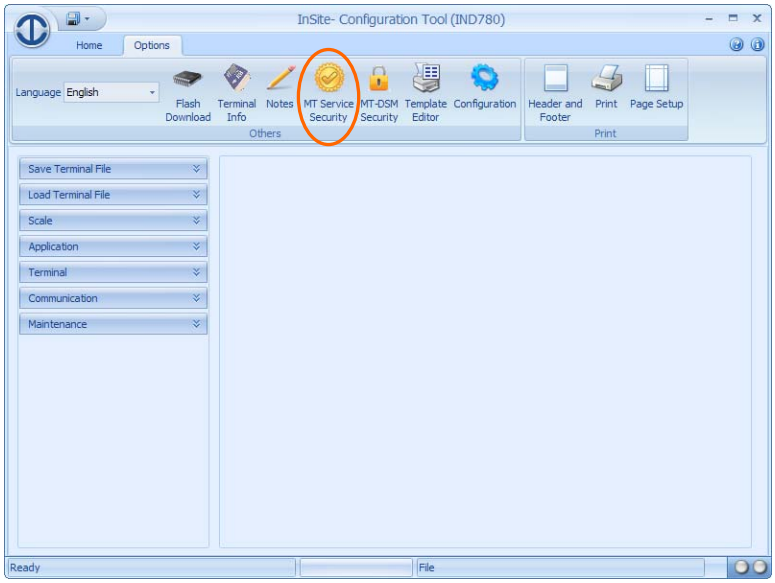

Figure 9-1: MT Service Security Button

If a terminal is connected while working with MT Service Security, the InSite tool will read the required security information from the terminal. At this point, it will also show the status of the terminal's security (locked or unlocked) and provide a command button to allow the opposite operation (unlock if locked, lock if

unlocked). Once the command button is clicked, the InSite tool will exchange the security information needed and update the status and command button.

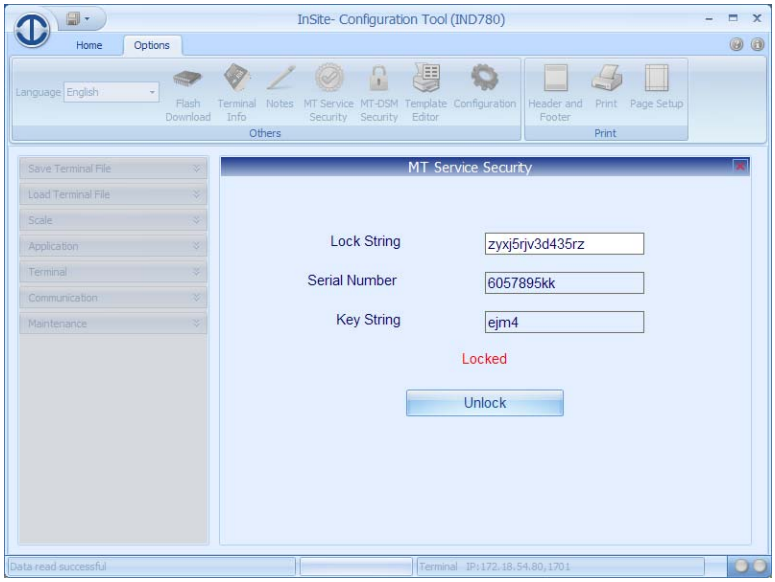

Figure 9-2: MT Service Security Unlock Button

If it is not possible to connect to the terminal, the MT Service Security function can still be used to unlock the terminal. In the disconnected mode, the InSite tool will provide an entry box for the lock string. This information must be acquired from the terminal's maintenance section. Enter in the string that the terminal displays and click on the Create Key button.

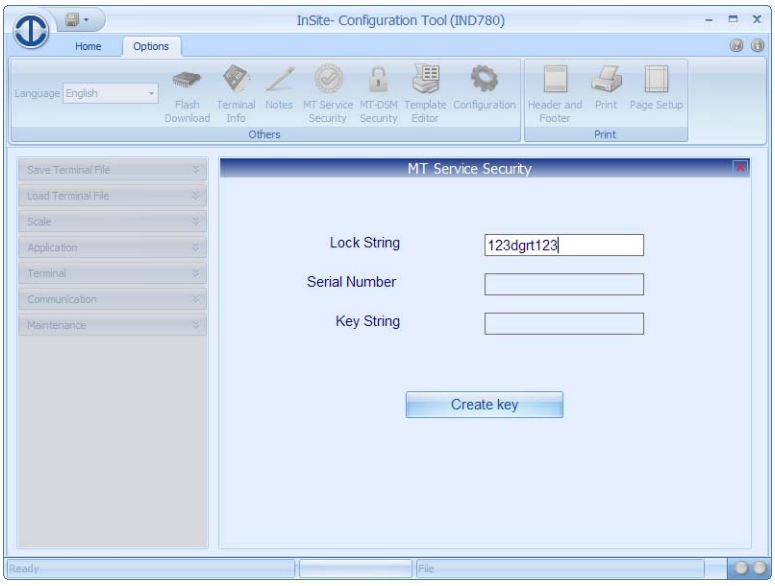

Figure 9-3: Botón creare clave

The InSite tool will generate a key string as long as the data is valid AND the serial number of the terminal is not blank (this value is embedded in the lock string data). The key string must then be entered at the terminal in order to unlock it.

To return to other configuration functions, close the MT Service Security window. Once the terminal is unlocked (from either method), the protected service information can then be viewed and edited. Don't forget to lock the terminal once at the end of the session. If the diagnostic information is to be saved, first unlock the terminal using this process, then perform the save.

Appendix A

InSite Terminal Connection

This section covers:

- Terminal wiring and connection information for InSite

This section provides specific information on terminal connection setup and wiring for operation with the InSite Configuration Tool.

IND131 / IND331

Configuration & Save/Load

Connection to InSite is only possible using COM1 of the terminal.

1. Enter setup of the terminal and select Variable Access as the assignment for COM1.
2. Confirm the connection settings in InSite.
3. Connect an RS-232 cable between the terminal and PC wired as shown below.

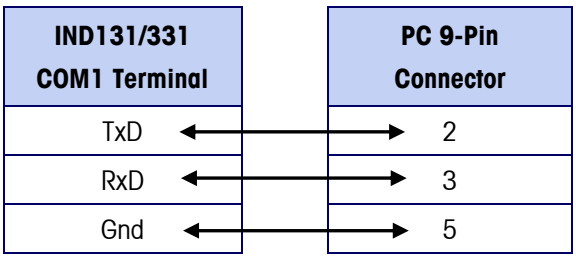

Figure A-1: RS-232 Connection to IND131/IND331 Terminal

After connection between InSite and the IND131/331 has been terminated, enter the terminal's setup tree and change the assignment for COM1 to the appropriate settings. Remember to change the serial port settings as well, if necessary. Power cycle the terminal.

Flashing new Firmware

Refer to "Upgrading Firmware" section in Chapter 4 of the **IND131/IND331 Technical Manual** for a complete explanation of the required steps.

IND560

Configuration & Save/Load

Ethernet

1. The optional COM2/COM3/Ethernet board must be installed in the IND560 terminal.
2. The IP address of the PC may need to be changed. Refer to the "Ethernet Connection to a PC" section of the IND560 Technical Manual, Appendix D
3. The IP address programmed in the terminal must be known so it can be entered in InSite.
4. Connect a cross-over Ethernet cable between the terminal and PC.
5. Confirm the connection settings in InSite are set for Ethernet – not serial interface and enter the IP address of the terminal.

Serial

1. Serial connection to InSite is only possible using COM1 of the terminal.
2. Two methods can be used to program the IND560 terminal for connection to InSite configuration:
   a. Select Variable Access as the assignment for COM1
   b. Turn SW2-1 ON then power on the terminal. This overrides the currently selected assignment for COM1 and sets the port for access to InSite.
3. Choose one of the two methods above and program the IND560 accordingly.
4. Confirm the connection settings in InSite are set for serial interface – not Ethernet.
5. Connect an RS-232 cable between the terminal and PC. The cable should be configured as shown below.

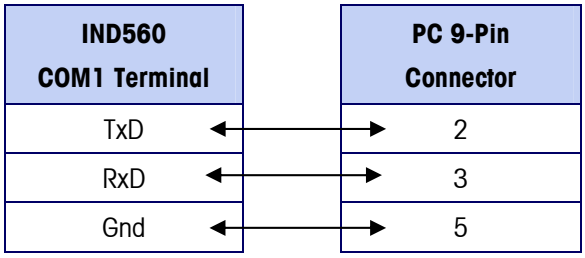

Figure A-2: RS-232 Connection to IND560 Terminal

After connection between InSite and the IND560 has been terminated, turn SW2-1 back off or enter the terminal's setup tree and change the assignment for COM1 to whatever is required. Remember to also change the serial port settings if required. Power cycle the terminal.

Flashing new Firmware

Ethernet

Refer to "Upgrading Firmware" section in Chapter 4 of the **IND560 Technical Manual** for a complete explanation of the required steps.

Serial

Refer to "Upgrading Firmware" section in Chapter 4 of the **IND560 Technical Manual** for a complete explanation of the required steps.

IND560x

Configuration & Save/Load

Ethernet

1. The optional ACM500 module must be connected to the IND560x terminal and the optional COM2/COM3/Ethernet board must be installed in the ACM500 module.
2. The IP address of the PC may need to be changed. Refer to the "Ethernet Connection to a PC" section of the IND560x Technical Manual, Appendix D
3. The IP address programmed in the terminal must be known so it can be entered in InSite.
4. Connect a cross-over Ethernet cable between the terminal and PC.
5. Confirm the connection settings in InSite are set for Ethernet – not serial interface and enter the IP address of the terminal.

Serial

1. Serial connection to InSite is only possible using COM1 of the terminal.
2. Two methods can be used to program the IND560x terminal for connection to InSite configuration:
   a. Select Variable Access as the assignment for COM1
   b. Turn SW2-1 ON then power on the terminal. This overrides the currently selected assignment for COM1 and sets the port for access to InSite.
3. Choose one of the two methods above and program the IND560x accordingly.
4. Confirm the connection settings in InSite are set for serial interface.
5. The COM1 port of the IND560x is intrinsically safe and requires use of an intrinsically safe barrier. **A PC and the IND560x's COM1 port cannot be connected directly!**

6. Refer to the "COM1 Serial Port Connection" section in Appendix A of the IND560x Technical Manual for details of the required barrier and wiring details.

After connection between InSite and the IND560x has been terminated, turn SW2-1 back off or enter setup of the terminal and change the assignment for COM1 to whatever is required. Remember to also change the serial port settings if required. Power cycle the terminal.

Flashing new Firmware

Ethernet

Refer to "Upgrading Firmware" section in Chapter 4 of the IND560x Technical Manual for a complete explanation of the required steps.

Serial

Refer to "Upgrading Firmware" section in Chapter 4 of the IND560x Technical Manual for a complete explanation of the required steps.

IND780

Configuration, Save/Load & Flashing Firmware

IND780 uses Ethernet connections to do ALL configuration & firmware updates.

1. The IP address of the PC may need to be changed.
2. The IP address programmed in the terminal must be known so it can be entered in InSite.
3. Appropriate Ethernet cable(s) / hardware should be used between the terminal and PC.

Appendix B

InSite Release Notes

This section provides information on any important release information and documents the change history information for the InSite Configuration Tool.

Release History

Version 5.01

This version corrects the IND131/IND331 Save/Load operation, which now works for **all** users.

Version 5.00

This is the 1st release of the rebuilt InSite Configuration Tool. This version contains the configuration versions supported in InSite 3.04 but has been restructured to provide each terminal's configuration in its own product module.

New features included:

- Integrated Template Editor
- Shared data dictionary for Template Editor
- Addition of IND560 v 3.xx
- IND780 v 5.xx addition
- IND780 v 6.xx addition
- IND131/331 addition
- IND560x addition

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