

Tisio Device Manager Centralized Startup Guide



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About this Startup Guide

This guide is for system administrators who use Tisio Device Manager to configure Tisio terminals from a central location.

The instructions in this guide assume that you have completed the following tasks:

- Installed Tisio Device Manager and Tisio Operating Software as described in the Tisio Device Manager Installation Guide.
- Installed the necessary support components, JavaVM, MySQL, Tomcat Web services and Apache Web Server components as described in the Tisio Device Manager Installation Guide.
- Set upgrade policies as described in Tisio Device Manager Installation Guide.

Introduction to Centralized Startup

Tisio Device Manager brings terminal configuration to a central Web Services Management Server. With its functionality, you can configure terminal properties and create connections to any server, make the configurations and connections available to terminals, and restart terminals to upgrade their configurations – all from one web services application, using any web browser.

The Tisio Device Manager consists of Java-based control service, a data base service (MySQL), a Client Device Manager Service, and the Device Manager Administrative utility.

Features of Tisio Device Manager

Tisio Device Manager (TDM) centralizes Tisio terminal management, giving you the following capabilities:

■ **Managing large groups of terminals from a central server**

Using the Device Manager, you can:

- View, modify and store terminal properties and connections for all managed devices
- Report configuration information of devices on request
- Define groups and multi-level sub groups of terminals to managed separate configurations and software components.
- Perform wake-up or shutdown operations.
- Register the configuration in Device Manager for automatic terminal updates.

■ **Restarting groups of terminals from a central location**

When a terminal restarts, it is updated with values from the registered configuration stored in a local data base.

■ **Easy access to the Device Manager administrative interface**

Device Manager can be run from any Web Browser supporting the Java applets requires JS2E runtime environment 5.0 support.

■ **Software Deployment**

The Device Manager provides management of device software packages and updates at all levels; globally, at the group level and individually for Tisio devices.

■ **Remote Device Control**

The Device Manager offers a simple right click control to view the contents of the managed device with password protection.

■ **Device Cloning**

Through the TDM utility, device cloning can be performed to create exact image copies of a Tisio device. These images are stored on the server which can be then redeployed to a similar Tisio device to obtain an exact configuration match.

■ **Secure Login**

A login secures access to the Device Manager administrative interface. Users can be created to control specific aspects to Tisio device management.

■ **Secure Network Access**

The Device Manager and managed Tisio thin clients communicate using HTTP/HTTPS protocols offering secure access over LAN, WAN and through firewalls.

■ **Secure Device Lock down**

The Device Manager provides setting and password protection to restrict users from making changes and controlling access to insecure USB memory devices.

■ **Backup Management**

The Device Manager provides a Backup/Restore section to enable backup of configuration data.

■ **Administration Tools**

The Device Manager Administration tools provide a user administration section to manage who is allowed to login, password management and restriction settings. Diagnostic Logs are also provided showing the communications between Tisio devices and the Device Manager.

Overview of the Central Configuration Process

To configure Tisio terminals through Tisio Device Manager, you will complete the following tasks:

- Getting started
 - Build a list of terminals
 - Start Device Manager
 - Registration of managed devices
- Organizing and configuring terminals
 - Create Managed Groups
 - Define terminal properties and connections for a Managed Groups using the Reference Terminal process.
 - Edit terminal properties and connections for Managed Groups
- Distributing the new configuration
 - Restart terminals to update them with the new configuration
- Completing ongoing processes
 - Distribute new software to terminals, including configuration settings, Operating Software, or client software
 - Reset passwords

This guide has instructions for configuring, starting terminals and managing them using Tisio Device Manager. A companion to this guide, the Tisio Device Manager Reference, contains greater details about Tisio Device Manager, troubleshooting, and error messages.

Getting Started

When getting started with Tisio Device Manager, the first steps include:

- Deciding how to configure terminals and the groups or sub groups they will be initially associated with.
- Starting the Device Manager Window
- Assigning terminals to the Tisio Device Manager, and defining initial settings.
- Create a group and managing configuration settings.
- Distributing configurations to managed Tisio devices.

These first steps lay the groundwork for configuring and managing groups of terminals.

Deciding How to Configure Terminals

When you set up a centralized configuration for a Tisio network, defining a grouping strategy is very key. Groups allow unique configurations to be assigned to Tisio devices, supporting the many different requirements throughout any organization. Tisio terminals automatically receive the associated configuration defined for a Managed Group they are in.

The Managed Group connection and property settings can be created and edited from within the Tisio Device Manager's interface, copied from another Group or a specified Tisio device.

In planning the configuration, keep in mind the following basic parameters:

- You can manage remote terminals locally at the Tisio Device Manager server or through the Internet using a web browser connected to the Tisio Device Manager server.
- Select a Tisio terminal device temporarily to initially define the

specific managed Group configuration settings.

- You can modify and edit the managed Group configuration settings from the Device Manager interface.
- You can use groups to manage different configurations and connection properties. Use group names that describe a specific grouping requirement chosen.
- For larger and more complex environments use multi-level groups to associate by similar configurations, organizational criteria, or geographical criteria. You may want groups for departments, divided by locations or for some other specific use. You may want individual groups for special cases.
- You can make certain configuration options available to users.

The following sections show how to implement these decisions through Tisio Device Manager.

Assigning Terminals to the Device Manager

Assigning the Tisio terminal to the Device Manager is done at the terminal and allows the terminal to be managed. It can be manually set or automatically defined by using the default domain host name “*tisiodm*” plus “<your domain>”, i.e.. “*tisiodm.your_domain.com*”.

The value must be a URL pointing the Tisio Device Managers Web Service, i.e.. “*http://<serverName>:8080/ThinCCo/DMServlet*” where <serverName> is the name of the host on which Device Manager has been installed.

- Assigning the Device Manager Manually.
 - The Device Manager setting on the Tisio terminal defines the URL of the Tisio Device Manager server. This value can be modified from the Tisio Device Properties window under the Device Manager tab at any time.
 - The first time the Tisio terminal is powered on or after a factory default, the Tisio Startup Wizard runs to setup required first time settings. The Device Manager setting can be set as one of the required first time settings under the Tisio Startup Wizards Device Manager tab.
- Assigning the Device Manager Automatically.
 - The Device Manager can be automatically assigned if the Tisio Device Manager’s host name is aliased on the local network’s DNS server. By default, all Tisio terminals use the hostname “thinccodm” as the Device Manager server. The full default URL setting used is *http://tisiodm:8080/ThinCCo/DMServlet*. To avoid manually setting a value on every Tisio device, add the alias “thinccodm” for the Tisio Device Manager in the local DNS table.

Defining the Management Server

The Tisio Device Manager value can be manually set from the Tisio Device Properties window. Press the F2 key then select the device's Connection Manager tab. Enter in the new value using the URL address to the Tisio Device Managers.

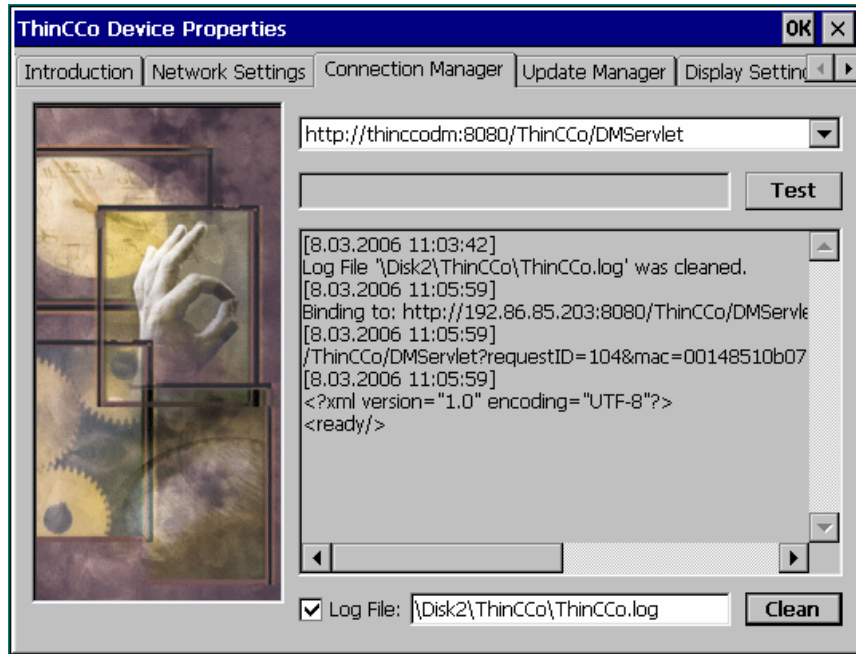


Figure 1 - Setting Device Manager Server

Multiple Management Servers

A Tisio Device manager can handle over 1000 Tisio devices. If the Tisio Device Manager Software is installed on multiple servers, the Tisio terminals should be pointed to their specific management server. Future versions will support multiple Tisio Device Management Services servers utilizing one central database. The only reasons to install multiple Management Servers are:

- You have more than 1000 Tisio terminals on your network
- Your Server has inadequate system resources to support multiple simultaneous software upgrades

If you feel that multiple Management Servers are needed, please contact ThinPATH Systems, Inc. Technical Support. They can assist you with planning and implementing the installation.

Terminal Startup Options

When a Tisio terminal starts for the first time, it goes through a series of initial setup screens to establish basic terminal properties and to establish a connection to the Tisio Device Manager. See **Defining the Management Server** above, since you are configuring terminals centrally.

Connections

On Tisio terminals connections established how a user access network services and applications.

To define connections:

1. Select **Connections > Configure** and check that you want to include the information.

Click **Add**, complete the information to add the connection, and click **OK**.

Registration of Tisio Devices

On first time startup of the Tisio terminal device the Tisio Startup Wizard will run. See Assigning the Tisio Device manager setting above. When the Tisio Startup Wizard has completed on the Tisio device it will register with the Tisio Device Manager to enable it to be remotely managed and configured. The configuration defined for the Tisio Device will automatically be downloaded eliminating the need to individually set each Tisio device on your network.

Starting the Tisio Device Manager (TDM)

The Tisio Device Manager is an integral part of the overall management scheme. The Tisio Device Manager offers an easy-to-use tool for Administrators to remotely manage all types of Tisio thin client devices and their groupings.

The Tisio Device Manager consists of a Java-based Control Service, a database service (MySQL), a Client Device Manager Service, and the Device Manager Administrative user interface.

To access the Tisio Device Manager either from the local TDM server or from a remote browser follow one of these two methods.

■ Starting on the local server

Open the web browser on the TDM server and enter the URL:

`http://localhost:8080/ThinCCo/DeviceManager.htm`

■ Starting from a remote browser

Open any Java-enabled web browser on a computer and enter the URL:

`http://<server.your.domain>:8080/ThinCCo/DeviceManager.htm`

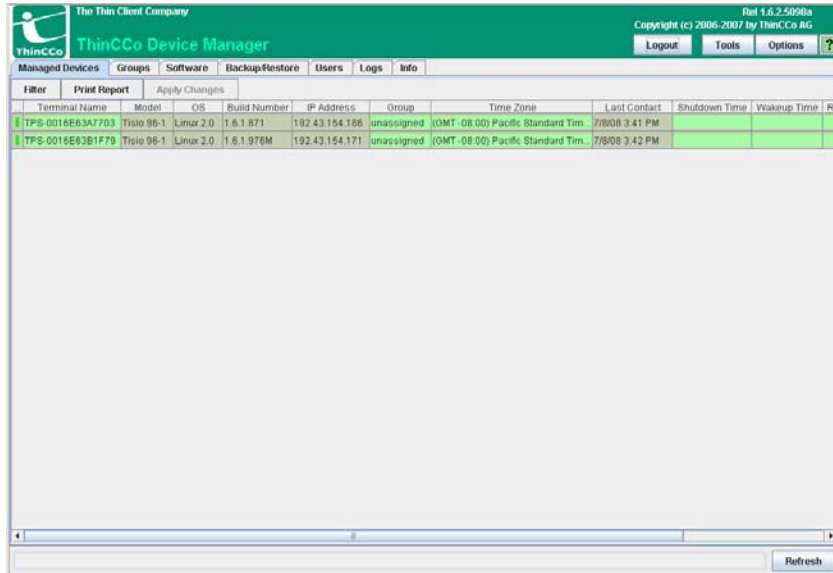
Where the value <your server> is the hostname or IP address for the server where the Tisio Device Manager software was installed.

You will first be prompted to login at the initial screen. Enter the username and password defined during installation of the Tisio Device Manager software, set to “Admin” and “admin” respectively.



Figure 2 - Tisio Device Manager Login Window

After a successfully logging in, the main Tisio Device Manager window will start display as shown in Figure 3 below.



Terminal Name	Model	OS	Build Number	IP Address	Group	Time Zone	Last Contact	Shutdown Time	Wakeup Time	Rt
TPS-0018E83A7703	Tisio 96-1	Linux 2.0	1.6.1.871	192.43.154.186	unassigned	(GMT-08:00) Pacific Standard Tim	7/8/08 3:41 PM			
TPS-0018E83B1F73	Tisio 96-1	Linux 2.0	1.6.1.976M	192.43.154.171	unassigned	(GMT-08:00) Pacific Standard Tim	7/8/08 3:42 PM			

Figure 3 - Tisio Device Manager main window

Management Tasks

Overview

The Tisio Device Manager breaks management tasks into logical functions. These are categorized as Managed Devices, Group Management, Software Deployment, Configuration Backup and Restore, view Logs and Administration. With this functionality, you can configure terminal properties and create connections for any server, make the configurations available to terminals, and restart terminals to upgrade their configurations – all from one web services application, using any web browser.

Tisio Device Manager includes the following functional operations, with details on each in the following section.

■ Managed Devices

Under Managed Devices, you can:

- View, modify and store terminal properties and connections for all managed devices.
- Report configuration information of devices on request.
- Add and Delete Tisio devices from the managed list.
- Perform wake-up or shutdown operations.
- Perform remote device diagnosis using Ping and Trace Route operations and view device logs.
- Modify devices' configurations. For example device time zone information, scheduled wake-up, reboot and shutdown times could be changed directly in the table shown. Other devices settings could be changed from "View/Edit" dialog.
- Perform Image cloning by creating or deploying the Image of a Tisio devices flash memory.

■ Groups

Under Groups, you can:

- Create and delete groups and sub-groups
- View, modify and store terminal properties and connections associated with a specific group
- Drag and drop devices and groups into another group. In result of this action the dragged item becomes a member of the new group and gets its current configuration settings.
- Copy configuration settings from a group/device to another group/device
- Perform groups report on request.

■ Deploy Software

Under Deploy Software, new or updated versions software packages can be installed for later deployment to Tisio devices.

■ Backup/Restore

Under Backup & Restore, vital deployment and configuration information can be easily be backed up and restored.

■ Administration

Under Administration, you can:

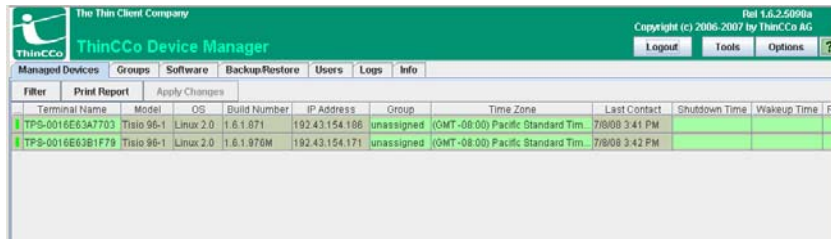
- View and modify user names and passwords controlling security and logon access to Tisio Device Manger
- View server log files

■ Server Info

Under Server Info, information is displayed about the Device Manager installation and the local server.

Management Tasks - Managed Devices

The Managed Devices window is the initial window displayed when the Tisio Device Manager starts. Tisio devices automatically register with the Device Manager which gathers information about the managed Tisio device. Basic information identifying the Tisio device is listed, as shown below.



The screenshot shows the ThinCCo Device Manager application window. The title bar includes 'The Thin Client Company', 'ThinCCo Device Manager', and 'Rel 1.0.2.5096a Copyright (c) 2006-2007 by ThinCCo AG'. The main window has a menu bar with 'Managed Devices', 'Groups', 'Software', 'Backup/Restore', 'Users', 'Logs', and 'Info'. Below the menu bar is a toolbar with 'Filter', 'Print Report', and 'Apply Changes'. The main area contains a table with the following data:

Terminal Name	Model	OS	Build Number	IP Address	Group	Time Zone	Last Contact	Shutdown Time	Wakeup Time	Rt
TPS-001E63A7703	Tisio 96-1	Linux 2.0	1.6.1.871	192.43.154.186	unassigned	(GMT-08:00) Pacific Standard Tim	7/8/08 3:41 PM			
TPS-001E63B1F78	Tisio 96-1	Linux 2.0	1.6.1.970M	192.43.154.171	unassigned	(GMT-08:00) Pacific Standard Tim	7/8/08 3:42 PM			

Figure 4 - Managed Devices Window

In addition to displaying basic information on devices, the Managed Devices window is used to perform specific management tasks on individual Tisio devices, usually from a simple right click menu over a selected Tisio device.

Managed Devices menu

The Managed Device menu is displayed by selecting a Tisio device and right clicking. The menu provides the following functions:

- View, modify and store terminal properties and connections for all managed devices
- Report configuration information of devices on request
- Add and delete Tisio devices from the managed list
- Perform wake-up or shutdown operations
- Perform remote device diagnosis using Ping, Trace Route and device logs

Manage Devices menu details

From the Managed Device menu, administrators can perform the following functions on the selected Tisio device.

Menu Item Name	Description
View/Edit	View and edit devices settings, server connections and client packages installed for the Tisio device
Delete Device	Remove the device from the list of managed devices.
Device Ping	Perform a TCP/IP Ping to the device. Display the results in a local popup window.
Trace Route	Perform a TCP/IP Trace Route to the device. Display the results in a local popup window.
Device Log	View the diagnostic log of a device. Display the results in a local window.
Connect via VNC	Perform a VNC connection to a device. Display the devices screen in a window.
Deploy Image	Push a cloned image to the device. After selected chose which saved image to deploy.
Create Image	Create a cloned image from a device and store it on the specified server.
Reboot	Perform a Reboot on the device.
Shutdown	Perform a Shutdown on the device or turn the device off.
Wakeup	Perform a Wakeup to the device or turn the device on.
Print Report	Print a report on the status of the selected device.

Manage Devices Tabs details

The Area below the Managed Tasks labeled as Managed Devices contains more functions available to control the Tisio device in the Managed Devices list.

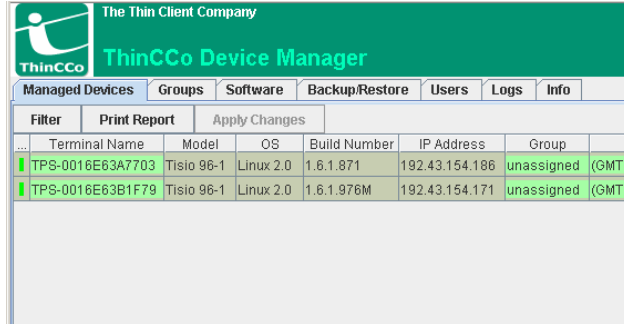


Figure 5 - Managed Devices Tabs

The Managed Device Tabs provide additional management functions with respect to Managed Device. The following table describes their use:


Managed Devices Tabs	Description and Usage
 Filter	This provided a way to modify the items listed in the Managed Devices.
Print Report	Print a report listing the Managed Devices that were selected.
Apply Changes	When ever changes are made to the Managed Devices window you must press Apply Changes for the new settings to take affect.

Figure 6 - Managed Device tab functions

Modifying Managed Devices Data Fields

The fields below identified by a green background in the Managed Devices main window can be modified directly.

When the field is selected with a left mouse click, a dialog window or dropdown box is presented allowing a new setting to be set.

Value to Modify	Description or User Prompt
Group	A drop down box lists all available groups
Shutdown Time	A time window is presented.
Wakeup Time	A time window is presented.
Reboot Time	A time window is presented.
Time Zone	A Tisio time zone setting window is presented.
Update Time	The time and date window is presented.
Auto Group	The time and date window is presented.

Figure 7 - Changeable fields in Managed Devices

- **Group** – Select a new group from the drop down list box. This will assign the selected Tisio device to a new group.
- **Shutdown Time, Reboot Time, Wakeup Time** – Enter the time and check the days of the week in the window you wish to have the shutdown, reboot or wakeup to be run.
- **Update** – Enter the time and check the days of the week in the window presented and select if you want to also perform a wakeup and shutdown.
- **Time Zone** – Select the proper time zone setting from the drop down list box.
- **Auto Group** – Enable Auto Grouping, enables grouping by IP address. Devices will automatically be assigned a group based on their assigned IP address. See the section on Auto Grouping by IP Address in the Group section below.


When any of the fields displaying a green background are changed the Apply Changes tab will become active indicating changes have been made but not yet saved. If another Managed Tasks tab is selected a prompt is presented to save or discard the changes.

Filtering Managed Devices

The Filter tab can be used to add or remove fields from view in the Manage Devices window. The table below lists the fields that can be displayed under the Managed Device window.

Column Name	Field Description
MAC	Tisio Ethernet hardware address
Terminal Name	Tisio network hostname
IP Address	Tisio network TCP/IP address
Domain	TCP/IP Domain Name
License Status	Tisio device connection license status
Model	Model number of the Tisio device
OS	Operating System running on the registered Tisio device.
Build Number	Operating System Build Version
Group	The Group to which the Tisio device has been assigned
Clients	Client Packages installed on the Tisio device
Last Contact	The last time of contact between the Device Manager and Tisio device.
Shutdown Time	The time and date to perform a shutdown.
Wakeup Time	The time and date to perform a wakeup
Reboot Time	The time and date to perform a reboot
Online	The Tisio on-line status
Time Zone	The Tisio time zone setting
Update Time	The time and date to perform an update
Auto Group	Enable or Disable Auto Grouping
License Status	Identifies the state of the devices license
Parameter 1-n	Currently not used.

Figure 8 - Managed Devices Fields

Press the tab  to add or remove fields from view, using the Select Filter attributes window. "Show State" defines if corresponding column will be visible in the table. In the "Filter String" user may specify a template string to filter out data to display in the "Managed Devices" table.

If the filter string is not empty for some parameter (column) then corresponding cell value in the “Managed Devices” table is checked if it match the filter. If some cell doesn’t match then the whole corresponding row will not be displayed in the table.

To match a filter the cell value (its string representation) should start with the filter string or the filter string considered to be a regular expression and cell’s value is checked against that expression. The filter string could be useful for example to display in the “Managed Devices” table only devices whose names starts from some substring, or which belongs to some particular time zone and so on.

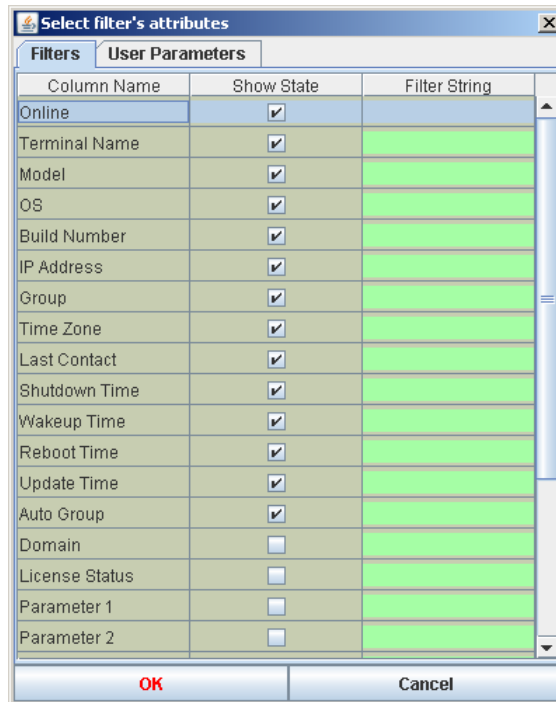


Figure 9 - Filter Managed Device window contents

The fields that get checked are displayed in the Manage Devices window. The use of the Filter String field displays those devices that match the text entered.

Management Tasks - Groups

Another important management functions is performed in the Groups window. It provides an easy method of managing groups of Tisio thin clients deployed throughout a company or organization.

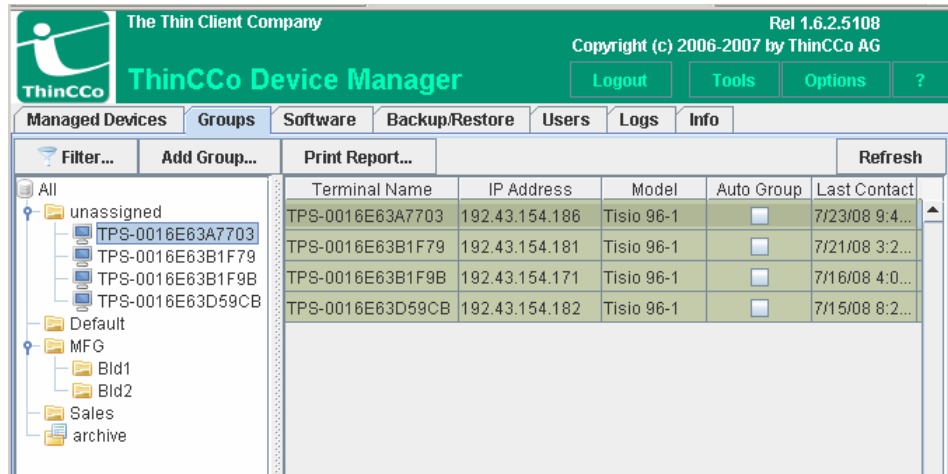


Figure 10 - Management Tasks Gorups View

From the Groups Management screen you can:

- Create and delete groups and sub-groups
- View, modify and store terminal properties and connections associated with a specific group
- Drag and drop or move devices and groups into another group. In result of this action the dragged item becomes a member of the new group and gets its current configuration settings.
- Copy configuration settings from a group/device to another group/device
- Print groups report on request.

Creating a Group and Managing Configuration Settings

Group Principles

The main intent of Groups used within the Tisio Device Manager is to provide an easy method of controlling and configuring groups of Tisio thin clients deployed throughout a company or organization. Multiple levels of groups can be created, meeting the various deployment requirements of large and small organizations. For a full description of all the group functions refer to the section, **Organizing and Managing Devices with Groups**

Specific configuration settings and connection information are associated with a group. Any Tisio terminals assigned to a Group will automatically have the configuration settings of that group assigned to the device. The individual property settings of a group or managed thin client device can be set and modified.

It is recommended you initially define the configuration of a group from a pre-configured Tisio terminal and use the Tisio Device Manager View/Edit windows to make modifications to the Managed Group or thin client device.

There are two types of groups there are standard groups and auto groups. Standard groups are used when you want to manually assign devices to a group. Auto groups are used when you want to automatically assign Tisio devices to a group based on the devices IP address.

The next section will help guide you through these easy setup steps so your Tisio thin client devices can be centrally managed.

Creating a Standard Group and Defining a Configuration

When creating a standard group, you are asked to initially assign a configuration. The configuration can come from another group, a parent group or an individual Tisio device. When creating a new top level group it is best to use an existing Tisio terminal that is already configured for your desired environment (also known as *Reference Terminal*).

Follow these steps to create a group and assign a configuration:

1. Identify a Tisio terminal to be used to initially define the settings for the Managed Group.
2. Working at the Tisio terminal, configure the device to your needs.
3. Open the Tisio Device Manager and click on the **Groups** tab.
4. Click on **Add Group** to create a new managed group.
5. Enter the name of the top level group you want to create into the **Group Name:** entry box.
6. Deselect the **Parent Group** so it does not create a sub group.
7. Click on the radio button **Reference Device:** and from the drop down box select the name of the Tisio terminal you configured in Step 1 above.
8. Select your Local Time Zone from the drop down list.
9. Enter a description of the new group.
10. Because this is a standard group leave the Enable IP Range disabled and click on the button **Add**.

The screenshot shows a dialog box titled "Add Group" with the following fields and options:

- Group Name: Sales
- Parent Group: MKT
- Reference Group: MKT
- Reference Device: TTC-0016E63A7644
- Time Zone: Pacific Standard Time (America/Tij...)
- Description: Corp. Sales AG
- IP Range section:
 - Enable:
 - Check Intersection:
 - Start IP address: 0 . 0 . 0 . 0
 - End IP address: 0 . 0 . 0 . 0

Buttons at the bottom: Add (in red), Cancel

Figure 11 - Create new Managed Group

11. The group you created now contains the configuration related to the terminal selected as the Reference Device. Any Tisio device moved into this group will automatically be assigned the group's configuration settings at the next reboot of the terminal.

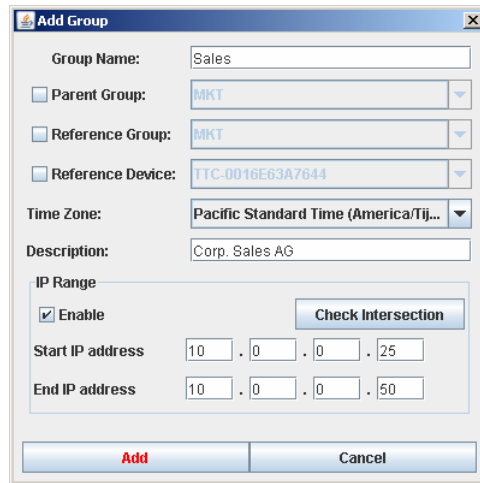
Creating an Auto Group

When creating an auto group you must enter an IP address range to identify which Tisio devices will be automatically assigned when they first contact the Device Manager. You are also asked to assign a configuration, same as when creating a standard group. The configuration can come from another group, a parent group or an individual Tisio device. When creating a new top level group it is best to use an existing Tisio device that is already configured for your desired environment (also known as *Reference terminal*).

Follow these steps to create an auto group:

1. Identify a Tisio terminal to be used to initially define the settings for the Managed Group.
2. Working at the Tisio terminal, configure the device to your needs.
3. Reboot the terminal, forcing the terminal to upload its configuration to the Tisio Device Manager if it has not already done so.
4. Open the Tisio Device Manager and click on the Groups tab.
5. Click on Add Group to create a new managed auto group.
6. Enter the name of the top level group you want to create into the Group Name: entry box.
7. Deselect the Parent Group so it does not create a sub group.
8. Click on the radio button Reference Device: and from the drop down box select the name of the Tisio terminal you configured in Step 1 above.
9. Select your Local Time Zone from the drop down list.

10. Enter a description of the new group.
11. Because this is an auto group, check the Enable IP Range and enter a starting IP address range and an ending IP address range.
12. Click on the button Add.



The screenshot shows the 'Add Group' dialog box with the following configuration:

- Group Name: Sales
- Parent Group: MKT
- Reference Group: MKT
- Reference Device: TTC-0016E63A7644
- Time Zone: Pacific Standard Time (America/Tij...)
- Description: Corp. Sales AG
- IP Range: Enable
- Start IP address: 10 . 0 . 0 . 25
- End IP address: 10 . 0 . 0 . 50
- Buttons: Add, Cancel, Check Intersection

13. The auto group you created now contains the configuration related to the terminal selected as the Reference Device. Any Tisio having an IP address in the specified range will be automatically moved into this group. The Tisio device will automatically be assigned the auto group's configuration settings at the next reboot of the terminal.

View/Edit Group Configuration Settings

The Tisio Device Manager allows the configuration settings and connections assigned to a group or device to be viewed and edited. This offers administrators the ability to modify the configuration settings of a Tisio device remotely. The Managed Device view or the Group view allows devices or groups to be selected for modification of their configuration settings. The View/Edit menu item opens a separate window allowing access to view and change settings associated with a group or individual device.

To modify any settings to a group or Tisio thin client device, follow these steps:

1. Open the Tisio Device Manager.
2. Select either the **Managed Devices** view (Click on **ManagedDevices** tab) or the Groups view (click on the **Groups** tab).
3. Select a Tisio thin client device, top level group or sub level group from the selecte Tisio Device Manager view.
4. Right click to select **View/Edit** Menu item to view Configuration details on the selected Group.
5. The Configuration Details window will allow all connections and settings for a Group to be modified and saved.

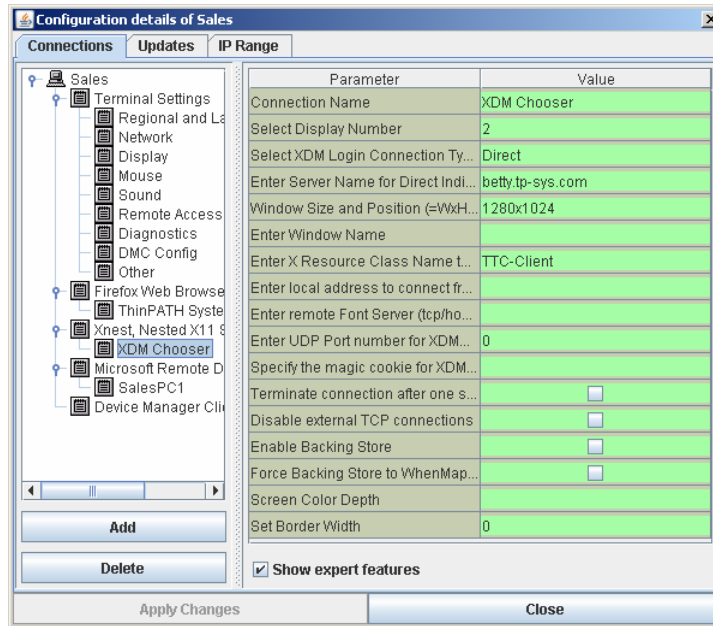


Figure 12 - Configuration Details of a Selected Group

6. Select a **Connection Type** on the left pane to open the configuration details for a connection. The right pane contains the individual setting that can be changed for the selected connection. Make changes to any connection setting and click the **Apply Changes Button**.
7. The **Add & Delete Buttons** can be used to *create* new connections or *delete* existing connections.

For more details on the Configuration Details window including the Connections Tab, Updates Tab and IP Range Tab see the Section below

Managing Device Properties section. There you will find details on editing specific device properties.

Distributing Configurations to Managed Tisio devices

The Tisio Device Manager server is used to automate the distribution of settings and connections to all Tisio managed devices. The Device Managed Client is included on all Tisio devices running Windows CE, Window XP Embedded or Linux. The settings and connections for of all the Tisio devices are automatically distributed to the Tisio devices being managed.

Organizing and Managing Devices with Groups

The main intent of groups used within the Tisio Device Manager is to provide an easy method of controlling and configuring groups of Tisio thin clients deployed throughout a company or organization. Multiple levels of groups can be used, meeting the varied deployment requirements by large and small organizations.

Group Hierarchical Considerations

The Tisio Device Manager supports the ability to create groups and multiple levels of sub-groups. This offers more control for administrators when managing larger numbers of Tisio thin clients.

Sub-groups are automatically assigned the configuration settings assigned to their parent group. Sub-group settings can be modified without affecting their parent group or any subordinate groups.

Traversing Groups and Sub-Groups

The Groups view of the Tisio Device Manager is opened by selecting the Groups tab.

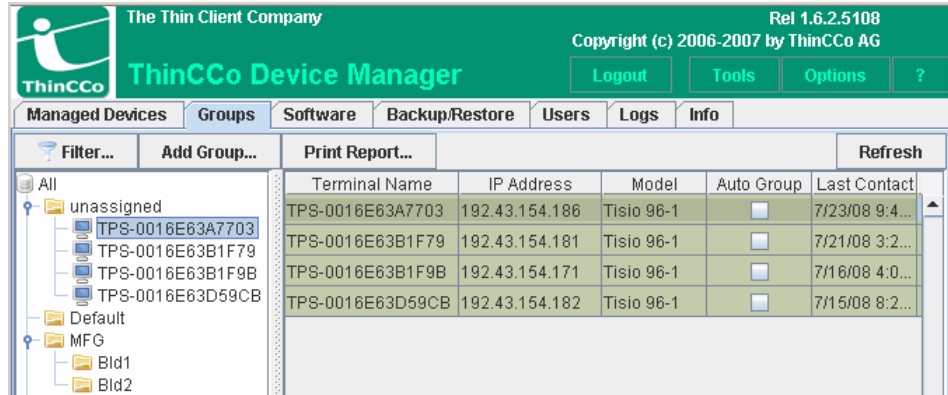


Figure 13 - Device Manager Groups view

The Groups view lists predefined and user defined groups, displayed in a hierarchical tree structure. Icons indicate the presence of predefined groups, user defined groups and user defined sub-groups. Icons also indicate if sub-groups exist and are visible. For top level groups, icons are used to indicate when a lower branch is empty, open or closed. Clicking on these icons changes the view of the hierarchical tree structure.

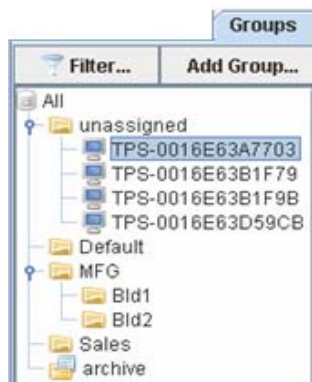











Figure 14 - Group hierarchal view

The group or sub-group names are displayed to the right of the group icons. The group can be selected by clicking on the name or icon.

The following figure describes in detail the function and indication of the icon when viewed, selected or clicked-on.

Icon	Indication and Function
	Top Level of all groups
	Defined group with no defined sub-groups. Clicking on the icon selects the group. Right click to display menu.
	Defined group with sub-groups. Clicking on the icon selects the group. Double clicking will make the next level of sub-groups visible. Right click to display menu.
	When group names or managed devices are selected a blue box surrounds the name of the group.
	Defined group with sub-groups not displayed. Clicking on the blue pointer or double clicking on folder will make the next level of sub-groups visible.
	Defined group with sub-groups displayed. Clicking on the blue pointer or double clicking on folder will hide all sub-groups.
	Lower sub-groups exist but are not visible. Clicking reverses the visibility of sub-groups.
	Lower sub-groups are visible. Clicking reverses the visibility of sub-groups.
	Archive Group


Icon	Indication and Function
	Managed Terminal Device. Click to select managed device. Right click to display menu.

Figure 15 - Group Icon Indications and Functions

Auto Groups and Standard Groups

There are two types of groups that can be created, a standard group or an auto group. The type of group you create defines how the group will be used and how devices are placed into the group.

Standard groups are used when you want to manually assign devices to a group. Using the Group or Managed Devices screens you will manually assign a device by selecting the group from a list, drag it to a group, or use tab functions to move it to a group.

Auto groups are used when you want to automatically have Tisio devices assigned to a group based on the devices IP address. When a auto group is created an IP address range is defined to the group. By default when Tisio device first contact s the Device Manager it will be automatically placed in a group based on its IP address.

Group Tabs and Menus

The Device Manager Groups window offers multiple methods of accessing group functions. The Group functions can be accessed from the Groups tabs just below the Management Tasks or by a right click menu while the mouse pointer is over a group or device in the group directory panel.

Some currently selected items could be unselected or reselected individually. For this you will have to hold pressed the Ctrl keyboard key and click left mouse button on the item whose selection state you want to change.

In both the tab list and the menu, some selections are automatically enabled/disable depending on whether current selection of groups and devices permits corresponding operation.

Group menu details

From the group menu, administrators can perform the following functions on the selected Tisio device, groups or subgroups.

Menu Item Name	Description
View/Edit	View and edit devices settings, server connections and client packages installed for the Tisio device
Delete Device	Remove the device from the list of managed devices.
Device Ping	Perform a TCP/IP Ping to the device. Display the results in a local popup window.
Trace Route	Perform a TCP/IP Trace Route to the device. Display the results in a local popup window.
Device Log	View the diagnostic log of a device. Display the results in a local window.
Connect via VNC	Perform a VNC connection to a device. Display the devices screen in a window.
Deploy Image	Push a cloned image to the device. After selected chose which saved image to deploy.
Create Image	Create a cloned image from a device and store it on the specified server.
Reboot	Perform a Reboot on the device.
Shutdown	Perform a Shutdown on the device or turn the device off.
Wakeup	Perform a Wakeup to the device or turn the device on.
Print Report	Print a report on the status of the selected device.

Menu Item Name	Description
Copy Settings	Copy the settings of a device, a group or subgroup and to another device, group or subgroup.
Move to Group	Move a device from a group or subgroup another group, or move a group or subgroup to another group.
Move to Unassigned Group	Move a device from a group or subgroup another group, or move a group or subgroup to the Unassigned Group.

Figure 16 - Goup Menu Functions

Manage Devices Tab details

The Area below the Managed Tasks labeled as Group contains more functions available to control the Tisio device assigned to groups.

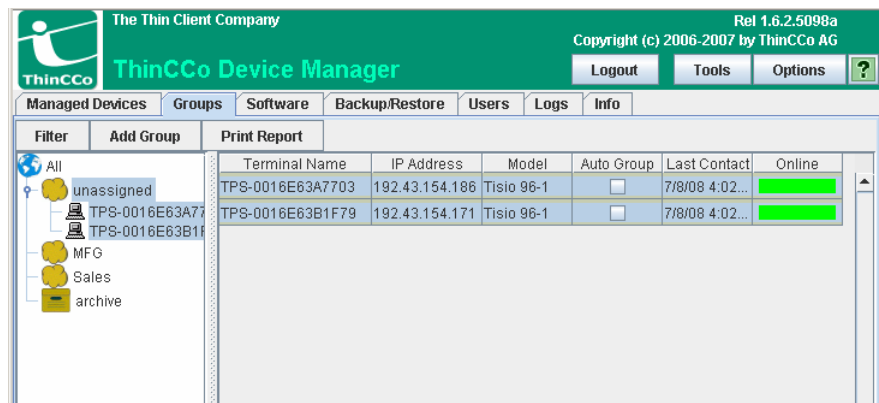


Figure 17 - Group Functions using Tabs or Menus

The Groups Tabs provides additional management functions with respect to group management. The following table describes there use:

Groups Tabs	Description and Usage
-------------	-----------------------


Groups Tabs	Description and Usage
 Filter	This provided a way to modify the items listed in the Managed Devices.
Add Group	The Add Devices tab allows a device to be manually registered and added to the Managed Devices list.
Print Report	Print a report listing the Managed Devices that were selected.

Figure 18 - Group Tab functions

Unassigned, Archive and Default Groups

The Unassigned and Archive groups are created by default and provide place holders for new and unmanaged Tisio devices. The Default group is not initially created but is normally the first group that is created. These groups will be referenced throughout the documentation.

■ Unassigned Group

The Unassigned group contains managed Tisio devices that first make contact with the Tisio Device Manager. All Tisio devices turned on for the first time get assigned to this group. Any configuration assigned to this group is automatically assigned to the Tisio device. By default the unassigned group contains no configuration settings or connection information.

■ Archive Group

The Archive group contains Tisio devices that have been previously deleted from the Device Manager. Devices moved into the Archive group are ignored by TDM but their last settings are kept for documentation purposes.

■ Default Group

The Default group is not initially created, but is the first group created. The group can be assigned any name but it is recommended it be named Default. The Default group when created can only be assigned a configuration from a Tisio device. Once created the default group should be modified to contain the configuration that will be initially assigned to new groups.

When creating the Default group using the Add Group function, the Parent Group box is not selectable until an initial first group is created. The Unassigned and Archive groups can not be selected as parent groups.

See the section on **Creating Groups and Sub-Groups** and the section **View/Edit Group Settings** on how to modify the Default groups settings.

Creating Groups and Sub-Groups

When creating a group you can create a top level group or sub-groups. When the new group is created, a configuration is initially assigned. The configuration can come from another group, a parent group or an existing Tisio device. The Device Manager does not permit to creation of subgroups for **unassigned** and **archive** groups

Figure 19 - Add Group window

The Add Group window provides for the following settings and values:

Add Group Setting	Description and Usage
Group Name	Defines the name of the group.
Parent Group	If checked a new sub-group will be created under the selected parent group. The configuration and connections assigned to the new group is inherited from the parent group.

Add Group Setting	Description and Usage
Reference Group	When Parent Group is unchecked and Reference Group is enabled, a new top-level group will be created. The configuration assign to the new group is inherited from the referenced group. The new group will not be a sub-group of the reference group and later modifications to the reference group will be not propagated to the newly created group.
Reference Device	When Parent Group is unchecked and the Reference Device is enabled, a new top-level group will be created. The configuration assigned to the new group is inherited from the reference device.
Time Zone	Select the time zone associated with the new group. The time zone value should match the time zone of the Tisio device added to this group.
Description	Display or add the description of the new group
IP Range	This defines the group as an auto group or a standard group. When a range is entered and enabled this becomes an auto group. When the IP Range is disabled this becomes a standard group. This setting for a group can be changed after the group is created.

Figure 20 - Add Goup descriptions and functions

Creating a new sub-group

Whenever creating a sub-group the initial assigned configuration is inherited from the parent group. To create a new sub-group:

1. Open the Tisio Device Manager and click on the **Groups** tab.
2. Click on the **Add Group** tab that appears below and enter the name of the new group in the dialog box provided.
3. From the **Parent Group** drop down box, select the parent group for the new sub-group.
4. Click on **Add** tab to finish creating the new sub-group.

Creating a new top level standard group

When creating a top level standard group the initial assigned configuration is inherited from a selected Tisio thin client device. To create a new top level group:

1. Open the Tisio Device Manager and Click on the **Groups** tab.
2. Click on the **Add Group** tab and enter the name of the new top-level group in the dialog box provided.
3. Deselect the **Parent Group** so it does not create a sub group.
4. Click on the radio button **Reference Device:** and from the drop down box select the name of the Tisio thin client device. The configuration and connection setting of the device will be applied to the new group.
5. Select the Local Time Zone.
6. Disable the IP Range and click on the button **Add**.

Creating a new top level auto group

When creating a top level auto group the initial assigned configuration is inherited from a selected Tisio thin client device. To create a new top level group:

7. Open the Tisio Device Manager and Click on the **Groups** tab.
8. Click on the **Add Group** tab and enter the name of the new top-level group in the dialog box provided.

9. Deselect the **Parent Group** so it does not create a sub group.
10. Click on the radio button **Reference Device:** and from the drop down box select the name of the Tisio thin client device. The configuration and connection setting of the device will be applied to the new group.
11. Select the Local Time Zone.
12. Enable the IP Range, enter the range of IP address and click on the button **Add**.

Copying Groups or Device Configurations

The Tisio Device Manager allows the configuration of a group or device to be copied to another group using the **Reference Terminal** button. Every group defined in the Tisio Device Manager contains configuration information. The group's configuration information defines the settings and connections of all the Tisio thin client devices associated with the group.

Follow these steps to copy the configuration information from an existing device or group to a group using the **Reference Terminal** button.

1. Open the Tisio Device Manager and Click on the Groups tab.
2. Click on a device or group you want to copy the configuration settings from.
3. Click on the **Reference Terminal** Button to select a target group or Tisio device.

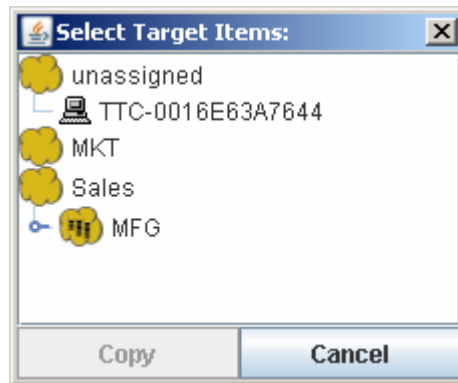


Figure 21 - Copy/Modify Group Settings

4. In the dialog Window, choose the Group name or Tisio device to copy the configuration settings to and click **Copy**. To make multiple selection in the dialog keep pressed Ctrl keyboard key while clicking left mouse button on desired items.
5. The group or Tisio device selected above now contains the same configuration settings as the group or Tisio device previously selected in step 2.

View/Edit Group Settings

The Tisio Device Manager allows the configuration settings assigned to a group or device to be viewed and edited. This offers Administrators the ability to modify the configuration settings of a Tisio device remotely. The Managed Device view or the Group view allows device or groups to be selected for modification of configuration settings. The View/Edit menu item opens a separate window allowing access to view and change settings, control the distribution of software packages associated with a group or individual device. The group can also be changed to be either a standard or auto group.

The View/Edit window includes a Connections, Updates, and IP Range tab. The following describes the functions of each tab:

Connections - The connections screen is selected by default. The Connections screen provides access to Tisio device settings and Connections. They can be edited or created in the connections screen.

Updates - The Updates screen lists software packages associated with a group or device. Available software packages can be added for distribution to managed devices.

IP Range - The IP Range screen allows a group to be defined as an auto group or standard group. When a range is entered and enabled this becomes an auto group. When the IP Range is disabled this becomes a standard group. This setting for a group can be changed any time after the group is created.

Note: When in the **Group** view left mouse button is clicked on a group tree node the group became selected (highlighted) but also all members of the group are also automatically selected.

This indicates changes will be applied to all sub-selected items.

To modify any settings for a group or Tisio thin client device, follow these steps:

1. Open the Tisio Device Manager and select the **Groups** tab.
2. Right click over the top-level group or sub-level group to view or edit.
3. Select View/Edit menu item to open configuration details on the selected Group. The Configuration Details window will allow all connections and settings for a Group to be modified and saved.

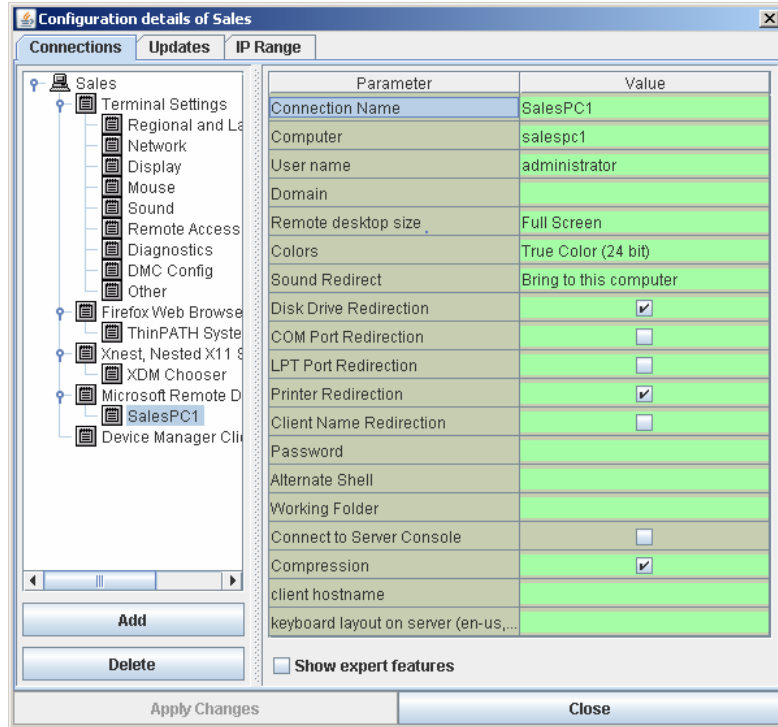


Figure 22 - Configuration Details of a Selected Group

4. Select a Connection Type on the left pane to open the configuration details.

The right pane contains the individual setting that can be changed for the selected connection. Make changes to any connection setting and click the Apply Changes button.

The Add and Delete menu items can be used to create new connections or delete existing connections. The Apply Changes tab will become active after making changes, click to save all changes.

For more details see the Section below Using the Tisio Device Manager Configuration Details window see

Managing Device Properties.

Removing Groups

Removing a group deletes the group, the configuration values associated with it and any sub-groups. Tisio devices are moved to the unassigned group. Removing groups is permanent and can not be undone. When group is deleted, a prompt is presented to confirm the deletion operation.

To remove a group or sub-group:

1. Open the Tisio Device Manager and click on the **Groups** tab.
2. Select the group or sub-group to delete and right click on the **Delete Group** menu item.
3. When presented with the **Confirm delete operation** window, click **yes** to delete the group.

Adding Members to a Group or Sub-Group

You can add members through the Tisio Device Manager, identifying them by the devices name.

Device Manager collects and updates information on Tisio device when the devices power on. The Tisio devices are assigned to an Unassigned Group and from this list you can add Tisio devices to a Group or sub-Group you have created.

To add a new managed Tisio device using **drag and drop** or from the **TDM right click menu**:

1. Open the Tisio Device Manager and click on the **Groups** tab.
2. Select the Tisio device from the unassigned group.

3. If using **drag and drop** press the first mouse button and drag the selected device to a desired group. When the mouse pointer is over a valid group choice, indicated by a small box next to the mouse pointer, release the mouse button and answer yes to the dialog prompt.

Note: It is possible to select several terminals and/or groups at once. For this you have to hold pressed Ctrl key while click with left mouse button over desired item. With multiple items selected all can be moved with one drag-n-drop operation into another group. Selected devices will become members of the new group. And selected groups will become subgroups of the destination group

4. If using the **Add to Group** tab, click on it.
5. Select the group from the dialog window and click OK.
6. The Selected device should now be in the group selected.

Management Tasks – Software

The Software window contains a list of software packages for all managed Tisio devices. Software packages consist of software modules specifically designed for use on Tisio devices. These software packages can be a new O/S release, O/S updates, add-on components or add-on updates. Some examples of add-on update packages are the RDP and ICA clients.

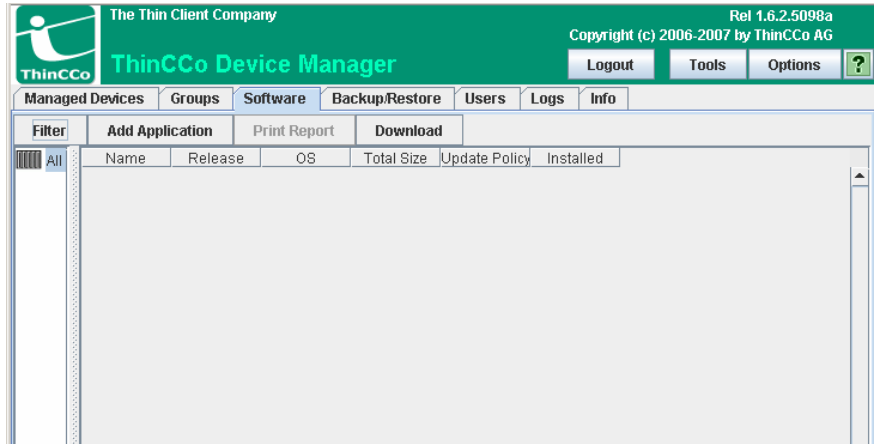


Figure 23 - Management Tasks - Software

The Software window also displays a list of all Tisio models, just left of the software packages. By default **All** is selected, showing all software packages for all Tisio models. Selecting one Tisio device type will display only those software packages compatible with that model.

Deploy menu details

From the deploy software menu, administrators can perform the following functions on the selected packages.

Menu Item Name	Description
----------------	-------------

Menu Item Name	Description
Filter	This provides a way to modify the items listed in the Deploy Software window. See Filtering Software Packages for more details.
Add Application	Install packages for deployment to managed devices from a local package kit. See Adding Software Packages for more details.
Delete Application	Delete the packages for deployment to managed devices from the Device Manager's Deploy Software list.
Print Report	Print a report listing the Managed Devices that were selected.

Software tab details

The Software Tab contains more functions available to install packages for distribution to managed devices.

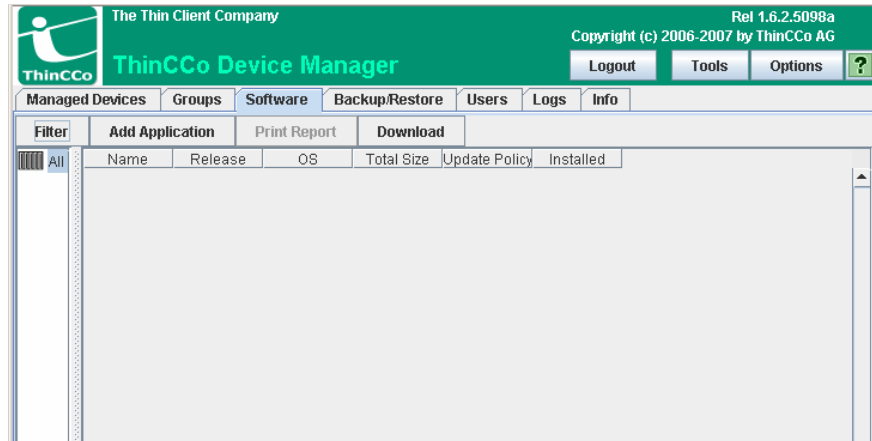


Figure 24 – Software tab functions

The Software Tab provides additional management functions with respect to installing packages for distribution to Tisio devices. The following table describes their use:

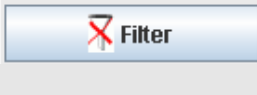


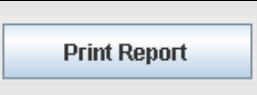

Software Tab	Description and Usage
	This provides a way to modify the items listed in the Deploy Software window. See Filtering Software Packages for more details.
	Install packages for deployment to managed devices from a local package kit. See Adding Software Packages for more details.
	Download from the network and install packages for deployment to managed devices.
	Print a report listing the Managed Devices that were selected.

Figure 25 –Software Tab functions

Filtering Software Packages

The Filter tab can be used to add or remove fields from view in the Manage Devices window. The table below lists the fields that can be displayed under the Managed Device window.

Column Name	Field Description
Name	Software Package Name
Release	Software Package Version
OS	The Operating System type required for this Software Package.
Total Size	Software Package Size in bytes.
Upgrade Policy	Can be set to Upgrade if Newer, Upgrade if Different, or Upgrade Disabled.
Installed	Date this package was installed on the Device Manager server.

Press the tab  to add or remove fields from view for the Software Package window. The Select Filter attributes window is displayed.

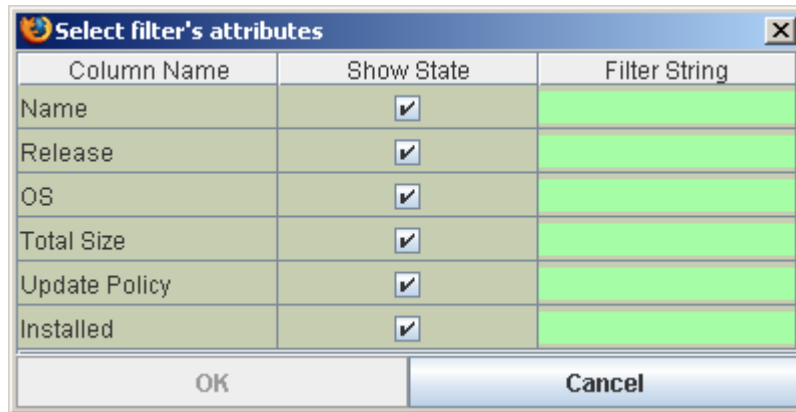


Figure 26 - Filter Manage Device Window contents

The fields that are checked are displayed in the Manage Devices window. The use of the Filter String field enables matching text to be entered to limit which devices are displayed.

Setting Upgrade Policy

The Upgrade Policy controls when packages are automatically deployed to Tisio devices and installed when that first contact the Device Manager after being turned on. The version of the software contained on the Device Manager is compared to the version of that installed on the Tisio device.

Note: The Tisio Linux devices running version 1.5 or earlier only display the packages to install in the local Setup Window. For these devices the user must choose to install then manually.

The Upgrade Policy can be set to:

- **Upgrade if Newer:** The software package is upgraded on the Tisio device if the version is at a higher level than on the Tisio device.
- **Upgrade if Different:** The software package is installed if the version does not match what is installed on the Tisio device. This setting can be used to down-rev a software package on the Tisio device.
- **Upgrade Disabled:** The software package is not installed on the Tisio device.

By default, when packages are installed on the Device Manager and made available to Tisio devices, the Upgrade Policy is set to **Upgrade if Newer**.


The Upgrade Policy setting is modified with a simple left click on the field and making another choice from the list box window.

Adding Software Packages

The **Add Application** tab is used to install upgrade, additional or new software packages for deployment to Tisio thin client devices.

Note: When running Tisio Device Manager from a browser on a remote PC and adding software packages, the add software packages window will only have access the local PC's file system unless a network mount has been made to the Tisio Device Manager server. Access to the application components is needed to install it on the Device Manager for distribution to clients.

To add a new software package:

1. From the Device Manager window, right click on the window and select  to open the add software packages window. If the window does not appear, see the section below, titled **Special Requirements**.

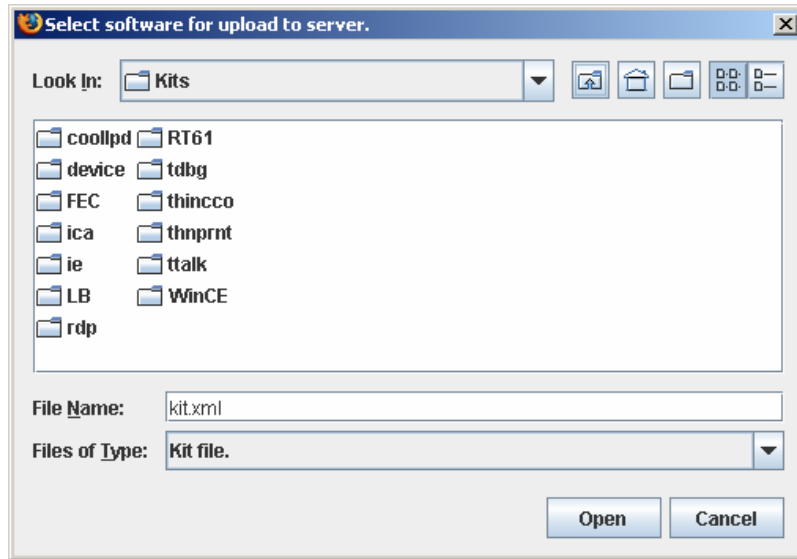


Figure 27 - Adding Software packages window

2. Browse to the Device Manager Kits directory. In each Kit directory there is a kits.xml file. Open the desired kit directory and select the kits.xml file, then click on the **Open** button. This will add the software kit to the Tisio Device manager.

Special Requirements

If choosing to run the Tisio Device Manager from a browser on a remote PC and requiring the add software packages task, the local PC must grant special permissions under Java to allow the Device Manager server to access the PC's local file system.

Follow the instructions below to enable permissions under Java to allow the TDM server to access the PC's local file system.

1. Open the file *java.policy* using the text editor notepad normally found in the directory:

C:\Program Files\Java\jre1.5.0_06\lib\security

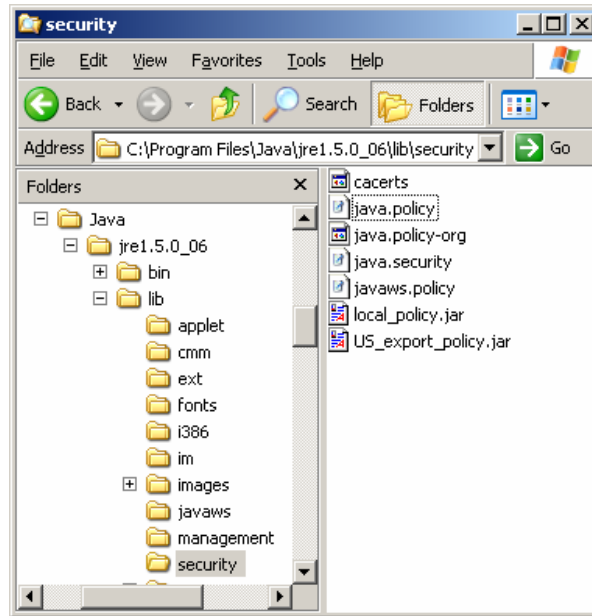


Figure 28 - Java security file location

2. Add to the end of the file the following text:

```
// Special Permissions for Tisio Device Manager SW upload
grant codeBase "http://10.0.0.1:8080/ThinCCo/*" {
    permission java.security.AllPermission;
};
```

Where the IP address, 10.0.0.1 in this example, is the IP address of your Tisio Device Manager server.

3. Save the changes to the file java.policy and close all instances of your local browser window.
4. Open your local browser to the Device Manager server and the Add Application feature should now be functional.

Downloading Software Packages

The **Download** tab is used to download from the internet available packages and install software packages for deployment to Tisio thin client devices.

To download a new software package:

1. From the Device Manager window, click on the tab

 to open the Download software packages window. If the

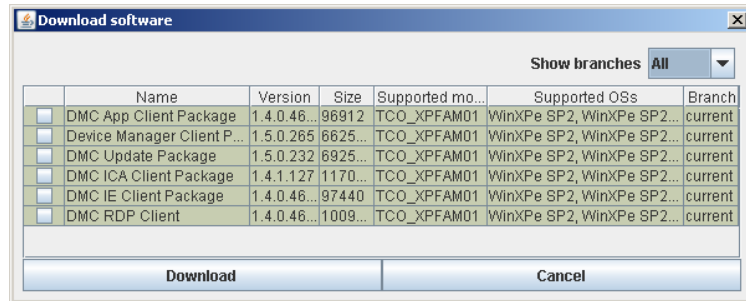
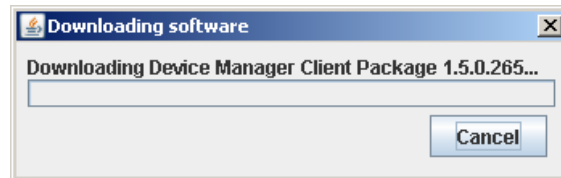
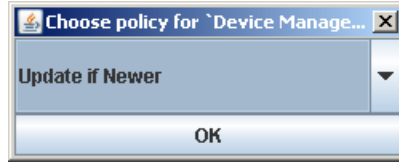


Figure 29 - Download Software Packages window

2. Select the packages you wish to download and install by clicking in the box, and click **Download**.
3. The selected package being downloaded will be indicated by a progress bar.



4. Once download is complete the package will be installed. Next select the Upgrade Policy for this package and press OK. The choices are Upgrade if Different, Upgrade if Newer, or Upgrade Disabled.



5. This completes the installation of downloaded packages.

Installing Software Packages on Managed Devices

The software packages or kits installed on the Device Manager server, which are designated for managed Tisio devices are listed in the Deploy Software window shown in Figure 23 - Management Tasks - Software.

Software packages can be manually deployed or automatically deployed to managed devices using the Device Manager.

Automatic Package deployment

For Automatic software distribution, the upgrade policy setting on a software package controls when packages are automatically deployed to devices. When that first contact to the Device Manager after being turned on, the software is automatically installed to the device. For more information when packages are installed see **Error! Reference source not found.**

Note: The Linux devices running version 1.5 or earlier only display the packages to install in the local Setup Window. For these devices, the user must choose to install then manually from the device.

Manual Package Deployment

Manual deployment of software packages can be initiated at the managed Tisio device or from the Device Manager utility.

When at a managed device, the Terminal Properties or Setup window displays which packages are available to installation. From here you can install all available packages. For details on how to manually install a software package from the managed device, see the user manual covering the device you are using.

From the Device Manager you can also manually install a software package to a managed device. To manually install a package to a managed device follow these instructions:

1. While in the Groups screen or the Managed Device screen, select a managed device.
2. Right click and select the View/Edit menu item.
3. Click on the Update tab at the top of the Configuration details dialog.
4. Select a package to install then click on the button labeled **Install>>**. This will move the package to the right pane.
5. Click Apply Changes to initiate the installing the package. Within the next few seconds, up to two minutes, the managed device will install the selected package. If required by the software package, the device will restart automatically.

Management Tasks – Backup & Restore

The Backup and Restore window offers administrators an easy method of saving and restoring vital deployment and configuration information.

All vital device settings and group configurations are saved in a single archive directory and file. All saved archives are listed by the date they were created along with a user comment.

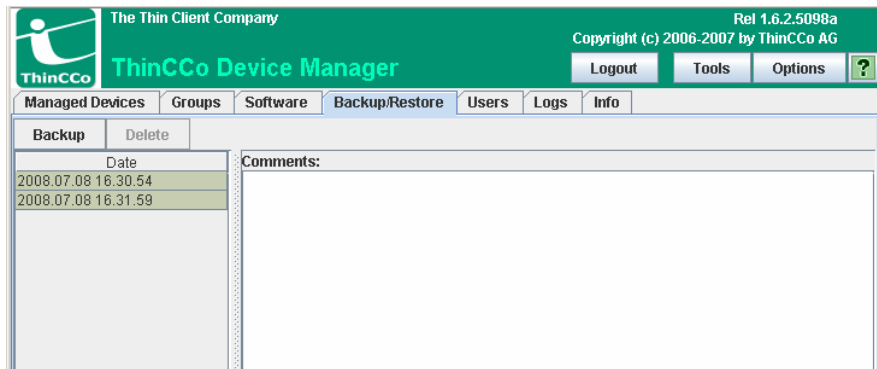


Figure 30 - Management Tasks - Using Backup and Restore

From the Backup and Restore window you can:

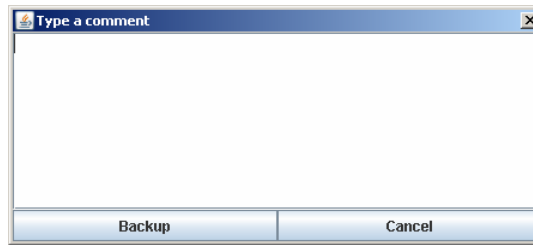
- Backup the current Device Manager configuration
- Restore from a previously saved Device Manager configuration
- Change the comment field used to describe the backup

Backup Configuration

The **Backup configuration** feature is an easy way to save vital deployment and configuration of Device Manager data.

To backup the management data:

1. Under Management Tasks select **Backup/Restore**.
2. Click the tab **Backup** to open a comment dialog box, used for a description of the backup to be made.



3. Enter a comment describing your current backup configuration.
4. Click on **Backup**. When the backup is completed a Backup finished window will appear. The new backup will display under the List of Backups window.

Restore Configuration

The **Restore config** feature is an easy way to restore vital deployment and configuration data.

To restore the management data:

1. Under Management Tasks select **Backup/Restore**.
2. Select the archive you wish to restore on the right side panel of the TDM Backup and Restore window.
3. Click the tab **Restore config** to restore the backup.
4. When the restore is completed, a **Restore finished** window will appear. Click on **OK**.

Edit Comment

The **Edit comment** allows the user comment field to be modified for any existing archive.

To modify comments:

1. Under Management Tasks select **Backup/Restore**.
2. Under the List of Backups window, select the archive you wish to modify the user comment.
3. Click the **Edit Comment** item to display the **Edit Comment** dialog window. Modify the user comment and click **OK**.

Management Tasks – Administration

The Administration window in the Tisio Device Manager enables the management of user access and a simple tool to register Tisio devices on the web site; www.thincco.com. At the top of the Administration window there are two tabs you can select.

From the Administration window – Devices Registration tab, you can:

- Register your Tisio product purchases
- Extend device Warranty options

From the Administration window – Users tab, you can:

- Create new user accounts and control user access
- Change user account settings and passwords
- Control user access by setting privileges
- Delete user accounts

Administration – User Accounts

In today's computing environments security plays a vital role in data access. The User Accounts window allows administrators to define a secure environment, maintain and create user accounts to control access to management features under the Tisio Device Manager.

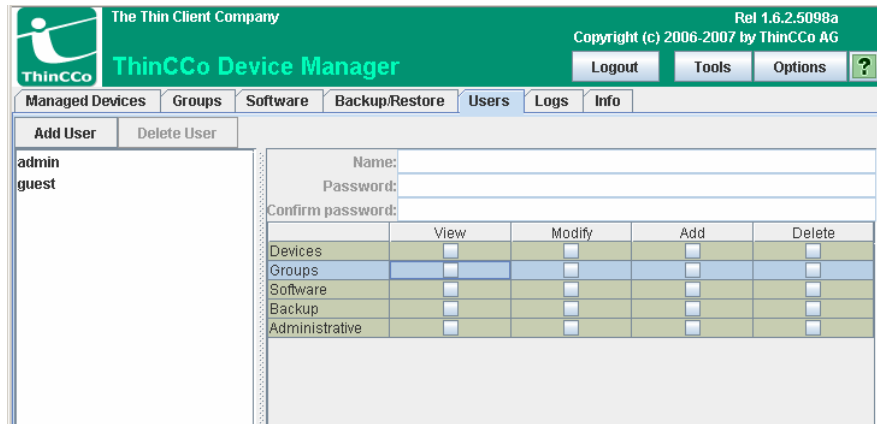


Figure 31 - Management Tasks - User Access Administration

Default Account Restrictions

The Tisio Device Manager Administration window restricts making certain modifications under the Users tab. The account restrictions include only allowing the password to be changes for the default users **admin** and **guest**. You are not permitted to modify permissions or delete these two default users' accounts.

Add and Edit User Accounts

The **Add User** allows a new user account to be created and to define the level of access. The **Edit User** allows the user account settings to be modified.

To create a new or edit an existing user account:

1. Under Management Tasks click on the **Administration** tab.
2. Select the Users tab at the top of the window and click on **Add User** or **Edit User** to display the User window.

	View	Modify	Add	Delete
Devices	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Groups	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Software	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backup	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Licence	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrative	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 32 - Create or Edit User Accounts

3. Enter the user name and password you wish to create.
4. Select the appropriate permissions. Please see access control table below.
5. Click **Apply** to save the new user account or new settings.

User Account Security and Controlling Access

User account security controls user access to specific functions under the Tisio Device Manager. Access is controlled by setting permissions associated with a user account already created. To modify any of these permissions, see the previous section on Add and Edit User Accounts.

Column Name	Field Description
Devices - View	View all managed Tisio devices
Devices - Modify	Modify settings for all managed devices
Devices - Add	Add new Tisio devices to the managed list
Devices - Delete	Delete Tisio devices from the managed list

Column Name	Field Description
Groups - View	View all managed Group
Groups - Modify	Modify settings for all Groups
Groups - Add	Create new groups in the Groups window
Groups - Delete	Delete groups in the Groups window
Software - View	View software packages
Software - Modify	Modify settings of software packages
Software - Add	Add new software packages
Software - Delete	Delete software packages
Backup - View	View backup archives
Backup - Modify	Modify backup settings
Backup - Add	Create backup archives
Backup - Delete	Restore backup archives
License - View	View all license
License - Modify	Modify settings for licenses
License - Add	Add new licenses
License - Delete	Delete licenses
Administrative - View	View user accounts
Administrative - Modify	Modify settings for user accounts
Administrative - Add	Create new user accounts
Administrative - Delete	Delete user accounts

Figure 33 - User Account Access Control and Permissions

Delete User

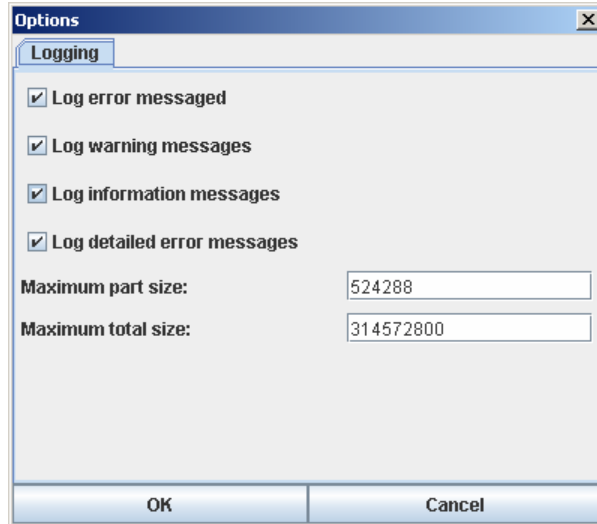
The **Delete User** allows a user account to be deleted. The guest and admin user accounts are system accounts and are not allowed to be deleted.

To delete a non-system user account:

1. Under Management Tasks click on the **Administration** tab.
2. Select the Users tab at the top of the window and select the non-system user account to be deleted.
3. Right click and select the Delete User menu item to remove the user account.

Log Settings

The **Log Settings** allows the level of logging to be set based on the type of data that is recorded. The size of logging files can be limited by setting the Maximize settings.



To modify the Log Settings:

1. Under Management Tasks click on the **Administration** tab.
2. Select the Log Settings tab and define the new log settings.
3. Click OK to accept.

Managing Device Properties

Device properties are user settings for Tisio terminals and consist of both configuration settings and connections. You can set most of the properties through Tisio Device Manager.

The configuration settings and connections can be defined on the Tisio device or under the Tisio Device Manager. The configuration settings and connections information is both uploaded and downloaded during power up of any Tisio devices. This information is available by opening the **Configuring Connections** window in the Tisio Device Manager.

Specific configuration settings and connections can be associated to an individual Tisio device, any group or sub-group. When opening the **Configuring Connections** window you are required to first select an individual Tisio device, a group or sub-group.

Distributing Device Properties

The Tisio device properties are automatically exchanged with the Tisio Device Manager during power up. The distribution of device properties is controlled by the Tisio Device Client settings. On power up the Tisio device uploads its configuration settings and connection information to the Tisio Device Manager. Next the Device Manager checks for differences and downloads a new set of device properties. The configuration settings and connection information downloaded will take precedence of any local Tisio device properties.

Device Settings

On a Tisio device, terminal properties are available in the Configuration Details window for the device name selected. The **Configuration Details** dialog presents a series of Parameter and

Value settings. Connections are also manageable from the Configuration Details window.

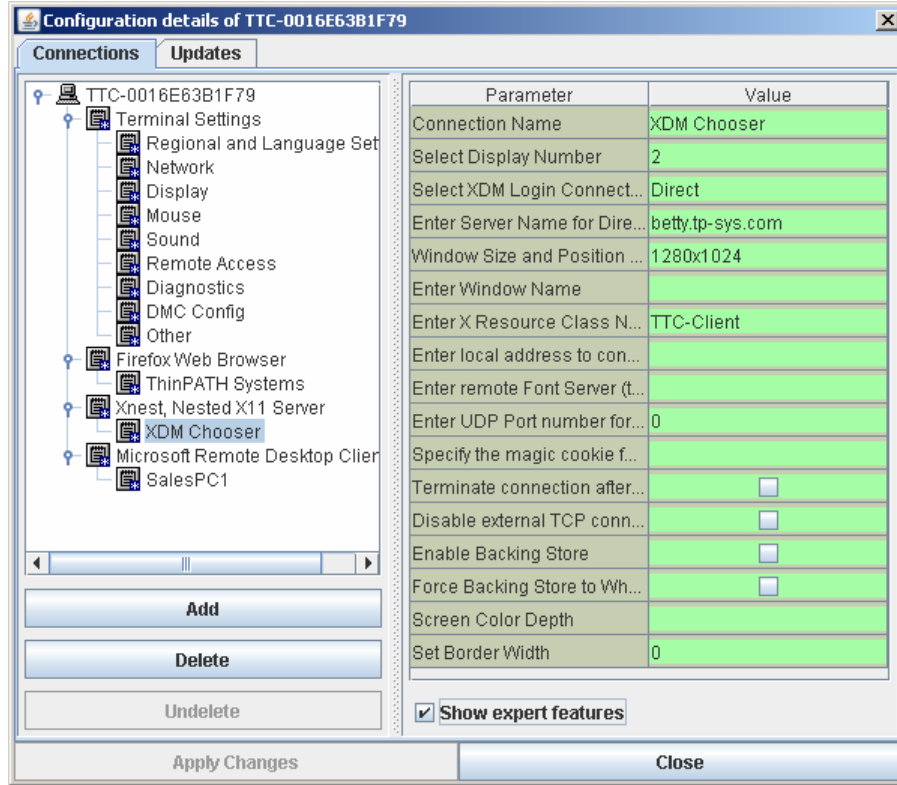


Figure 34 - Device Manager Configuration Details Window

Using the Tisio Device Managers Configuration Details Window, you can define Tisio device settings as follows:

Terminal Settings – identifies general settings for the Tisio device. They include:

- Regional and Language settings.
- Basic settings for network addresses. Parameters that cannot be set globally, such as a static IP address, are on terminals but are not in Tisio Device Manager.

- Settings for the monitor, including resolution, refresh rate, a screen saver and highcolor.
- Mouse Settings.
- Sound Settings.
- Remote access enables/disables start of VNC server on the selected device.
- Diagnostics log settings.
- Device Managet Client settings.
- Settings called other include settings for a specific type of Managed Device. Some settings on managed device running Linux, Window XP Embedded or Windows CE will be different.

Connection Settings – these are listed in the Device Managers Configuration Details and are identified using the name of the local application such as Microsoft Remote Desktop, Microsoft Internet Explorer, Firefox, Citrix ICA client and Teemtalk or TeemX Terminal Emulator.

Configuring Connections

You can create connections for your Tisio terminals using the Device Managers Configuration Details window. In the Configuration Details window you can:

- Set up connections.
- Modify connections
- Remove connections.

The connections are listed by connection type and then by connection name. For a Tisio WinCE device, common connections are, Microsoft Internet Explorer and Microsoft Remote Desktop Client.

Note: For full details on Connections for your Tisio Device refer to the Tisio User manual. There you will find complete details on all settings and parameter requirements for each Tisio device. This section explains how to make changes for a managed device.

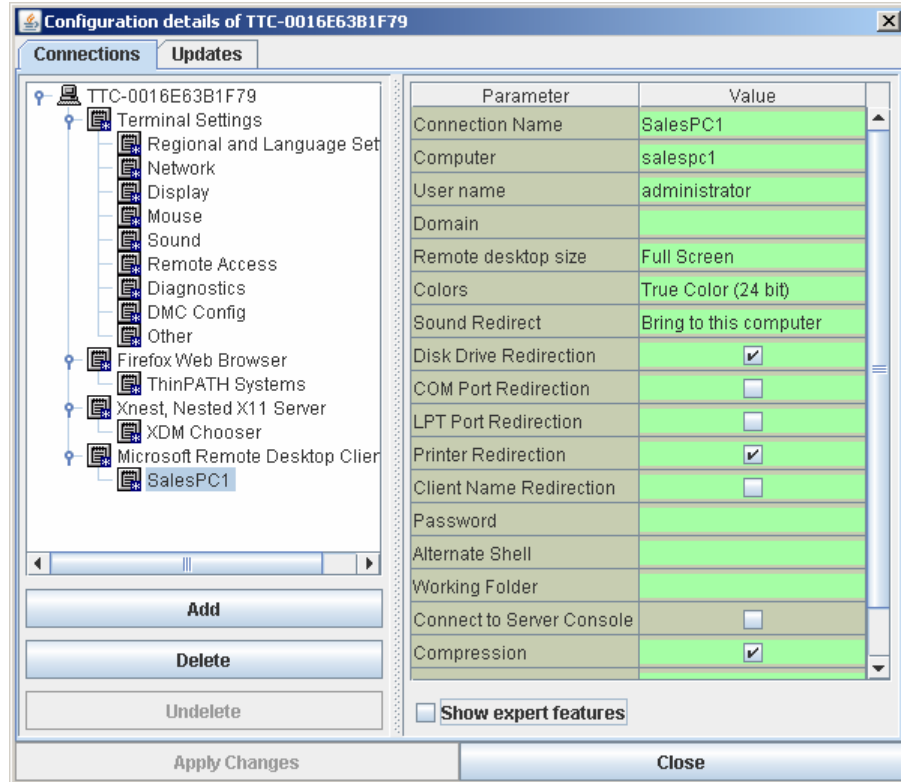


Figure 35 - Managing RDP Connections

For a Tisio device connections type examples include:

- **Microsoft Terminal Server client connections**

The Microsoft Terminal Server client uses the RDP protocol to connect to a Windows Terminal Server.

- **Citrix ICA connections**

The Citrix ICA client uses the ICA protocol to connect to a Windows Terminal running Citrix Presentation Server or Server Citrix MetaFrame.

■ **Microsoft Internet Explorer connection or Firefox Browser**

Terminals can connect to the internet using the Microsoft Internet Explorer browser or a Firefox browser.

Additional client packages are available for your Tisio thin client to support other types of connections, including those for terminal emulators, and load balancing.

Defining Global Connections

To define global connections for Microsoft Terminal Server client, Citrix ICA client and other Tisio clients a group must be created. In the group add a connection:

1. Select a group and click on View/Edit .
2. Click Add. The New Connection dialog displays.
3. Complete the wizard.
4. Once a Tisio devices place into this group it will be assigned the new connection on the next power cycle or reboot.

Connecting Terminals to the Internet Using Microsoft Internet Explorer

To allow an Internet Explorer session:

1. Click on the add button and select IE Browser in the list of extensions and click Add.
2. Change browser preferences as appropriate. See the Tisio Terminal User's Guide for explanations of available options.
3. Click OK to create a new connection.

Removing Defined Connections

This procedure removes all connections of a specific type. It is

recommended that you first remove all defined connections in order to create a clean state.

To remove all connections of a specific type:

1. Select the connection type or connection from the list and click on Delete.
2. Click Ok to confirm the delete.

Managing Device Properties Using Cloning

Device cloning in the Tisio Device Manager offers yet another method for managing a Tisio device. Device cloning is a method where the TDM server is capable of imaging the exact contents of a remote device's DOM and saving the image file to a server. These device images can then be sent to specific Tisio devices so they receive an exact copy of all settings or connections from the original device.

Tisio terminals maintain both configuration settings and connections. You can set most properties through Tisio Device Manager using the conventional method described in the section Managing Device Properties, but in some instances you will be required to use device cloning to manage every configuration.

Device Cloning Principals

Device cloning is a method where the local Flash Memory, or Disk on Module (DOM), containing the operating system component and the RecoveryOS of the Tisio device (see the [Tisio Series Recovery Guide](#) on the web for details) is made into a single file and copied over the network to a server. This single file image can then be imaged to one or many Tisio Devices through the network.

Both the creation and deployment of the cloned images can be performed on the remote Tisio device without end-user intervention. The Tisio Device Manager screen contains functions to initiate creation and deployment of cloned device images. Once a device has been imaged it contains the exact copy of the cloned images configurations.

Device Cloning Requirements

Device cloning requires that the Tisio device contain the device cloning client, the Tisio Device Manager software installed on a PC and an FTP server:

- The Tisio Device must be running RecoveryOS Version 1.6.3 or above.
- The Tisio TDM server must be installed and running on a Windows or Linux PC. The TDM server must be version 1.6.1.5089 or higher.
- An FTP server must be configured and available on the network to accept file transfers from remote Tisio devices.

Device Cloning

Device cloning is initiated from the Tisio Device manager application by selecting the right-click menu item **Deploy Image** or **Create Image** with the mouse pointer over a group or individual device. **Deploy Image** can be used with individual devices or groups of device, but **Create Image** can only be used with a single device. The specifics of the Deploy Image and Create Image screens are described below.

Device cloning is intended to be used only by trained administrators. Please read all warnings below on its use before performing any device cloning tasks.

Warning: When creating or deploying images the managed device must not be powered off. Doing so may make them inoperable.

Warning: When deploying images, only deploy them from one device to another with the same type of hardware (same model type), the same Flash memory size (or bigger) and the same operating system. Failure to do this will result in an inoperable device.

Warning: Cloning partition one (1) or cloning the incorrect partition could leave your device in an inoperable state. It is best always to clone only partition 2.

Warning: Changing the cloning Script may leave a device in an inoperable state. It is recommended that the Script never be changed unless requested by our Customer Support Team.

Create Image User Interface

The **Create Image** screen enables administrators to create a cloned image of any remote Tisio device. The **Create Image** screen includes, at the top of its window, the **Recent Settings** choice, allowing you to select previous configurations that have been saved previously. Also included are a number of tabbed screens:

- **FTP** - Defines the FTP server settings where the cloned image file is sent.
- **Image Info** - Defines the type of image file that will be created. It can be Linux, Windows CE, or Window XPe type image file.
- **Reboot** - Defines how the remote reboot will be initiated on the device.
- **Advanced** - Defines advanced setting specifying what parts of the DOM to image and what tool to use.

- **Script** - Displays the Recovery script used to carry out the cloning. This is for advanced administrators and is generally not altered (See the Warnings above.)

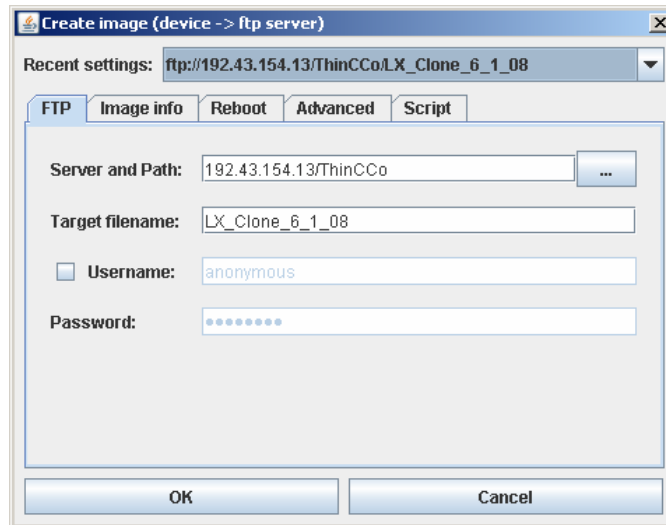



Figure 36 - Create Image control screen

Create Image – FTP Tab

The Create Image - FTP Tab screen controls where and how the cloned image file is sent to the FTP server:

FTP Tab Fields	Description and Usage
Server and Path	Enter the FTP Servers host name or IP address followed by the file directory path. For Example: 10.0.20.44/Tisio_Images or server1/Tisio_Images
The button  right of Server and Path field.	This control button opens a window to view the files on the specified FTP server.
Target Filename	Contains the name of the image file name to create on the FTP server.
Username	If the username field is enabled this is used as the login for the FTP server connection. By default this is disabled and the username anonymous is used.

FTP Tab Fields	Description and Usage
Password	If the username field is enabled, this is sent with the username for the FTP server connection. When username is disabled a random password is used.

Create Image – Image Info Tab

The Create Image Tab - Image Info screen contains the type of image file that will be created. It can be Linux, Windows CE, or Window XPe type of image file:

Image Info Tab	Description and Usage
Model	Displays the Model number of the device the image will be cloned from.
OS	Displays the operating system type that will be placed into the cloned image.
Firmware	Displays the name of the operating system original image.
Notes	Provides a place to enter a more detailed description of the image file.

Create Image – Reboot Tab

The Create Image Tab - Reboot screen defines how the remote reboot will be initiated on the device during cloning:

Reboot Tab	Description and Usage
Ask user before reboot	Select Yes or No
Delay (seconds)	Specifies the delay time until reboot
Message	The message that will display in the reboot request.

Four separate actions relating to rebooting are determined by whether the “Ask user” and the “Delay” field have been set, as follows:

Ask user before reboot	Delay is specified	Resulting Action

Not set	Not set	User will see the specified message on the screen and the device will reboot in 2 seconds.
Set	Not set	User will see a message on the screen and device will reboot in 'Delay' seconds unconditionally
Not set	Set	User will see the specified message on the screen until the device reboot is confirmed or cancelled (Ok/Cancel)
Set	Set	User will see a message on the screen and device will reboot in 'Delay' seconds. The user can accept an immediate reboot by pressing OK or select Cancel to prevent the reboot.

Create Image – Advanced Tab

The Create Image Tab - Advanced screen defines advanced settings for what parts of the Flash ROM to image:

Advanced Tab	Description and Usage
Partition to Clone	You can select a partition on the Flash ROM to image, 1, 2 or Full disk . By default only 2 nd partition is imaged. This contains the device operating system.
Tool to use	Depending on device OS, select from available tools to create cloned image on 2 nd partition. Currently only dd (Linux device dump) is supported for CE and Linux devices and ntfsclone for XP embedded devices ('ntfsclone' procedure creates more compact image file).

Deploy Image User Interface

The Deploy Image screen enables administrators to deploy a cloned image of any remote Tisio device. The **Create Image** screen includes, at the top of its window, the **Recent Settings** choice, allowing you to select previous configurations that have been saved

previously. Also included are a number of tabbed screens. The window Tabs are:

- **FTP** - Defines the FTP server settings where the cloned image file is sent.
- **Image Info** - Defines the type of image file that will be created. It can be Linux, Windows CE, or Window XPe type of image file.
- **Reboot** - Defines how the remote reboot will be initiated on the device.
- **Advanced** - Defines advanced setting of what parts of the DOM to image.
- **Script** - Displays the Recovery script used to carry out the cloning. This is for advanced administrators and is generally not altered. (See the Warnings above, at the beginning of the section)

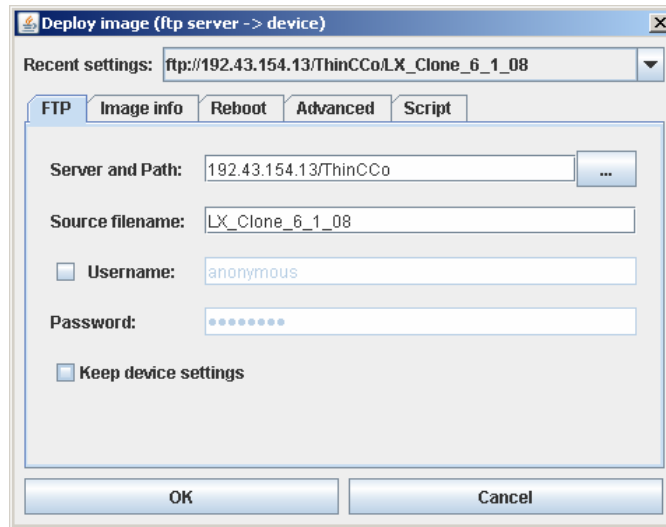



Figure 37 - Deploy Image control screen

Deploy Image – FTP Tab

The Deploy Image - FTP Tab screen contains the FTP server settings where the cloned image file is downloaded from the FTP server. The following describes the fields to control the FTP server:

FTP Tab Fields	Description and Usage
Server and Path	Enter the FTP Servers host name or IP address followed by the file directory path. For Example: 10.0.20.44/Tisio_Images or server1/Tisio_Images
The button  right of Server and Path field.	This control button opens a window to view the files on the specified FTP server.
Target Filename	Contains the name of the image file name to download from the FTP server.
Username	If the username field is enabled this is used as the login for the FTP server connection. By default this is disabled and the username anonymous is used.
Password	If the username field is enabled this is sent with the username for the FTP server connection. When username is disabled a random password is used.
Keep Device Settings	TDM will restore current device settings after the cloning procedure will be finished.

Deploy Image – Image Info Tab

The Deploy Image - Image Info screen contains the type of image file that will be downloaded. It can be Linux, Windows CE, or Window XPe type of image file. The following fields control the image type:

Image Info Tab	Description and Usage
Model	Displays the Model number of the device the image will be cloned from.
OS	Displays the operating system type that will be placed into the cloned image.
Firmware	Displays the name of the operating system original image.
Image Size	This is the size of the cloned image file on the FTP server.

Image Info Tab	Description and Usage
Build	This is the operating system Version number of the cloned image.
Administrator	This is the user name of the administrative user that created the cloned image when logged in on the Device Manager.
Notes	Provides a place to enter a more detailed description of the image file.

Deploy Image – Reboot Tab

The Deploy Image Tab Reboot screen defines how the remote reboot will be initiated on the device. The following describes the fields that control the rebooting of the remote device during cloning:

Reboot Tab	Description and Usage
Ask user before reboot	Select Yes or No
Delay (seconds)	Specifies the delay time until reboot
Message	The message that will display in the reboot request.

Four separate actions relating to rebooting are determined by whether the “Ask user” and the “Delay” field have been set, as follows:

Ask user before reboot	Delay is specified	Resulting Action
Not set	Not set	User will see the specified message on the screen and the device will reboot in 2 seconds.
Set	Not set	User will see a message on the screen and device will reboot in 'Delay' seconds unconditionally
Not set	Set	User will see the specified message on the screen until the device reboot is confirmed or cancelled (Ok/Cancel)

Set	Set	User will see a message on the screen and device will reboot in 'Delay' seconds. The user can accept an immediate reboot by pressing OK or select Cancel to prevent the reboot.
-----	-----	---

Deploy Image – Advanced Tab

The Deploy Image - Advanced screen defines advanced settings for writing partitions to the Flash ROM:

Advanced Tab	Description and Usage
Partition to Restore	You can select the partition on the Flash ROM to image: 1 , 2 or Full disk . By default only second partition is imaged. This contains the device operating system.
Tool to use	Depending on device OS, select from available tools to create cloned image on 2 nd partition. Currently only dd (Linux device dump) is supported for CE and Linux devices and ntfsclone for XP embedded devices ('ntfsclone' procedure creates more compact image file). To update individual files in an archive file without cloning, you can use 'unzip' tools. Under MS Windows, the file can be created by means of the ' 7zip ' archiver (www.7zip.com) or by means of ' tar -czf ' linux command.
Partition Size	The size in Mbytes of the selected Partition
DOM Size	The size in Mbytes of the DOM
RAM Size	The size in Mbytes of the System RAM
FS Type	The current File System Type.

Using Device Cloning

Device cloning is intended to be used only by trained administrators. Please read all warnings below on its use before performing any device cloning tasks.

Device cloning is initiated from the Tisio Device manager screen by selecting the right click menu item **Deploy Image** or **Create Image** over a group or individual device in the Groups or Managed Device windows. The **Deploy Image** can be used with individual devices or groups of device, but **Create Image** can only be used with a single device. To perform these tasks follow the procedures below.

Warning: When creating or deploying images the managed device must not be powered off. Doing so may make them inoperable.

Warning: When deploying images only deploy the same type of image file to the same type of Operating System, hardware model device and to a device with the same Flash memory size. Failure to do this may result in an inoperable device.

Warning: Cloning partition 1 or cloning the incorrect partition could leave your device in an inoperable state. It is best always clone only partition 2.

Warning: Changing the cloning Script may leave a device in an inoperable state. It is recommended that the Script never be changed unless requested by our Customer Support Team.

Create Image

The **Create Image** feature copies the content of a Tisio Device Disk-On-Module (DOM) containing the operating system and writes it to a server, allowing the image to be later written to a different Tisio Device.

To copy the image of a Tisio device:

1. Under Management Tasks click on the **Managed Device** or **Groups** tab.
2. Select a device to clone and right click on it, then select the **Create Image** Menu item.

3. In the Create Image window and under the FTP tab enter the FTP Server and Path value, for example, 192.168.101.13/Tisio. You must enter the valid path for your FTP server. See the section **Establishing FTP server under Windows IIS** to determine your path and to setup your FTP server.
4. In the Target filename field, enter the cloned image file name to create on the FTP server.
5. If you want to use anonymous access, leave username field unchecked, otherwise enter the FTP server username and password.
6. Select the Reboot Tab and enter any Reboot option. Leaving these setting blank will cause the device to simply reboot during the cloning process.
7. Under the Advanced Tab, leave the selection on partition 2. It is recommended that only partition 2 be cloned as it contains the operating system and all device configurations.

Warning: Changing the Script may cause the Device to no longer boot. It is recommended that the Script never be changed unless requested by the Product Support Team.

8. Press the OK button to begin the process to create a cloned image file.
9. On the selected device it will be automatically rebooted and boot into the image cloning system. The following window will be displayed while the image file is created and sent to the FTP

server.

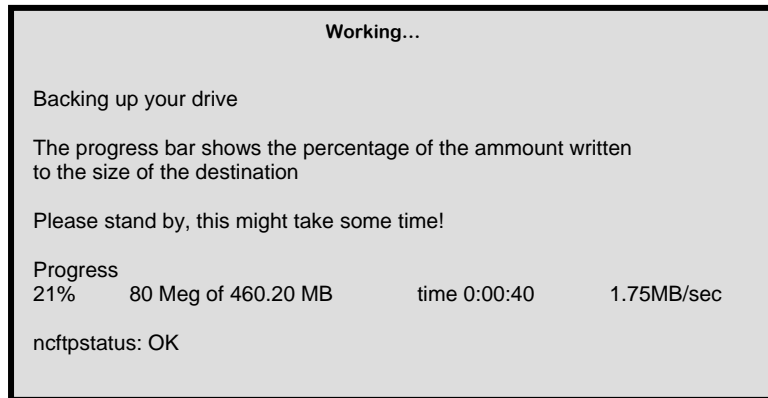


Figure 38 - Image Cloning Process Status

10. When completed the device will automatically reboot and return to normal functionality.

Deploy Image

The **Deploy Image** allows the DOM of a Tisio Device to be copied from an image file created by the **Create Image** process.

To deploy an image file to a Tisio device:

1. Under Management Tasks click on the **Managed Device** or **Groups** tab.
2. Select a device or group to deploy an image to. Next right click to select the **Deploy Image** Menu item.
3. In the Deploy Image window select a previous defined image file from the **Recent Settings** list or, under the FTP tab, enter the FTP Server and Path value, for example 192.168.101.13/Tisio. You must enter the valid path for your FTP server. See Establishing FTP server under Windows IIS to determine your path and to setup your FTP server.
4. Enter the cloned image file name you want to use on the FTP server in the Target filename field. This field is filled in automatically if you selected a recent setting.

5. If you want to use anonymous access leave username field unchecked, otherwise enter the FTP server username and password.
6. Select the Reboot Tab and enter any Reboot option. Leaving these setting blank will cause the device to simply reboot during the cloning process.
7. Select the Advanced Tab, leave the selection on partition 2. It is recommended that only partition 2 be deployed as this contains the operating system and all device configurations are contained in here.

Warning: Cloning partition 1 or cloning the incorrect partition can leave your device in an inoperable state. It is recommended to clone only partition 2.

8. Press the OK button to begin the process to create a cloned image file.

Warning: Changing the Script may cause device to no longer boot. It is recommended that the Script never be changed unless requested by your Product Support Team.

9. The selected device will be automatically reboot and boot into the image cloning system. The following window will be displayed while the image file is created and sent to the FTP server.

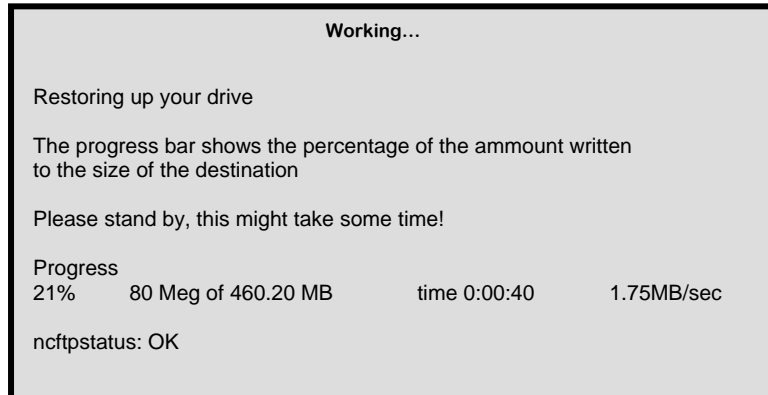


Figure 39 - Image Deploying Process Status window

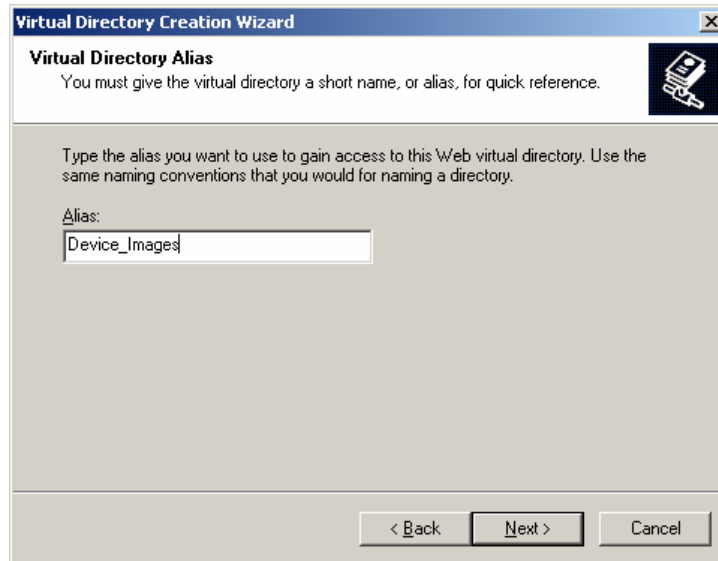
10. When the deployment process is completed the device will automatically reboot and will have the same configuration and image as that in the cloned image file.

Establishing FTP server under Windows IIS

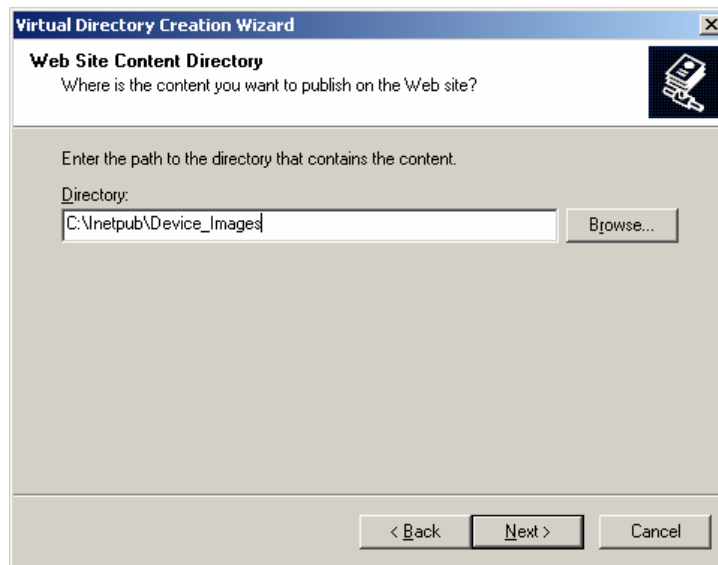
This installation requires that you have already installed Windows IIS support on a Windows PC. Please refer to Microsoft installation instructions on installing IIS. When installing Microsoft Window IIS, you must also include the File Transport Protocol (FTP) Service.

To set up a Virtual FTP server under the Windows IIS server perform the following steps:

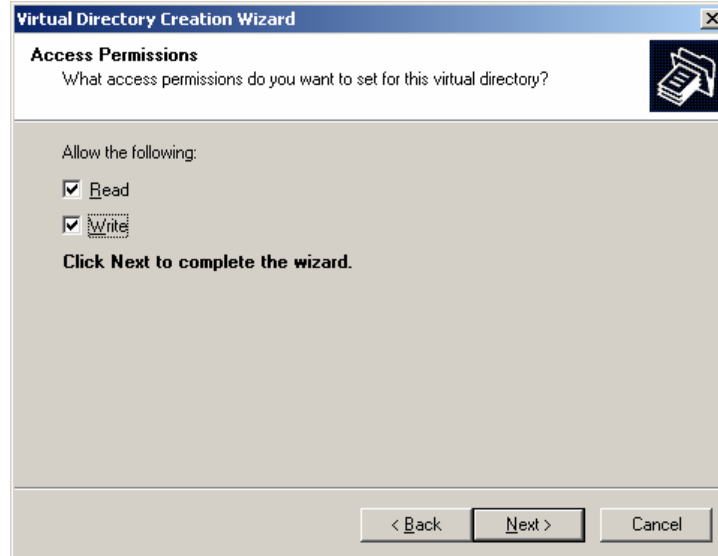
1. This installation requires creating a Virtual FTP directory. In the windows file system create the follow directory if not present:
C:\Inetpub
2. On the PC where IIS is installed, open the Internet Information Services tool. This is normally started from the start menu,
Start> Programs> Administration Tools> Internet Information Services or from **Control Panel > Internet Information Services > Internet Information Services**.
3. In the IIS Administration window expand the Server name and Web Sites to open the **Default FTP Site**. Select the **Default FTP Site**.
4. Right Click and select **New > Virtual Directory**. You will be prompted to begin creating a new virtual FTP directory; click next to start.



5. Enter an Alias name to use for the virtual FTP server and click next. This will become the value you will use for the path to the cloned image files.



6. Click on the Browse button and go to a directory like **C:\Inetpub\Device_Image** and click next.
Note: This directory must exist; If not you must first create it before you can continue. Open File Manager and create the directory you want to use.



7. Select the Access Permission as listed above and click next.



8. Click finish to complete creating the virtual web directory. Close the IIS Administration window.