



Quick Start V2.05

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1. NETWORK CONFIGURATION

INTRODUCTION

The network protocol used is TCP/IP with a 100/10 Ethernet device.

The following is needed to configure your Thin Client on the Network:

- Hostname/Clientname – the Thin Client hostname on the network
- IP address – the Thin Client IP on the network. This can be static or dynamic. When the IP is static it is assigned manually by the network administrator and will always be the same for a specific Thin Client. When the IP is dynamic it is automatically assigned via a DHCP server. You must have a DHCP server running somewhere on your network.
- DNS Settings (optional) – the Domain Name System (DNS) information. The settings that can be specified are Primary & Secondary DNS IP address, as well as a DNS Search Path. Basically DNS server hosts a database with Hostnames and associated IP addresses.

How to setup the basic network configuration:

1. While on the Thin Client Desktop press " Ctrl + Alt + s " to open the Iota Setup Program.
2. Select "Network Configuration" button in the main setup menu. The "Network Configuration" window will open.
3. Set focus to the Client Name textbox. The default Client Name is "iota". Change this to a unique Client Name/Host Name.
4. Set the DHCP checkbox.
 - 4.1. Dynamic IP - If you want to make use of Dynamic IP address allocation via a DHCP server, check the "Enable DHCP" checkbox. The IP Address, Subnet Mask & Gateway IP Address textboxes will become

disabled. If DHCP was used since the last boot, the previous IP address, mask & gateway information will be displayed. If this is the first time that you run DHCP since the last boot, the textboxes will be empty. Please note that there must be a DHCP Server on your network.

- 4.2. Static IP - If you want to make use of a Static IP address, uncheck the "Enable DHCP" checkbox. The IP Address, Subnet Mask & Gateway IP Address textboxes will become editable. Enter the IP, Subnet Mask and Default Gateway. Typical values are: Static IP Address: 192.168.100.10
Subnet Mask: 255.255.255.0
Gateway IP Address: 192.168.100.223
(The Gateway IP Address refers to your default gateway)
5. Set the DNS settings.
 - 5.1. Enter the Primary & Secondary DNS IP addresses, as well as a DNS Search Path. Please note that these three settings are all optional and any combination can be used. More than one DNS Search Path can be entered by separating each Search Path by a comma.
 - 5.2. If a Static IP address is used for the Thin Client, the DHCP DNS option is not available. Dynamic DNS is only available while making use of DHCP, and is the default setting used. Static DNS settings can however be supplied, by un-checking the "Enable DHCP DNS" checkbox. This will allow the DNS settings to be entered manually. The DHCP server will then not be allowed to update the DNS settings.
6. Click on the "Save" button to save the settings or the "Apply" button to apply the settings immediately. Please note that it is better to Apply your network setting after changes have been made.

2. REMOTE HOSTS/SERVERS

Before you can make a connection to a server you must add the server (remote host) as a Remote Host/Server on the Thin Client. This is applicable for all connections to servers. Currently the following connections are supported: RDP (Windows Terminal Server), X Server (X11R6), Telnet, IBM5250 & IBM3270. ICA connection is optionally available.

How to add a remote host/server:

1. Select "Remote Hosts/Servers" button in the main setup menu. The "Remote Hosts/Servers" window will open.
2. Set focus to the "Server IP/Name" textbox. Enter the IP address OR hostname of the remote host/server.
3. Set focus to the "Description" textbox. Enter the description of the remote hosts/server.
4. Click on the "Accept" button. The IP/Name and Description will be added to the list above.
5. Click on the "Save" button to save the addition. The setup program will return to the main menu.

Notes:

- The Server IP/Name is usually something like: 192.168.100.1
- The Server IP/Name can also be the server name. Please see the "Network Configuration" menu for configuration of the DNS settings.
- The Description is compulsory. This is the local identifier of the Remote Host/Server, and is not a network setting. Any Description name can be used. No spaces are allowed in the Description name. Example: Win2003Server
- After you "Accept" the Remote Host/Server you have to hit "Save" to commit the addition of the server. If you only Accept and Cancel the changes will not be saved.

The next step is to add a Connection to a specific Remote Host/Server.

How to add a RDP (Windows Terminal Server) Connection:

1. Select "RDP & X Clients" button in the main setup menu. The "RDP & X Clients" window will open.
2. Check the Remote Hosts and Server list (top right hand side), and identify the server to which the Connection must be made.
3. Select the Remote Host/Server from the list.
4. Select the "Add RDP" button. The Remote Host/Server will be added to the RDP Servers list (top left hand side).
5. Configure the RDP Settings (bottom left hand side).
 - 5.1. The Colour Depth. Default 16 bit.
 - 5.2. Bitmap Updates. Send screen updates as bitmaps, rather than using higher-level drawing operations. Default On.
 - 5.3. Console Size. Default 800x600.
 - 5.4. Key Binding. Certain key combinations have functionality in both the local desktop on the Thin Client, as well as the on the Remote Host/Server (the RDP Server). For example the "Ctrl + Alt + Del" key combination. Default Local Window Manager.
 - 5.5. RDP Version. Dependent on Windows Terminal Server. Default Version 5.
 - 5.6. Full Screen. When On it will override the Local Window Manager settings, and fully cover the current screen. Default Off.
 - 5.7. Username, Domain & Password. This is the RDP user detail. All settings is optional. For instance only the Username can be supplied. This open the RDP logon with the Username entered already.
6. Click on the "Save" button so save the Connection. "Apply" will save and restart the desktop.

How to add an X Connection (Linux / Unix):

1. Select "RDP & X Clients" button in the main setup menu. The "RDP & X Clients" window will open.
2. Check the Remote Hosts and Server list (top right hand side), and identify the server to which the Connection must be made.
3. Select the Remote Host/Server from the list.

4. Select the "Add X Server" button. The Remote Host/Server will be added to the X Servers list (top centre).
5. Configure the X Server Settings (centre of screen).
 - 5.1. X Server Argument. This is the command line argument that is passed to the X Server. Default is "-ac -query". Choose User radio button and enter Argument in text box.
 - 5.2. X Font Server. Choose Local to make use of the local Thin Client font server. A remote font server may be specified in the format tcp/hostname:port. Example: tcp/LinuxServer:7100 or tcp/192.168.100.1:7100. Please note that a Font Server must be configured and running on the remote server to make use of this option.
6. Click on the "Save" button so save the Connection. "Apply" will save and restart the desktop.

Text Terminal Connections:

Three Text Terminal Connections are currently supported:

- Telnet
- IBM 5250
- IBM 3270

How to add a Telnet Connection:

1. Select "Text Terminals" button in the main setup menu. The "Text Terminals" window will open.
2. Check the Remote Hosts list (top right hand side), and identify the server to which the Connection must be made.
3. Select the Remote Host/Server from the list.
4. Select the "Add Telnet" button. The Remote Host/Server will be added to the Telnet Hosts list (top centre).
5. Configure the Telnet Settings (right hand side).
 - 5.1. Emulation – Choose the emulation from the combo box. Supported emulations are ANSI, SCOANSI, VT100, VT220, Xterm & Linux.
 - 5.2. Font – Choose 16 pt, 20 pt or VGA font. Default is VGA.
 - 5.3. Border.
 - 5.4. Fullscreen.

- 5.5. Function Keys. Each emulations function keys may be edited.
- 5.6. Colour Modes. Specific colour attributes may be edited.
6. Click on the "Save" button so save the Connection. "Apply" will save and restart the desktop.

How to add an IBM 5250 Connection:

1. Select "Text Terminals" button in the main setup menu. The "Text Terminals" window will open.
2. Check the Remote Hosts list (top right hand side), and identify the server to which the Connection must be made.
3. Select the Remote Host/Server from the list.
4. Select the "Add 5250" button. The Remote Host/Server will be added to the 5250 Hosts list (top centre).
5. Configure the 5250 Settings (centre).
 - 5.1. Cursor – The cursor colour may be changed.
 - 5.2. Font – Choose 16 pt or 20 pt font. Default is 16 pt.
 - 5.3. Border.
 - 5.4. Fullscreen.
 - 5.5. Ruler – the ruler may be enabled at the bottom of the screen.
6. Click on the "Save" button so save the Connection. "Apply" will save and restart the desktop.

How to add an IBM 3270 Connection:

1. Select "Text Terminals" button in the main setup menu. The "Text Terminals" window will open.
2. Check the Remote Hosts list (top right hand side), and identify the server to which the Connection must be made.
3. Select the Remote Host/Server from the list.
4. Select the "Add 3270" button. The Remote Host/Server will be added to the 3270 Hosts list (top left).
5. Configure the 3270 Settings (left hand side).
 - 5.1. Model – Choose the model of the emulation. This is a combination of the two combo boxes.
 - 5.2. Font – Choose 16 pt or 20 pt font. Both regular and bold fonts are available.

- 5.3. Colour – either full screen colour or original IBM green is available.
- 5.4. Port – the TCP connection port. Default port 23.
- 5.5. Columns & Rows - number of columns and rows may be set to fit screen. Next to the row spin box is a check box that may be used to set the column and row settings to the optimum settings for the selected font.
6. Click on the “Save” button so save the Connection. “Apply” will save and restart the desktop.

Default Connections & Auto Connect

Once a connection has been configured, it may be set as a default and/or auto connection.

(Please see previous section for configuration of Connections)

Interaction between the User and the Thin Client Desktop may be configured by making use of:

- Auto Connection – this connection will be made automatically when the Thin Client is reset (rebooted). There may only be one Auto Connection at one time. This option is useful if the user of the Thin Client should always connect to a specific server. A connection to the specified server will be made without any user intervention.
- Default Server – several different connections made be configured at one time on the Thin Client. A special position is reserved in the Desktop Popup Menu and Desktop Toolbar to store the Default Server. Only one connection may be set as the Default Server at one time. This option is convenient for the most often used connection, where connections are made to more than one remote host/server.
- For each type of connection (RDP, X, Telnet, IBM 5250/3270) a default server of that type may also be specified. A special position is reserved for each default server in the Desktop Popup Menu and Desktop Toolbar.

How to configure the Auto Connect option:

1. Select “Default Connections” button in the main setup menu. The “Default Connections” window will open.
2. Check the Candidate Default Servers list, and identify the server to which the Auto Connection must be set.
3. Select the Remote Host/Server from the list.
4. Select the “Auto Connect” button. The Remote Host/Server will be added next to the Auto Connect button.
5. Click on the “Save” button so save the change. “Apply” will save and restart the desktop and auto connect to the selected server.
6. Auto Connect may be cleared by making use of the Disable Auto Connect button.

How to configure the Default Server option:

1. Select “Default Connections” button in the main setup menu. The “Default Connections” window will open.
2. Check the Candidate Default Servers list, and identify the server that must be set to be the Default Server.
3. Select the Remote Host/Server from the list.
4. Select the “Default Server” button. The Remote Host/Server will be added next to the Default Server button.
5. Click on the “Save” button so save the change. “Apply” will save and restart the desktop. The Default server will now be available in the Desktop Popup Menu and Desktop Toolbar. (Please see Desktop Configuration to set the availability of the Desktop Menus)
6. All Defaults may be cleared by making use of the Clear Defaults button.

How to configure a specific Default Server option (RDP, X, Telnet & IBM 5250/3270):

1. Select “Default Connections” button in the main setup menu. The “Default Connections” window will open.
2. Check the Candidate Default Servers list, and identify the specific server that must be set to be the Default Server for that group of connections.

3. Select the relevant Default button. The Remote Host/Server will be added next to the relevant Default button. Please note that a default can only be set for the group that the connection belongs to. (RDP Connection can be the RDP Default connection, etc.)
4. Click on the "Save" button so save the change. "Apply" will save and restart the desktop. The Default server will now be available in the Desktop Popup Menu and Desktop Toolbar. (Please see Desktop Configuration to set the availability of the Desktop Menus)
5. All Default may be cleared by making use of the Clear Defaults button.

3. PRINTER CONFIGURATION

The IOTA Thin Client printer support:

- Line Printing (LPD)
- Raw Socket Printing (SPD)
- Printer Ports:
 - Parallel
 - Serial
 - USB
- LPD – two print queues available
- SPD – two print deamons available

How to configure LPD printing:

1. Connect the printer to one of the ports (parallel, serial or USB).
2. Select "System Services" button in the main setup menu. The "System Services" window will open.
3. Enable the Line Printer Deamon radio button.
4. Edit the LPD tcp port number. Default is 515.
5. Enter the Print Queue 1 name. The Print Queue name must correspond to the print queue name configured on the remote server.
6. Select the device port to correspond to port connected in point 1 above (parallel, serial or USB).
7. Click on the "Save" button so save the change. "Apply" will save and restart the Thin Client. For the Print Deamon to take effect, the Thin Client must be restarted.
8. Configure printer on remote host/server:
 - 8.1. For Windows Servers the general procedure is as follows (reference is Windows 2003 Server Standard Edition):
 - 8.1.1. Open Printers Window
 - 8.1.2. Add a Printer to open the Printer Wizard
 - 8.1.3. Choose Local Printer attached to this computer
 - 8.1.4. Choose Create a new port and in the combo box choose LPR Port

- 8.1.5. Enter the IP or Hostname of the Thin Client to which the printer is connected
 - 8.1.5.1. When making use of DHCP it is better to use the Hostname, rather than the IP. You would have to make sure that each Thin Client have a unique Hostname, as well as that a DNS server is running to resolve the Hostname.
 - 8.1.5.2. When making use of static IP address for the Thin Client, the IP address would be sufficient.
- 8.1.6. Enter the Print Queue name (same as Print Queue name in point 5 above)
- 8.1.7. Select the Printer Driver
- 8.1.8. Select Windows sharing information and other windows specific info
- 8.1.9. Optionally print a test page
- 8.1.10. Finish the Wizard
- 8.2. For Linux Server the general procedure is as follows (reference is Linux Redhat 9):
 - 8.2.1. From the Start menu (RedHat) choose System Settings
 - 8.2.2. Choose Printing
 - 8.2.3. Select New & go forward
 - 8.2.4. Enter the Name you choose for this Printer
 - 8.2.5. From the combo box choose Networked Unix (LPD)
 - 8.2.6. Enter the Thin Client IP or Hostname in the Server text box (see 8.1.5.1/2 above)
 - 8.2.7. Enter the Queue name in the Queue text box (same as in point 5 above)
 - 8.2.8. Select the Driver
 - 8.2.9. Optionally print a test page (please note not to print the test page to a text only printer – it requires a standard graphic printer)

Notes: To add a second print queue is similar, - check Enable 2nd Print Queue check box.

How to configure Raw Socket Printing (SPD):

1. Connect the printer to one of the ports (parallel, serial or USB).
2. Select "System Services" button in the main setup menu. The "System Services" window will open.
3. Enable the Socket Printing Daemon radio button.
4. Edit the SPD tcp port number. Default is 9100.
5. Select the device port to correspond to port connected in point 1 above (parallel, serial or USB).
6. Click on the "Save" button so save the change. "Apply" will save and restart the Thin Client. For the Print Daemon to take effect, the Thin Client must be restarted.
7. Configure printer on remote host/server:
 - 7.1. For Windows Servers the general procedure is as follows(reference is Windows 2003 Server Standard Edition):
 - 7.1.1. Open Printers Window
 - 7.1.2. Add a Printer to open the Printer Wizard
 - 7.1.3. Choose Local Printer attached to this computer
 - 7.1.4. Choose Create a new port and in the combo box choose Standard TCP/IP Port
 - 7.1.5. Enter the IP address of the Thin Client on which the printer is connected to (the Port Name will be completed automatically)
 - 7.1.6. Choose the Custom settings and click on the Settings button
 - 7.1.7. Make sure that the IP address, Port Name and Port Number is correct (default port number is 9100, 9101)
 - 7.1.8. The Protocol must be Raw
 - 7.1.9. Select the Printer Driver
 - 7.1.10. Select Windows sharing information and other windows specific info
 - 7.1.11. Optionally print a test page
 - 7.1.12. Finish the Wizard
 - 7.2. For Linux Server(reference is Linux Redhat 9):
 - 7.2.1. From the Start menu (RedHat) choose System Settings
 - 7.2.2. Choose Printing
 - 7.2.3. Select New & go forward

- 7.2.4. Enter the Name you choose for this Printer
- 7.2.5. From the combo box choose JetDirect
- 7.2.6. Enter the Thin Client IP or Hostname in the Printer text box (see 8.1.5.1/2 in previous section)
- 7.2.7. Enter the Port number in the Port text box (same as in point 4 above)
- 7.2.8. Select the Driver to be Raw Print Queue
- 7.2.9. Optionally print a test page (please note not to print the test page to a text only printer – it requires a standard graphic printer)

Notes: To add a second SPD daemon is similar, - check Enable 2nd Socket Printing Deamon check box.

4. THIN CLIENT MANAGEMENT

The IOTA Thin Client can be configured in the following ways:

- Desktop Configuration – Settings that changes how the Window Manager behaves and what menu and toolbars are displayed and also Desktop Themes, Colour settings and Numlock can be configured here.
- Console Settings – Settings that changes the monitor hardware settings as well as some X server settings: Screen Resolution, Horiz Sync, Vert Refresh, Colour Depth, Mouse pointer hiding and acceleration, blank time, LCD and Touch Screen.
- Remote Management – The Thin Client can be configured from a remote location by the system administrator. This is a useful and practical way of managing Thin Clients without having to go to each terminal.
- Firmware (In System Programming – ISP) – the firmware on each Thin Client can be upgraded or replaced with different versions of the IOTA firmware. Reload your Thin Client OS in just a few minutes for a central server.
- Factory Defaults – Setting your Thin Client back to the state that it was in when it left the factory. Some options available.
- Password – Set the IOTA Setup program password.

DESKTOP CONFIGURATION

The configurable settings available for the Desktop and Window Manager:

- **Toolbar** (the main toolbar either at the top or bottom of the screen)
Also known as the **Taskbar** in Windows environment. When switched on the taskbar is also in auto hide mode. Thus move the mouse pointer to the bottom (or top) of the screen to display the taskbar. The taskbar houses the main menu (IOTA Start button), the Default Server (red 'i' with blue dot), any default connection, four work spaces and any currently open windows.

- **Menu Display** (Main Menu)

- Application menu
- SysAdmin menu
- Windows list
- PPP Connection menu

The Menu Display refers to the Main Menu available. Two routes can be followed to open the main menu. Either click on the IOTA Start button on the Taskbar (Toolbar must be switched on) or right click anywhere on the desktop. This will give you access to the Application menu, Sysadmin menu, windows list and PPP Connection menu. Each of these menus may be switch on or off. The main menu will also display the Default Server and Default Connections as setup in Default Connections. For Window manager options right click mouse pointer on the Taskbar.

- **Desktop Theme** - Currently three desktop themes are available: Infadel, Nice & Metal
- **Background Icon** – The IOTA background icon can be switch off. Switching it off will leave a blank background on the desktop.
- **Background Colour** - the background colour can be set to match the current theme (see desktop themes above) or switch off completely or finally it can be customized by specifying the RGB values, each from 0 – 255.
- **Numlock at Boot** – the Num Lock button on the keyboard can be switched on or off by default.

How to configure the Desktop & Window Manager:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "Desktop Configuration" button in the main setup menu. The "Desktop & Window Manager Configuration" window will open.
3. Use the radio buttons to configure the options that needs to be changed.
4. Click on the "Save" button so save the change. "Apply" will save and restart the desktop. The desktop needs to be restarted for some of the changes to take effect.

CONSOLE SETTINGS

Console Settings allows configuration of the certain X Server settings:

- Horizontal Sync
- Vertical Refresh rate
- Screen Resolution
- Colour Depth
- Mouse Pointer Visibility – All ways visible or auto hide
- Mouse Pointer Acceleration
- Screen Blank Time
- LCD TFT Display
- Touch Screen

How to configure the Console:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "Console Settings" button in the main setup menu. The "Console Settings" window will open.
3. Use the radio and spin buttons to configure the options that needs to be changed.
4. Use the Default Settings and Optimum Settings buttons to restore these settings respectively.
5. Use Ctrl + Alt + NumPad plus (+) or minus (-) to alternate video modes
6. Click on the "Save" button so save the change. "Apply" will save and restart the desktop. The desktop needs to be restarted for some of the changes to take effect.

REMOTE MANAGEMENT

The IOTA's Remote Management capability makes it easy for the System Administrator to manage the Thin Clients on the network. The Thin Client is access through a Web browser, by pointing your browser to the IP or the Hostname of the Thin Client.

If static IP addresses is used the IP address of a specific Thin Client can be used to access the Thin Client. If DHCP is used to allocate IP addresses then you may still make use of the IP address to access a Thin Client, but it would not be practical as

you would probably not know the allocated IP address. The Hostname can also be used and will rely on a DNS server to find the correct IP address.

Also note that if your web-browser makes use of a proxy, be sure to exclude the Thin Clients IP addresses for the list. In other words, add them to the "Exception" list.

For Windows Internet Explorer take the following steps:

1. Open Internet Explorer on the machine that will be used for Thin Client management
2. Choose Tools → Internet Options → Connections → LAN Settings
3. In the Proxy Server section check the "Bypass proxy for local addresses" check box.
4. If the Thin Client/s is not on your network segment, but still on your LAN click the "Advance..." button and enter the IP's to the Exception list (Do not use proxy server for addresses beginning with:)
5. Save & Apply the changes.

For Mozilla web browser take the following steps:

1. Open Mozilla on the machine that will be used for Thin Client management
2. Choose Edit → Preferences → Advanced → Proxies
3. In the "No Proxy for:" text box enter the IP's of the Thin Client/s
4. Save & Apply the changes.

How to use IOTA Remote Management:

1. Open the web browser on the machine that will be used for Thin Client management
2. Point your browser to the IP address or Hostname of the Thin Client you wish to access
3. The IOTA Login screen will appear
4. Click the Login button and enter the Username and Password. (Default: config / iota)
5. You will now have access to the web version of the IOTA setup program on that specific Thin Client. Please be careful when using the Remote Management facility when the Thin Client is in use. Committing certain changes will

terminate a user session and restart the terminal. This is only for System Administrators.

6. When finished with the terminal, close the browser.

Please note:

- Not all options that are available from the Setup Program on the terminal are available via Remote Management – mostly System Utilities
- When rebooting the Thin Client remotely (after a setting has been changed that requires a restart) your browser has to be refreshed. Keep in mind that it will take a few seconds for the Thin Client to start all the processes (especially the web server). When using DHCP and where you used the IP address, rather than a unique Hostname, your browser will probably point to the wrong IP.
- When using DHCP, the best option is to make use of a unique Hostname, but your browser should also have access to a DNS server that can resolve to the correct IP.

How to disable/enable IOTA Remote Management:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "System Services" button in the main setup menu. The window will open.
3. Disable / Enable the Remote Management by using the radio button. If enabled set the HTTP port number. The default is port 80.
4. Apply the changes. The Thin Client must restart for the changes to take effect.

FIRMWARE (In System Programming – ISP)

The IOTA's Firmware (OS & Application Software) can be reloaded to make provision for upgrades. This process is called In System Programming (ISP). The following is required to do a firmware upgrade:

- An image file that contains the new firmware (Uniterm Manufacturing provides firmware upgrades from time to time)

and on special request). Image file name is usually something like "iota16.V205"

- A TFTP server running on a machine that the Thin Client have access to. The image file should be placed in a directory called /tftpboot/iota/...
- Make a note of the Thin Client settings before you do the ISP process. This will replace the firmware on the Thin Client which includes the all the customer settings (connections, server, etc.).
- You can initialize the ISP process from the Setup program on the terminal or Remotely via a Browser
- Some Network Configuration data can be specified then the update is carried out to make sure that the Thin Client is still on the network after the update. This is especially useful when the update is done remotely.

How to update the Firmware from the terminal:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "System Services" button in the main setup menu. The "System Services" window will open.
3. Check the In System Programming (ISP) check box and click on the Apply button
4. Confirm to update the Resident Flash Array by clicking on Yes.
5. Some default settings will be displayed. Press N and <enter> to changed these settings.
6. You will be prompted for the following information:
 - 6.1. Thin Client Hostname – this must be an unique Hostname. The default is: iota
 - 6.2. Depending if DHCP is currently used, you will be given the option to change that
 - 6.3. Thin Client IP address (if not using DHCP)
 - 6.4. Subnet Mask
 - 6.5. Default Gateway IP address
 - 6.6. Primary DNS
 - 6.7. Remote Image Host – this is the server (host) that is running the TFTP server and contains the new image file

6.8. Image filename – this is the name of the new image file. Please note that it must contain the path "iota/iota16.V205" where "iota16.V205" is the new image file name

7. You will be asked to commit this upgrade. Press Y and <enter> to proceed or N and <enter> to change some of the information.
8. The Thin Client will reboot and attempt to retrieve the new image file from the TFTP server. The image file is then downloaded and the upgrading process will continue for about two minutes, where after the Thin Client will reboot with the new firmware.

Notes:

- If the ISP process fails the Thin Client will reboot with the old firmware.
- Make sure that the TFTP server is running and "visible" from the Thin Client
- The TFTP protocol is a UDP protocol and thus poor network performance maybe responsible for downloading a corrupt image file.

How to update the Firmware via Remote Management:

1. Open the web browser on the machine that will be used for Thin Client management
2. Point your browser to the IP address or Hostname of the Thin Client your wish to access
3. The IOTA Login screen will appear
4. Click the Login button and enter the Username and Password. (Default: config / iota)
5. You will now have access to the web version of the IOTA setup program on that specific Thin Client. Please be careful when using the Remote Management facility when the Thin Client is in use. Committing certain changes will terminate a user session and restart the terminal. This is only for System Administrators.
6. Click on the System Services button. The screen will open.
7. On the bottom of the screen select In System Programming. The red screen will open.
8. Enter the following information into the relevant text boxes:

- 8.1. Thin Client Hostname – this must be an unique Hostname. The default is: iota
- 8.2. Depending if DHCP is currently used, you will be given the option to change that
- 8.3. Thin Client IP address (if not using DHCP)
- 8.4. Subnet Mask
- 8.5. Default Gateway IP address
- 8.6. Primary DNS
- 8.7. Remote Image Host – this is the server (host) that is running the TFTP server and contains the new image file
- 8.8. Image filename – this is the name of the new image file. Please note that it must contain the path “iota/iota16.V205” where “iota16.V205” is the new image file name
9. Click on the Submit button.
10. A message will be displayed that the ISP process is underway.
11. Wait about two minutes and refresh your browser to the correct IP address / Hostname. (Depending on the network performance this process might take a few minutes longer)

Note:

- The Thin Client is being rebooted during this process, thus your browser will now point to a web server that just rebooted. It might look as if the web server have “hang”, while it may still be busy starting up again (after the reboot).
- In this process you might have changed the IP and/or Hostname values and if it is Static or Dynamic (using DHCP). Thus it is very important to make sure you refresh your browser to the correct IP / Hostname.

FACTORY DEFAULTS

Sometime it is required to set the Thin Client back to the state that it was in when it left the factory, in an un-configured state. With the exception of some network settings all server, connection and other settings change will be set back to the factory default state.

How to reset Factory Defaults:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "System Services" button in the main setup menu. The "System Services" window will open.
3. Check the Set Factory Defaults check box on the bottom of the screen and click on the Apply button
4. Confirm to reset the Factory Defaults by clicking on Yes.
5. The Factory Defaults Settings screen will open. This will allow you to configure some essential network settings. This is useful especially when it is done via Remote Management to enable the System Administrator to continue configuration remotely.
6. By Applying without configuring anything will set the Thin Client into a true factory default state.
7. By checking the Current Settings checkbox the current network settings will be restored after the factory defaults was set.
8. The network settings can also be completely changed by using the various radio buttons and text boxes.
9. Click on the Apply button to set the factory defaults and Cancel the cancel the operation.
10. The terminal will reboot into the factory default state.

Note:

- Special care must be taken when this is done via Remote Management – please see Firmware (ISP) section

PASSWORD SETTING

A password can be set to control access into the setup program. This can be useful for System Administrators.

How to set the Setup Program Password:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "Change Password" button in the main setup menu. The "Password Entry" window will open.
3. Click with the mouse pointer on the Disable Password check box to uncheck it.

4. Set focus to the first text box – a border will appear around the text box
5. Type the password – please note that no characters will appear when typing
6. Set focus to the second text box – a border will appear around the text box
7. Type the password – please note that no characters will appear when typing
8. Please note that the two passwords must match
9. Click on the OK button to save the changes
10. The next time when the Setup Program is launched you will be prompted for the password.

MOUSE CONFIGURATION

Provision is made for PS/2, Serial and USB mouse devices. Your number of mouse driver is available depending on the mouse that is used.

How to Configure the Mouse Driver:

1. While on the Thin Client Desktop press Ctrl + Alt + m to open the Mouse Config Program.
2. Using the UP / DOWN / LEFT / RIGHT, TAB, SPACE & ENTER keys select the type of mouse that you have.
3. Note that you cannot use the mouse itself during this process.
4. Select the mouse by moving Up / Down in the list provided.
5. Once you have the mouse that you are looking for TAB to the OK button and Enter
6. The Desktop will restart with the new mouse configured.

Note:

- If the mouse is not working correctly after the restart, repeat the procedure and select another mouse.
- We recommend Microsoft IntelliMouse for standard Wheel mouse.
- Mouse configuration can also be done via Remote Management in the System Services menu.

5. SYSTEM UTILITIES

The System Utilities menu contains some useful utilities:

- Pinging to other machines
- Displaying of Network Device Configuration (ifconfig)
- Displaying of Network Routing Configuration (route)
- Displaying of current running processes (ps aux)
- Enabling/Disabling of System Log Daemon and Kernel Log Daemon
- Viewing and clearing of log file (/var/log/messages)
- Viewing of X server log file (/var/log/XFree86.0.log)

These utilities are added to assist the System Administrator in troubleshooting, especially for network problems.

How to Ping another machine:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "System Utilities" button in the main setup menu. The window will open.
3. Servers/Hosts added to the Thin Client Remote Host/Server list can be pinged directly by selecting the host from the Server Name & IP address list and clicking on the Ping IP address button
4. Other IP address can be pinged by entering the IP in the text box provided and clicking on the Ping button
5. When the ping is successful a window will open showing the pinging process. If the ping failed the window will only briefly open and then close again. The window can be closed at any time by clicking on the close icon in the title bar.

How to display network configuration information & processes information:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "System Utilities" button in the main setup menu. The window will open.

3. Click the route and/or ifconfig buttons to view the routing and network device configuration respectively.
4. To view the current processes running on the Thin Client click on the processes button.

How to Enable/Disable the System and Kernel Log

Daemons:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "System Utilities" button in the main setup menu. The window will open.
3. Use the radio buttons to switch on/off the daemons.
4. Apply the changes to take effect.
5. Please note that if you leave the daemon running it will eventually fill up your available flash array space. This is only intended for troubleshooting and should be switched off when not used.

6. SHARED RESOURCES

It is possible to share USB mass storage devices (memory sticks) to the network on which the IOTA Thin Client is connected. This is done making use of a SAMBA server on the Thin Client. This makes it possible for a user to dock a USB memory stick on the Thin Client and then access it through for example a RDP connection or Linux X connection. Our reference implementation will reflect a RDP connection through Windows Terminal Server to a Windows 2003 Server.

How to access a USB memory stick through a RDP session:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "Shared Resources" button in the main setup menu. The window will open.
3. Use the radio buttons to switch on the Samba server.
4. Enter the Workgroup name in the text box – this is the Windows Workgroup name under which it will be shared in Windows Network Neighbourhood. The default can be used and is iota-share.
5. The NetBios name is the same as the Thin Client Hostname – this should be a unique name. This can be changed in Network Configuration.
6. Enter the Resource Sharename in the text box – this is the name under which the USB memory stick will be shared. The default can be used and is usb-storage-devices.
7. Enter the Allowed Host/s. This is the Hosts that will have access to the Samba server running on the Thin Client. If you are accessing through a RDP session the only required Host is the Windows Server that is running Windows Terminal server. Please note that the Samba server can be accessed from any machine. It does not have to be a Windows Terminal server connection. It can for example be a standalone XP PC or anything else.
8. If you want to give a network segment access you can only the first three IP octets. For example 192.168.100. will give

access to the whole 100 network segment. You may also use Hostnames, as long as they are defined in the Remote Hosts/Servers section.

9. Share Users must be added and will be authenticated when you enter through network neighbourhood. Enter the user name and password in the text boxes and click on the Add User button. The user will be added to the list. Users may also be deleted.
10. Save & Apply changes. The changed must be Applied before it will take effect.
11. After the Thin Client have restarted, you may dock the USB memory stick.

Note:

- Users are specific to each Thin Client – each Thin Client is running its own Samba Server
- Certain User names are not allowed – for example root, bin, etc.
- No NULL passwords are allowed.
- If your Share User name and Password is chosen to be the same as your RDP User name and Password, then automatic authorization will be done when you enter Network Neighbourhood. (You only have to enter your password once when you log on to Windows Terminal Server)
- Two USB memory sticks may be docked at once
- The docking process takes about 5 seconds to complete
- For Samba on Windows Network Neighbourhood is dependent on the Windows Server and may take several minutes in some cases. This happens mainly when the Shared path is added to Network Neighbourhood the first time.
- Printer Share through the Samba Server is not implemented. Please contact Uniterm Manufacturing if this is a requirement.

IMPORTANT USAGE NOTE:

When docking and undocking the USB memory sticks please close any open files that are currently being accessed on the memory stick. Also exit from the Network Neighbourhood path to enable the Samba Server to cleanly unmount/release the memory stick.

7. PPP & MODEM CONNECTION

A PPP connection through a serial modem can be made to an Internet Service Provider (ISP). This is useful for standalone Thin Clients that need to dial-up to a remote server via the Internet.

To make use for the PPP connection on the Thin Client you need the following:

- A serial modem connected to a telephone system
- An ISP account. (Username, password, etc)
- A server to connect to that is available on the Internet (or through your ISP) – you need the server Hostname / IP address

Before you can configure your PPP & Modem you need to setup a Remote Host/Server to connect to. Please see Section on Remote Hosts/Server and Connections before continuing. Once your Remote Host/Server is setup you may configure your PPP connection and your modem. Three PPP connections configurations can be saved at one time.

Please follow the procedures below and complete all steps in each.

How do I Connect and Detect my modem:

1. Connect your modem to the serial port on the Thin Client. Make sure that the telephone and power cables are connected to your modem.
2. Switch your modem on.
3. While on the Thin Client Desktop press Ctrl + Alt + S to open the Iota Setup Program.
4. Select "Network Configuration" button in the main setup menu. The window will open.
5. Click on the PPP & Modem button. The window will open.
6. Click on the Detect Modem/s button.
7. A window will open that will try to detect your connected modem. Certain capabilities of your modem will be tested.

Look at the output of this window carefully, it might give you information needed later to configure the modem correctly.

8. Close the window when your done.

How do I Configure my modem:

1. First complete the Detection step above
2. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
3. Select "Network Configuration" button in the main setup menu. The window will open.
4. Click on the PPP & Modem button. The window will open.
5. Chose the connection you want to save it under (1, 2 or 3).
6. Enter the Connection Name – this name will appear in the Main Menu later.
7. Enter your ISP Name in the text box.
8. Enter your Username and Password in the text boxes. (This will be provided by your ISP).
9. The following items are modem specific. Check your modem manual for details. (The detection section above may provide valuable information):
 - a. Baud Rate- default 57600
 - b. Flow Control – default CRTSCTS
 - c. Modem Volume – the modem speaker volume, default low
 - d. Prefix – the dial prefix. For example 0 to get a line.
 - e. Init1 & Init 2 – init string that may be required by the modem
 - f. Dial Command – ATDT for Tone and ATDP for Pulse
10. Phone number. Provided by your ISP.
11. Use Static IP – to be used if you should log on to your ISP as a specific static IP. Most ISP use DHCP when you dial up. The Remote server to which you connect might require that you have a specific static IP address. Check to check box and enter your static IP in the text box.
12. Default route – this will make your PPP connection the default route. You generally need to check this, else your existing Ethernet LAN connection might still be your default route. Once the PPP connection is disconnected your original default route will be restored.

13. Auto Reconnect – will automatically redial when the telephone line is dropped.
14. Stupid Mode – some modems just needs this, no reason, thus Stupid Mode
15. Auto DNS – determines if you make use of the ISP's DNS or your original setting (as setup in Network Configuration). Generally you need this.
16. Click on the Connect button to test your connection. Once you have tested your connection and it works fine you may click on the Disconnect Button.

How do I initialise a PPP connection:

1. Make sure you are able to dial-up as described above.
2. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
3. Select "Desktop Configuration" button in the main setup menu. The window will open.
4. Use the radio button to switch on the PPP Connection.
5. Save & Apply changes. The Desktop will refresh.
6. Go to the Main Menu by either right clicking anywhere on the Desktop or find it on the Taskbar under Iota Start.
7. Under the PPP menu find the Connection name that you want to use (1 out of 3 possible connections).
8. The modem will open the dial-up window and the connection will take a few seconds to established (depending on ISP).
9. Launce your Remote Host/Server connect (most probably RDP configured earlier)
10. You can terminate the PPP connection by pressing Ctrl + c and then closing the dial-up window.

8. MOZILLA WEB-BROWSER

Mozilla Web browser is available on certain Firmware distributions. (IOTA Thin Clients with 32 MB Resident Flash Array versions).

How do I check if Mozilla is available on my Thin Client:

1. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
2. Select "System Services" button in the main setup menu. The window will open.
3. In the top line of the screen your System version will be displayed
 - 3.1. If it starts with "Iota V4." then you have a 32 MB Resident Flash Array and Mozilla is available.
 - 3.2. On the other hand if it starts with "Iota V2." Then you have a 16 MB Resident Flash Array and Mozilla is not available.

How do I launch Mozilla:

1. To check if Mozilla is available see above.
2. While on the Thin Client Desktop press Ctrl + Alt + s to open the Iota Setup Program.
3. Select "Default Connections" button in the main setup menu. The window will open.
4. Check the Mozilla check box next to the Display on Toolbar heading.
5. Save & Apply changes.
6. Mozilla will now be available in on the Taskbar and Main Menu and can be launched from there in the future.
7. When launched it will bring up a splash screen and a few seconds later the browser will open.

9. FAQ

Nothing yet

10. GET HELP

For any further help please contact:

- Your IOTA Thin Client distributor
- Uniterm Manufacturing directly on telephone 031 701 0908 / +27 31 701 0908
- Uniterm Manufacturing Web-site: www.uniterm.co.za
- Email: info@uniterm.co.za