

TTerm Connect Quick Start Guide

What is TTerm Connect?

TTerm Connect is TurboSoft's web-based terminal emulator. Built on common web technologies such as HTML5, CSS and Javascript, TTerm Connect requires no desktop software installation or management and is able to provide terminal emulation services regardless of platform.

TTerm Connect consists of a server component which provides the actual emulation and host connectivity and a lightweight browser-based client which provides the end user interface. Administration and management is also provided through a browser-based interface.

The server component is available for both Windows® and Linux® based servers, specifically Red Hat Enterprise Linux and CentOS. Web server software explicitly supported includes Apache (Windows and Linux) and IIS (Windows).

The TTerm Connect client is simply any modern HTML5 capable browser with Javascript enabled. The following browsers are explicitly supported.

- ▶ Microsoft Edge®
- ▶ Mozilla Firefox®
- ▶ Apple Safari®
- ▶ Google Chrome®

About this Document

This document applies to TTerm Connect version **2.1.2** and above.

All browser screenshots in this document are taken using Google's *Chrome* web browser.

Intended Audience

This document is designed to provide the user(s) who will be administering TTerm Connect with enough information to begin working with the software. It covers the basics of administering and configuring TTerm Connect for host connectivity.

It assumes an understanding of the concepts of terminal emulation and appropriate access to related network services that TTerm Connect may make use of, such as email and LDAP/Active Directory along with any host systems that end users intend to connect to.

This document also assumes that TTerm Connect has already been successfully installed on an accessible server. If this is not the case, please refer to the **TTerm Connect Installation Guide** and complete the processes described therein before proceeding.

Technical Support and Assistance

For further assistance please visit www.ttwin.com/support or contact TurboSoft Support directly. Full contact details are listed on the last page of this document.

Up and Running...

After successfully installing you are ready to begin working with the administration side of TTerm Connect and, ultimately, getting your users connected to host systems.

Below is a list of tasks - some essential, some optional - that will help you achieve this. Wherever these tasks appear in the Quick Start Guide you'll see a small flag icon , colored purple for vital configuration tasks and gray  for optional equivalents.

On completing these tasks your users will be able to login to TTerm Connect's Desktop Client and connect to a host system using the configurations you have created for them.



CHANGE THE DEFAULT PASSWORD (page 4)

Login to the Administration Portal and change the default Administrator account password.



LICENSE TTERM CONNECT (page 7)

Add a license file to enable full functionality.



OPTIONAL: CONFIGURE SERVER POOL (page 12)

Bring additional TTerm Connect servers and databases online for load balancing or redundancy.



OPTIONAL: CONFIGURE GUEST USER ACCESS (page 15)

Configure guest user access. By default, this is disabled.



OPTIONAL: ADD EXTERNAL USERS AND GROUPS (page 17)

Configure and sync LDAP/Active Directory.



OPTIONAL: CONFIGURE DESKTOP CLIENT DEFAULTS (page 20)

Set the default displays settings and behaviors for the desktop client.



ADD INTERNAL USERS AND GROUPS (page 24)

Create internal user and group accounts.



OPTIONAL: CONFIGURE EMAIL (page 19)

Configure outgoing email for administrator notification and support services.



CONFIGURE A PROFILE (page 25)

Create a profile. Profiles are the configuration options used to spawn a host session.

TTerm Connect Overview

There are two web-based elements to TTerm Connect, an *Administration Portal*, where configuration, monitoring and management of host connectivity and end user activity take place as well as a *Desktop Client*, where end users can login and connect to host systems.

The Desktop Client is supplied with the intention of replacing a traditional desktop terminal emulator application, however it is an optional component and, if required, may be replaced by embedding TTerm Connect in an existing web page (intranet or public facing).

This approach requires some knowledge of web development and is covered in detail in a separate document, the **TTerm Connect Embedded Guide**. This document and several example webpages can be accessed by browsing to <https://www.myhost.com/examples/index.html> where *myhost.com* is your domain.

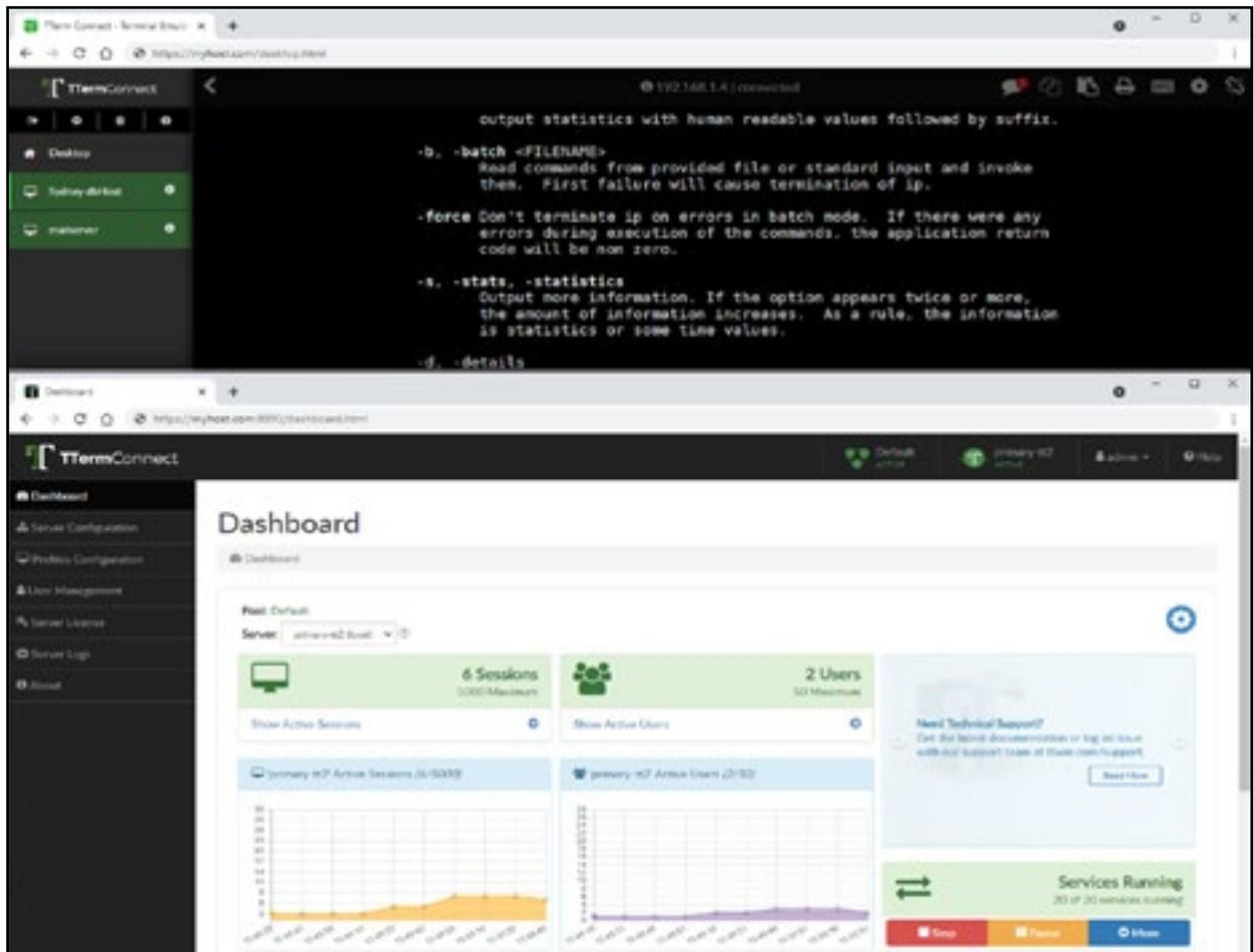


Figure 1. The Desktop Client (top) and the Administration Portal (bottom).

Both the Administration Portal and Desktop Client are initially installed on the same server. While this isn't a requirement, if you choose to migrate to separate servers for each component they must be on the same domain.

By default, the Desktop Client will be available on port 80 of the configured server, accessible via <https://www.myhost.com>.

However, before users can connect to a host system TTerm Connect must be configured.

Change the Default Password

Open the Administration Portal in a web browser by using the address assigned to TTerm Connect during installation.

By default the Administration Portal is available at port 8090 of the server, <https://www.myhost.com:8090>.

Log in using the default administrator account credentials, username: admin, password: admin. At this point it is strongly suggested that the administrator account default password be changed to ensure the system is secure.

The current account password may be altered through the **User Preferences** page. Once logged in, access the **User Preferences** page by selecting the drop-down menu at top right of screen labelled with the account name (*admin* for the default account) and selecting the **My Preferences** menu option as shown in **Figure 2**. When using a mobile device or a small screen device, the **My Preferences** menu option is available from the main menu button.

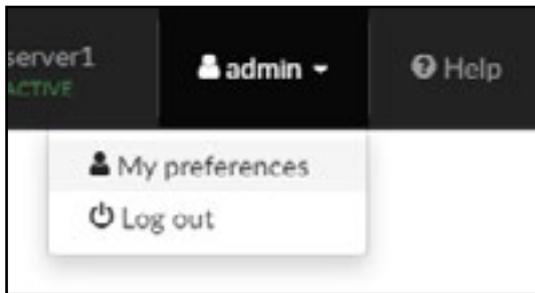


Figure 2. Access your User Preferences from the user drop down menu.

On the **User Preferences** page, enter a new password and confirm the change. Once the password change is complete, return to the **Dashboard**.



See page 40 for more information on User Preferences.

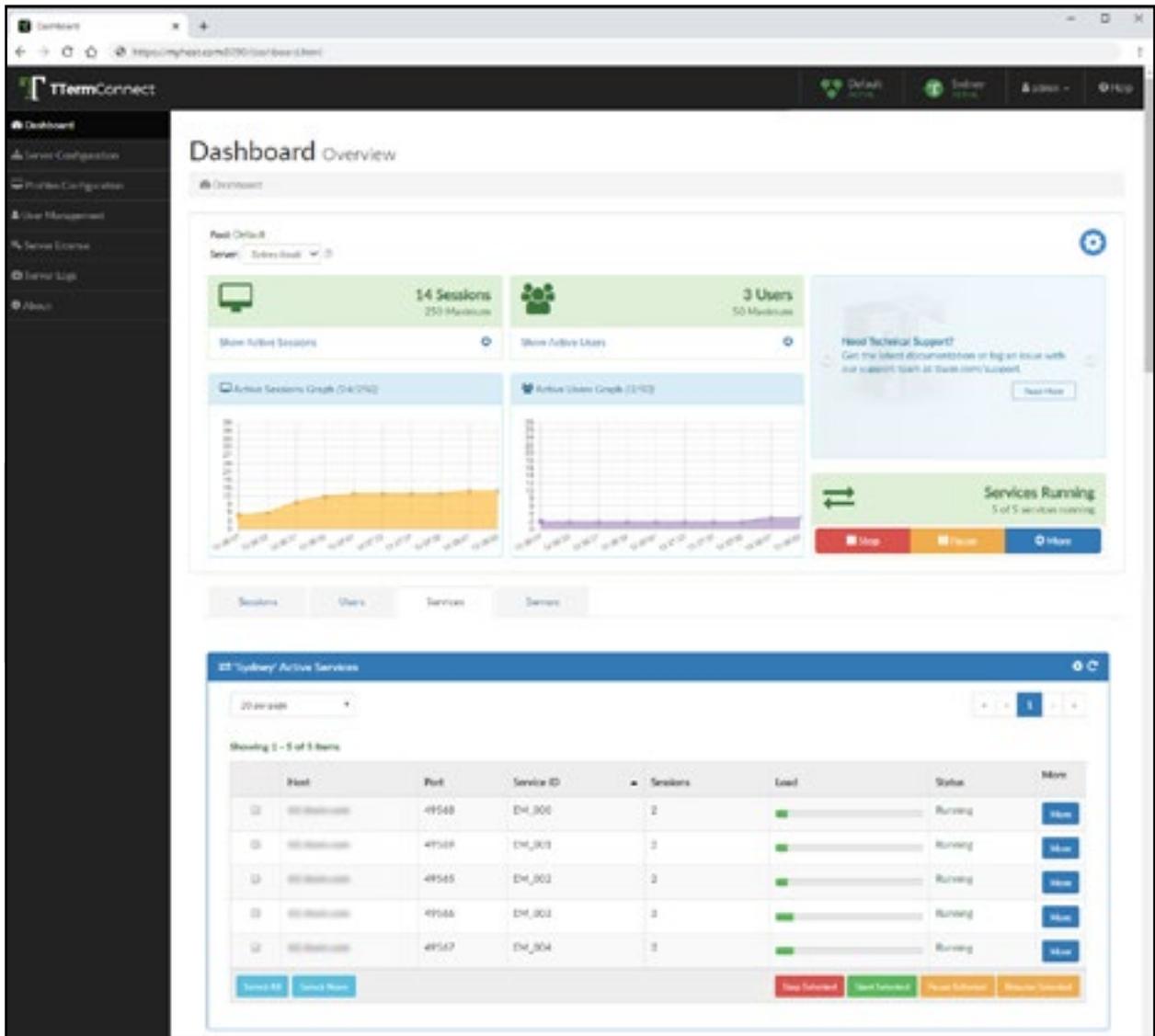


Figure 3. The TTerm Connect Administrator Dashboard.

The Dashboard

The Dashboard caters to the day-to-day operation of TTerm Connect, providing live information on user activity, server loads and license utilization as well as server and pool wide controls.



Important Terms: A **server** is an individual TTerm Connect installation which contains all the components required to provide host connectivity. A server **pool** is a grouping of one or more TTerm Connect **servers** for the purposes of load balancing, redundancy or increased capacity.

The Dashboard provides visibility on activity across the pool and can filter data for an individual server or offer a combined, pool-wide summary or activity.

There are two parts to the Dashboard - **Widgets** and **Activity Tables**.

Widgets

The upper part of the dashboard consists of several configurable widgets which provide controls and live feedback for TTerm Connect's operations. Additional widgets can be added from the **Widget Library** to provide extra controls and data visualization.



For more detail on available widgets and their functions refer to page 33.

Activity Tables

Underneath the widgets, the activity tables provide detailed views of active sessions, services, users and server status. Often information presented in these tables may be clicked or tapped to provide more detail or navigate to other, related parts of the Administration Portal.

The **Active Sessions** table provides a list of sessions instigated by end users including guest users.

The **Active Users** table provides a list of users and guests currently active on the system.

The **Active Services** table lists the emulation services running on TTerm Connect, their network location, load and status.



An **Emulation Service** is an independent TTerm Connect process which provides host connectivity to end users. Multiple services will exist on each TTerm Connect server to ensure server resources are used efficiently. For a more detailed explanation refer to the side box on page 16.

The **Servers** table lists one or more TTerm Connect servers that are members of a pool providing host connectivity to end users. The table provides details on each server power state, its mode of operation, host name and location.

When initially installed TTerm Connect will be running as a stand-alone server, meaning only one server will be listed on the table. For information on creating a pool and bringing additional TTerm Connect servers online see page 12.

The Dashboard is covered in greater detail on page 32.

Licensing TTerm Connect

When initially installed, TTerm Connect includes a 30-day evaluation license. During this period the software is fully functional.

When a license expires TTerm Connect will offer limited functionality. In this mode of operation it may be configured but no host connections may be established. At the top of the Dashboard a notification will display when TTerm Connect is unlicensed or a license state requires attention.

Should an end user happen to log into the Desktop Client of an unlicensed TTerm Connect installation they will see an empty desktop with no options to connect to a host system.

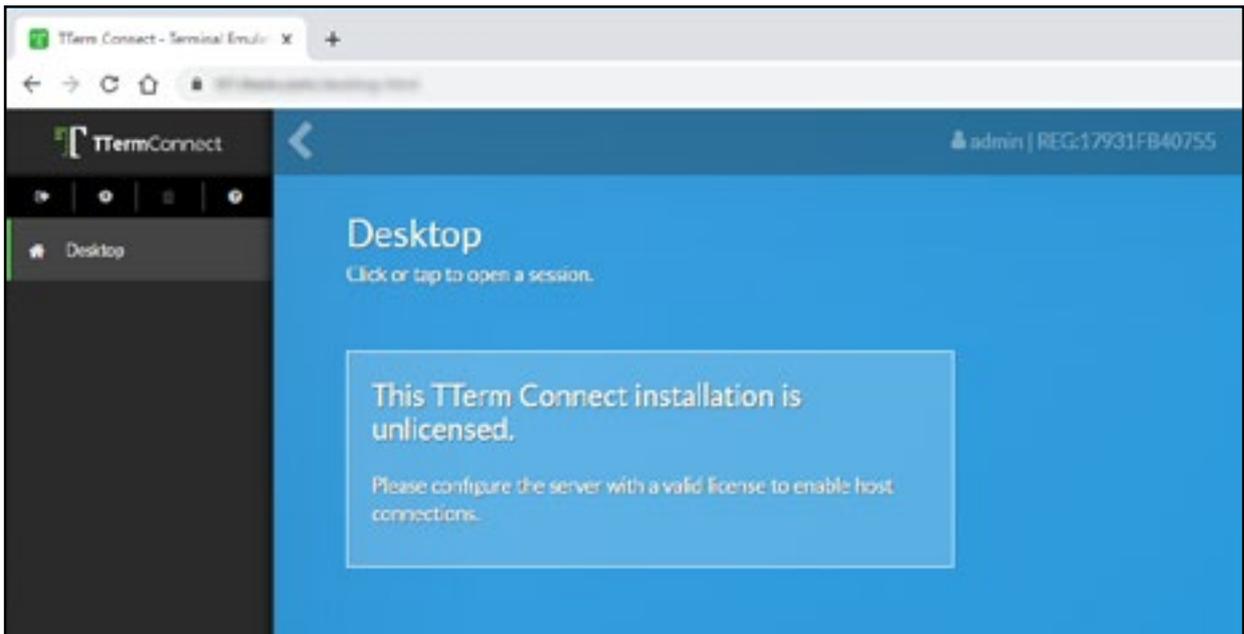


Figure 4. The Desktop Client on an unlicensed TTerm Connect server.

TTerm Connect can be easily converted into a fully licensed, unrestricted version simply by importing the appropriate license certificate through the Administration Portal. The **Server License** page allows an Administrator to view, replace or add a license to a TTerm Connect installation.

Licensing TTerm Connect is a two-step process - uploading a license certificate and then activating that certificate.

A license certificate is provided by Turbosoft or a Turbosoft distributor in the form of a .key file. If you do not have a license file but have purchased TTerm Connect please contact your Turbosoft representative

To import the license, navigate to the **Server License** page and click or tap the **Browse** button on the **Upload License File** panel as shown in **Figure 5**.

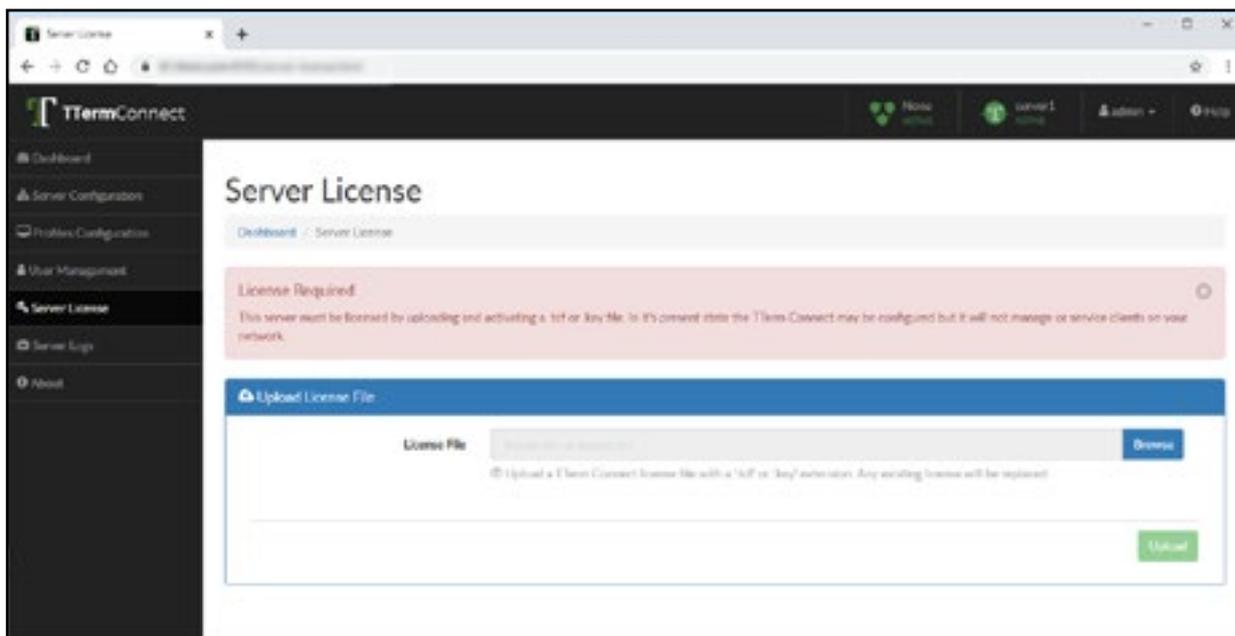


Figure 5. The Server License page.

Navigate to the location of the .key file on your local device. Select this file and click or tap **Upload** to import it into TTerm Connect.

Once successfully imported TTerm Connect will attempt to activate the license automatically.

License Activation

License activation is a one-time process which stamps a license certificate with a unique identifier and completes the licensing process. There are two activation methods, *in-program activation* (online) or *manual activation* (offline).

In Program Activation

Activating a license through the Administration Portal is the default method of activation and is an automated, transparent process.

When a license file is uploaded TTerm Connect will attempt to automatically submit the file to the Turbosoft license servers where it will be stamped and returned to the installation. Once the license is activated TTerm Connect will be fully licensed and functional.

In situations where a TTerm Connect installation has limited or no access to external networks In Program Activation will not be possible as TTerm Connect will not be able to directly communicate with the Turbosoft license servers. In such a scenario TTerm Connect will report the license activation as incomplete and offer manual activation.

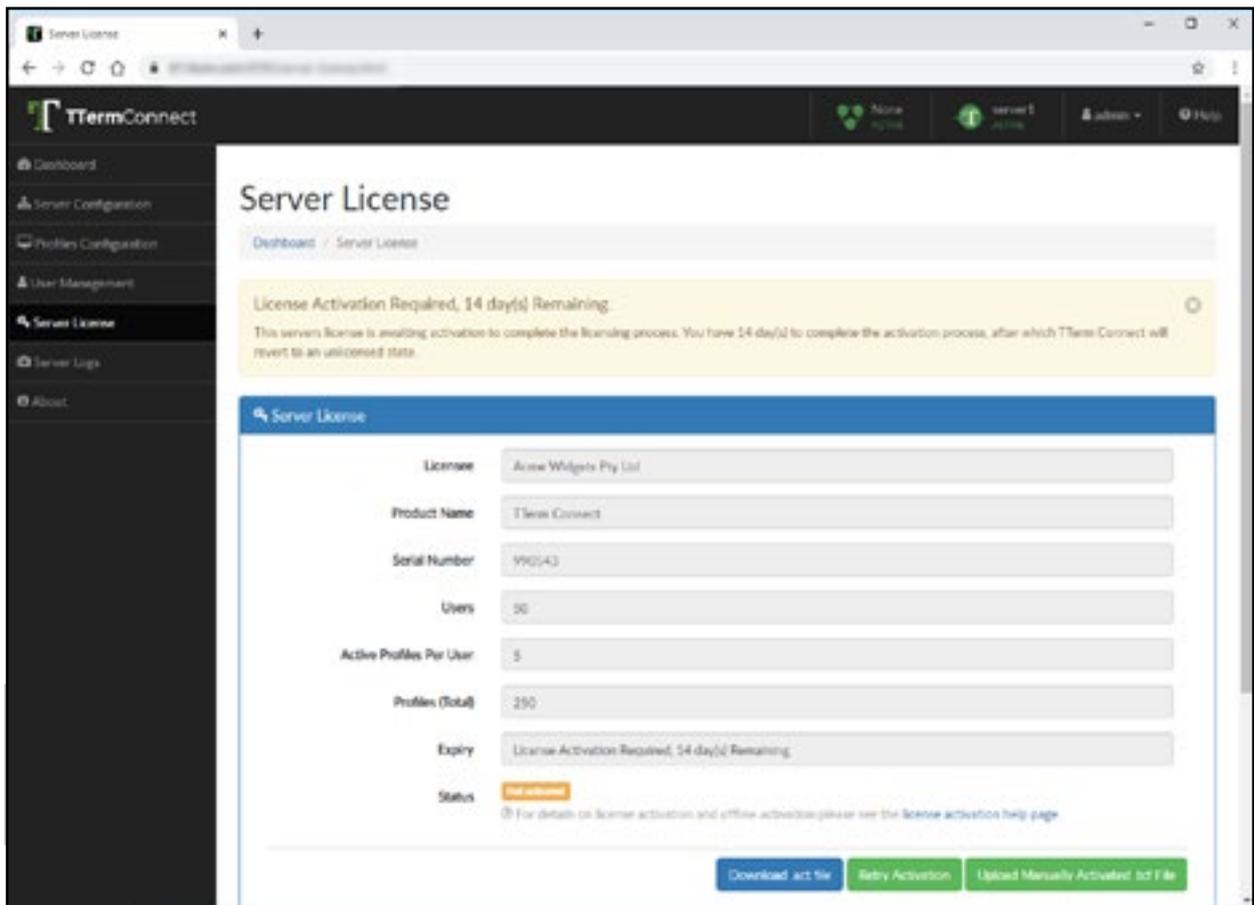


Figure 6. To manually activate TTerm Connect, download an .act file.

Manual Activation

Where an In Program Activation attempt has failed TTerm Connect will provide an intermediate license file (.act) for download through the **Server License** page.

Manually activating a license requires downloading this file and then uploading it to a Turbosoft web page from a device that does have internet access. The file will then be processed and returned for upload back into TTerm Connect.

When a valid license has been uploaded into TTerm Connect but has not yet been activated TTerm Connect will function in a fully licensed state for a grace period of seven (7) days. During this time, the activation must be completed or TTerm Connect will revert to an unlicensed state. Notifications about days remaining during the grace period will be displayed throughout the Administration Portal.

To manually activate TTerm Connect, follow these steps:

- 1 Click or tap the **Download .act File** button on the **Server License** page.
- 2 Save the resulting .act file.
- 3 Copy this file to a computer or device that has internet access.
- 4 On that device, open a browser to <https://mercury.ttwin.com/ttermconnect>

- 5 Fill out the activation form selecting the `.act` from the local device. Once completed the form will return a direct link to download the activated license file, optionally, enter an email address where the newly activated certificate will also be sent.
- 6 Select the **Retrieve Certificate File** button to submit the activation form.

A link will then be presented which will download a new `.tcf` certificate file and, if email details were entered in step 5, the file will also be sent to the nominated email address.

Return to device with access to TTerm Connect and open the **Server License** page.

- 7 Navigate to the **Server License** page.
- 8 In the **Upload License File** panel, click or tap **Browse** and select the `.tcf` file.
- 9 Click or tap **Upload**.

The license file details will now populate the server license panel. The license status will show *activated* or *valid*. The TTerm Connect server is now licensed and fully functional.



Note that licenses takes into account the server domain name. Should this domain name change at any time, the license certificate will require re-activation.

Server Configuration Options

Now that TTerm Connect is licensed and fully function, navigate to the **Server Configuration** page to configure system options.

Several settings defined here will have been set during the installation process, however these and the system defaults may be altered through the **Server Configuration** page.

The Sever Configuration page is arranged as a series of tabs, these are:

- ▶ **Server** - Settings for configuring TTerm Connect for single server/multiple server operation.
- ▶ **Database** - Database options for the current server, or across the server pool (if configured).
- ▶ **Server Components** - Configuration items for the server(s).
- ▶ **SSL** - Optional, but strongly recommended. SSL certificate options for the Administration Portal. TTerm Connect is a web-based application and it is suggested all communications be secured via SSL (*https*).
- ▶ **LDAP/Active Directory** - Optional. Configuration and sync options.
- ▶ **Email** - Optional. SMTP Server Configuration for outgoing email and notification services.
- ▶ **Desktop Client** - Default settings for the Desktop Client, refer to page 20 for more detail.
- ▶ **Diagnostics** - Unless directed by a Turbosoft support representative these settings can be left as default.

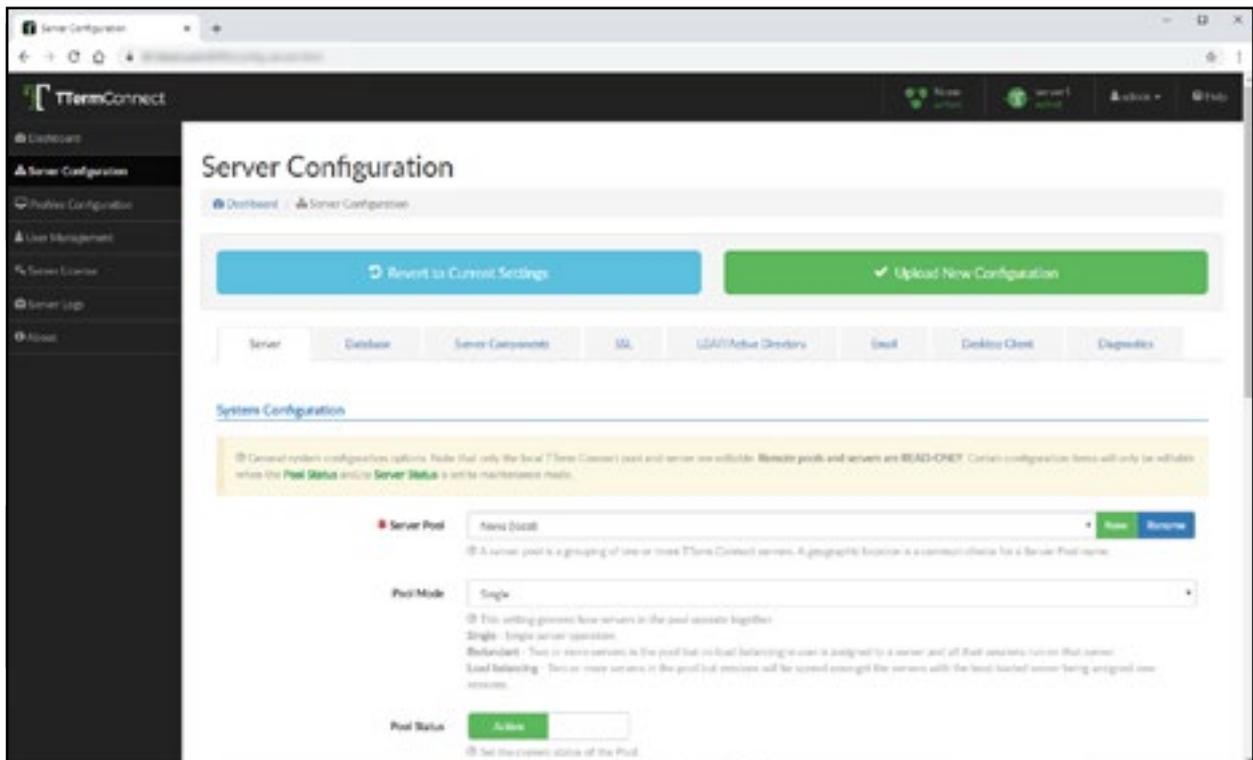


Figure 7. The Server Configuration page.

Server

TTerm Connect has the capability to serve very large sites and provide a degree of redundancy and/or load balancing. The Server tab contains options relating to configuring TTerm Connect for operation across a pool containing multiple TTerm Connect server installations.

A TTerm Connect pool can operate in one of three distinct mode; single server mode, load balancing mode and a redundant pool mode.

Single Server vs. Multiple Server Pools

	Single Server	Load Balancing/Redundant Modes
Number of Servers	One (1).	Multiple (2+).
Database	PostgreSQL, can be located on the same hardware as other server components.	One or more PostgreSQL databases. Multiple locations.
Redundancy	None.	Server and database redundancy.
Load Balancing	Internal. Multiple <i>services</i> on each server share loads and sessions.	In addition to internal service-based load balancing, sessions are allocated between servers (load balancing mode only).
Users	Maximum user numbers are dependent on hardware capability.	Increased capacity and performance (for load balancing mode) over a single server configuration.

Adding New Servers

If you wish to utilize one of TTerm Connects multiple server modes for load-balancing or redundancy you will need to bring secondary servers into the pool. For further information on this process refer to the **Installation of Additional Servers** section of the *TTerm Connect Installation Guide*.



For operational reasons certain settings cannot be modified while a pool is active. These settings will be marked as read only. To edit them the pool to which the settings belong must be put into Maintenance mode, which can be accessed from the Server tab. Maintenance mode is a setting where no host sessions are served and changes may be made to various configuration options.

Database

This tab contains database configurations for the current TTerm Connect server or pool.

TTerm Connect utilizes PostgreSQL databases. Initially TTerm Connect will make use of a single database, however for large installations with multiple servers and for scenarios where redundancy is required additional databases may be added.



Database settings cannot be modified while a pool or server is active and will be marked as read only on the Database tab. To edit them the pool to which the settings belong must be put into **Maintenance mode**. This setting is found on the **Server** tab.

PostgreSQL Database Configuration

Hosts

The host address of one or more PostgreSQL databases, supplied as IP addresses **ONLY**.

Multiple redundant servers are arranged as master and secondaries. Note that the port and login credentials of each server must be identical.

Click or tap the **Add** or **Delete** buttons to modify the available servers. Database credentials can be tested to confirm validity by clicking or tapping the **Check Database Settings** button at page bottom.

Note that when adding a new server through the **Add a New Server** wizard the option to create an additional database will be available. For more information refer to the *TTerm Connect Installation Guide*.

Server Components

Configuration options for TTerm Connect's server and service components.



Please note that this section does not describe every available server configuration option, merely the subset of essential items that may be required to perform initial configuration. For further information please refer to in-program help.

Administration Server

The Administration Server (i.e., the Administration Portal) is accessed through a web browser. Options are provided to change the server address and port here.

Changes to the URL and port settings for the Administration Portal require either a Windows Service or Linux daemon restart to take effect.

Relay Service

The Relay Service is an optional service which provides a single exposed port and IP address for all Emulation Services and Connection Manager functions. The advantage of the relay is a reduction in the number of ports required and the ability to hide connection manager and multiple emulation service ports from the client.

Connection Manager

The connection manager assigns connections between an end user client and one of the multiple Emulation Services available to TTerm Connect. The Connection Manager handles load balancing, license and user access permissions.

Credential Forwarding

Credential Forwarding is a setting which enables the sending of TTerm Connect username, password and domain credentials to be forwarded to a remote host system to facilitate login. To enable this feature, it must be set to 'on' here and then an equivalent setting must also be set for each individual profile where it is to be used for host login.



For more about creating and configuring a profile, including using credential forwarding to login to a remote host see page 27.

Guest/Anonymous User Access

Guest Access settings are defined in the Connection Manager section. In a new installation guest access is disabled by default.

Set the **Allow Guest Access** option to **on** to allow any user to access TTerm Connect's Desktop Client and specify a **Guest User Group** which guests will be assigned to.

Guest username settings can be further refined by setting a **Minimum Username Length** and/or by setting **Require Email** to force guest usernames to take the form of an email address.

Any profiles available to the **Guest User Group** will be available to guest users when they login to the TTerm Connect Desktop Client. For more information on assigning profiles to users or user groups see page 29.



A new TTerm Connect installation will contain the built-in user groups **default** and **guest**. To create additional user groups refer to the User Management section on page 22.

Emulation Service Server

An Emulation Service facilitates a connection between TTerm Connect and a host. Multiple individual services are run to ensure the server load is spread and resources are used efficiently. See the sidebar for a detailed service definition and information on how many services are appropriate for your requirements.

The **Number of Instances** configuration item defines the number of Emulation Services TTerm Connect will run simultaneously.

Start/Stop Options

The **Auto Start** setting initializes the Emulation Services when the Connection Manager is started. If this setting is disabled in the event of a server restart manual action is required to start emulation services from the Dashboard before end users can connect to host systems.

SSL Configuration

TTerm Connect is designed to be run over SSL to ensure secure communications between components and clients. However, it is also possible to run TTerm Connect without the need for an SSL certificate by disabling the **Use SSL** option in this section. In a live environment Turbosoft strongly recommends that the **Use SSL** option is enabled.

Enabling or disabling SSL requires a server restart to take effect.

The certificate item drop down allows the selection of existing SSL certificates available to TTerm Connect.

To upload a new certificate or to edit the particulars of an existing certificate, click or tap the key icon attached to the item to launch the **Certificate Manager**.

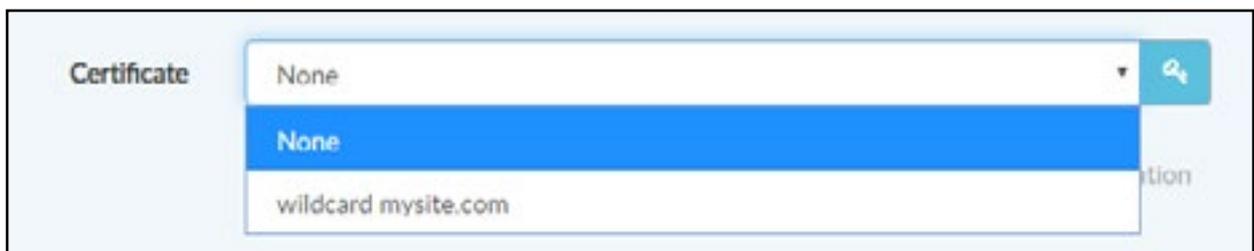


Figure 8. Existing certificates appear in the drop-down list. The key icon at right launches the Certificate Manager.

TTerm Connects certificate manager supports .P7B, .PEFX, .PEMKey, PublicKey (PEM or DER-style public key certificate) SSHPublicKey (SSH-style Public Key) .PPK (PuTTY Private Key) and .XML certificates.

What is an Emulation Service?

An Emulation Service, henceforth referred to simply as a *service*, is an independent TTerm Connect process which provides host connectivity to your end users. Services are handled separately and in multiple instances in order to balance server loads and provide separate functionality from administration and configuration handling.

The number of services that a TTerm Connect server maintains is determined by your license conditions and the configuration options you have specified in the server configuration.

How Many Services Should I Run?

There are a number of factors which would influence this choice, most critically, the number of user sessions that are likely to be running concurrently and the hardware resources available to TTerm Connect.

As a rough guide, Turbosoft recommends running a minimum of 4 services. If you are likely to run greater than 100 simultaneous sessions simply divide the maximum number of likely sessions by 25 to arrive at the optimal number of required services (for example, 150 sessions = 6 services). A service is capable of running a *maximum* of 100 sessions.

LDAP/Active Directory Configuration

TTerm Connect supports LDAP/Active Directory for user management and access control and is compatible with several LDAP/Active Directory vendor implementations - Microsoft's Active Directory, OpenLDAP and Lotus Notes.

User and group management is covered in this document on the following pages, however, to enable the syncing of LDAP users and groups this option must first be configured under the server settings.

To enable LDAP/Active Directory support, select the **LDAP/Active Directory** tab from the Server Configuration page.

The **LDAP/Active Directory Settings** table lists existing LDAP configurations available to TTerm Connect. Initially this table will be empty, click the **Add** button to add a new server.

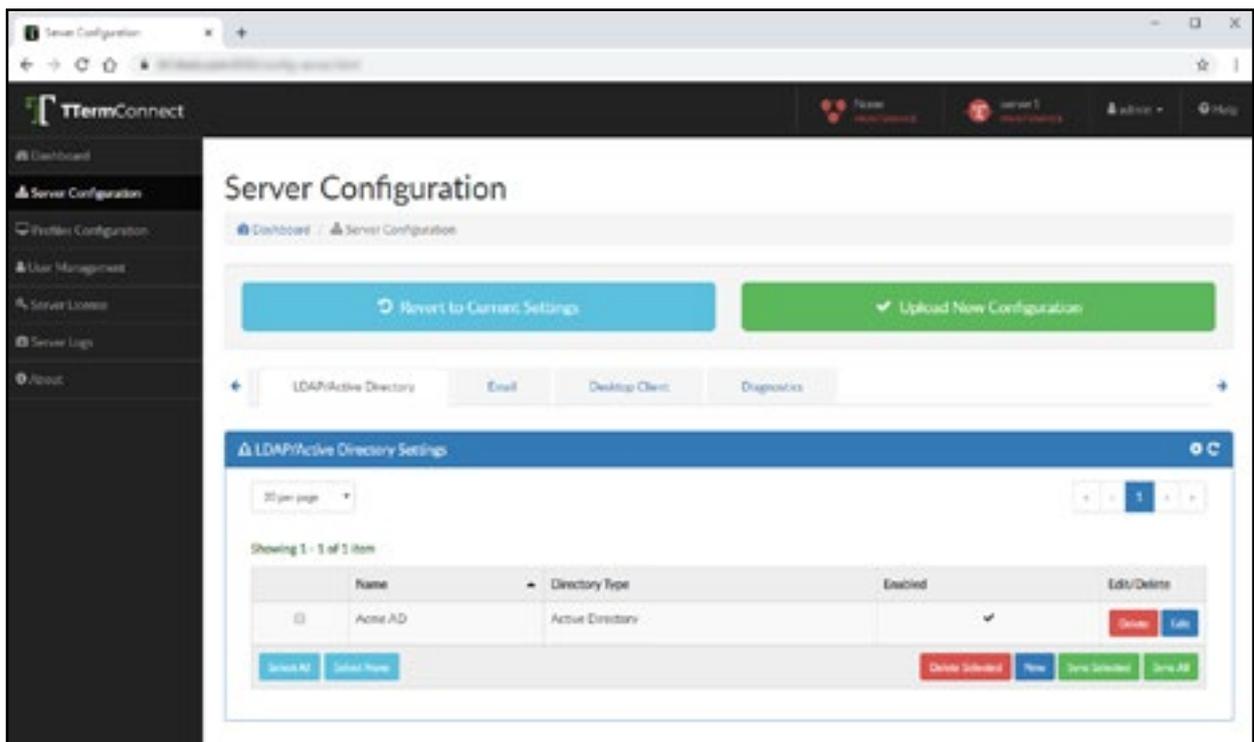


Figure 9. LDAP configuration table.

Fill the LDAP configuration form with the relevant server details. At several points in the form there are test buttons which will show return data from the LDAP server to assist in fine tuning the filters used for group and user import.

Note that each LDAP configuration has an **Enabled** option. This item must be set to 'on' to enable the LDAP domain as a selectable option on the Desktop Client login page.

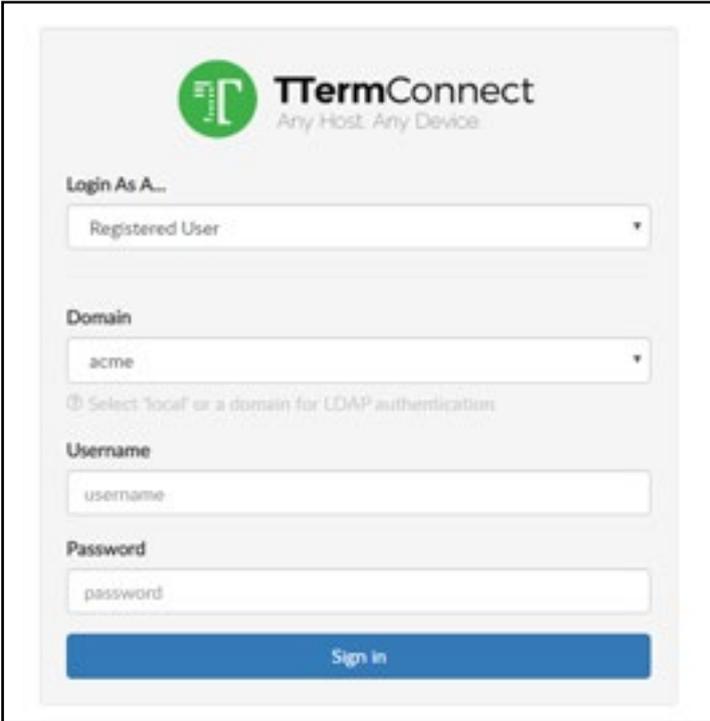


Figure 10. LDAP/Active Directories set to Enabled will appear as a domain option for the Desktop Client login.

Sync an LDAP Directory

To sync an individual LDAP directory, select its entry in the **LDAP/Active Directory Settings** table and click or tap the **Sync Selected** button in the table footer. To sync all available LDAP configurations simply click or tap **Sync All**.

Alternately set the **On the Fly Creation** option in the individual LDAP configuration. This automates account creation on behalf of LDAP users when they successfully log in to TTerm Connect for the first time.

Once the sync is complete, synced users and groups will appear in the user manager colored blue and with the source clearly labelled *LDAP/Active Directory*.



LDAP users and groups are READ ONLY in TTerm Connect.

Email Configuration

TTerm Connect can be configured to send email for various system notifications and alerts. This tab contains email server configuration options and the option to enable notifications to a general **Administrator Email**.

Enable Mail Service

This setting can be considered the ‘master-switch’ for outgoing email from the TTerm Connect. Enable this item and Administrators will be sent notifications on changes in server status, license information and other important system events.

Server Configuration

Configure this item with details of an outgoing email server that TTerm Connect will utilize. The **Send Test Email** button will send a short test email to the address specified in **Administrator Email** to confirm that these settings are correct.

Notifications

This section contains settings for outgoing notifications. Specify an email address in the **Administrator Email** item as a designated receiver for all notifications from TTerm Connect.

The **Support Email** item is a designated receiving email for all in program help requests. By default this is set to a Turbosoft support email address however it may alternately be assigned to an internal help desk email if preferred.



The Server Logs page in the Administration Portal contains a feature which allows an Administrator to send diagnostic capture files directly to the email address nominated in the **Support Email** configuration item. The support email is not utilized anywhere else in the application.

Desktop Client Configuration

The Desktop Client is the optional end user web application designed to replicate the functionality of a traditional desktop terminal emulation application. The settings listed in this section determine the default Desktop Client behavior and appearance for end users.

Display Language

Select the interface language that the client will be displayed in. The choice of display languages will be limited to those available on the server installation.

Login Settings

Select the login option which appears preselected on the Desktop Client login page, either **Guest User** or **Registered User**. Note that the **Guest User** option will only be available if **Guest Access** is enabled in the server configuration settings. See page 15 for more information.

Display Settings

Displays Settings cover a variety of configuration item defaults which affect client appearance and behaviors such as the size and scale of the terminal, actions on connect and screen layout.

These settings are largely mirrored by those that can be found by an end user in the Desktop Client itself under the **Settings** menu. The Desktop Client configuration that is set through the Administration Portal defines what a new user will see when logging into the client for the first time.

End users can override default settings in the Desktop Client at any time.

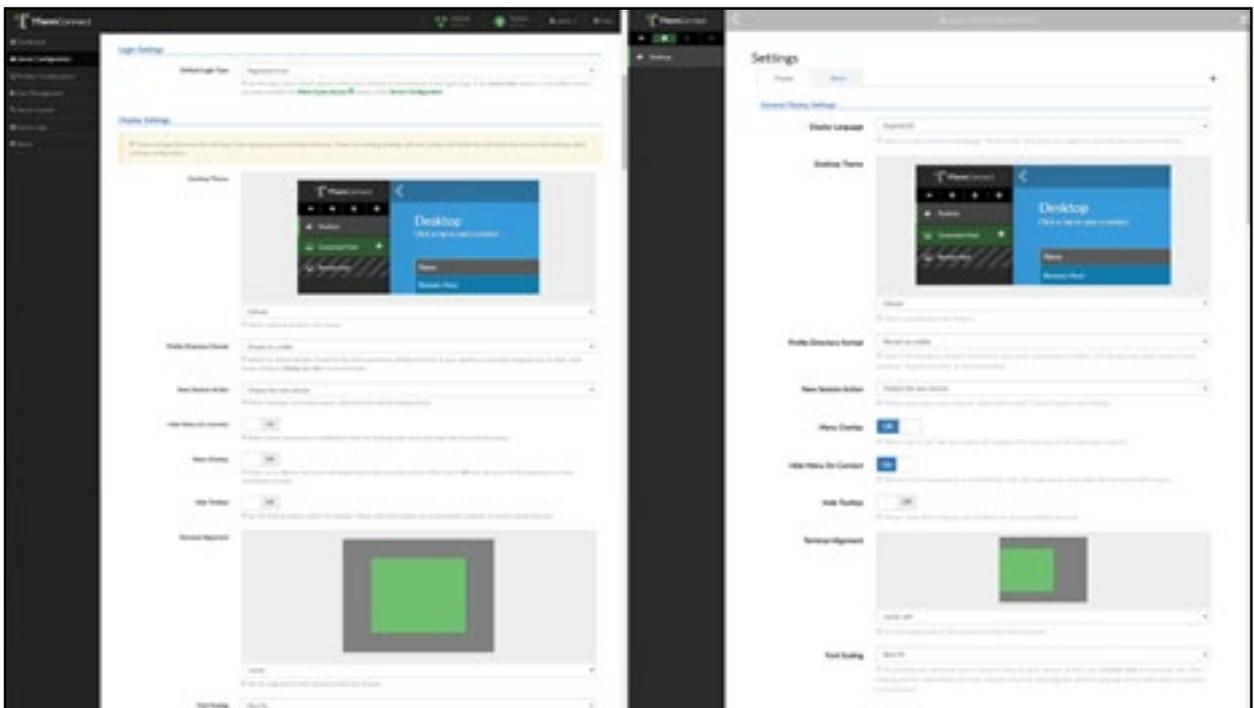


Figure 11. Desktop Configuration in the Administration Portal (left), the settings page in the Desktop Client (right).

Items such as terminal color schemes are set per-profile and must be configured when creating a profile. For more details refer to **Creating and Configuring Profiles** on page 25.

On-Screen Keyboard

The availability and type of on-screen keyboard available to your end users will depend on options set in each profile configuration. Where one or more on-screen keyboards are made available these options determine their display characteristics in the Desktop Client.

Printer Settings

Set the default paper size and orientation for outputting terminal content to printable PDF files through the Desktop Client. Note that individual profiles may be configured to set their own printer settings. Where a profile does not set a preferred page size and orientation the Desktop Client will fall back to these settings.

Editing Settings

The default operation of TTerm Connect specifies that a profile is defined by an administrator and made available to end users through the Desktop Client. In this mode of operation end users must work with the configuration options that have been chosen on their behalf.

However, if required, TTerm Connect can allow end users to modify profile configurations for individual use.

The **Desktop Client Profile Editor** is a simplified version of the tools found on the Administrator portal's **Profile Configuration** page. Any settings that end users modify through the Desktop Client's editor are saved to their account and run on top of any configurations made by an administrator.

The modifications the end user makes apply to their account only and are retained. Furthermore, administrators can configure end user editing to limit access to nominated profiles and/or subsets of configuration options.

By default this option is disabled and must be enabled here to allow editing. Then, each individual profile must have appropriate access rules in place which permit editing before the options will display in the Desktop Client.

For more information on Access rules refer to the **Profile configuration** and **Access Rules** on page 29.



By default, the ability for end users to edit and customize profiles through the Desktop Client is disabled.



As of TTerm Connect 2.0.0 only color scheme settings are available through the Desktop Client Profile Editor.

User and Group Management

Users and groups provide access control for the TTerm Connect Administration Portal and Desktop Client as well as determining which profiles a user will be able to access for connecting to host systems.



Profiles are the configuration templates used to establish host sessions and can be assigned to individual users or groups. For information on profile creation refer to page 25.



Profiles added to the group specified for guest access will be available to all anonymous users of the TTerm Connect Desktop Client, should an administrator enable guest access. See page 14 for enabling or disabling guest access.

Default Users and Groups

Several user groups are built into TTerm Connect by default. These are:

- ▶ **Admin** - The administrator's group, with access to the administration portal. This group cannot be deleted and is colored green in the user interface.
- ▶ **Default** - The default user group. This group cannot be deleted and is colored green.
- ▶ **Guest** - A group which anonymous users are assigned to when logging into the TTerm Connect desktop. The group associated with guest access can be reassigned through the server configuration settings. Guest access can also be disabled entirely.

At install, only a single user account exists in the system, that being the **Admin** user account belonging to the **Admin** group.

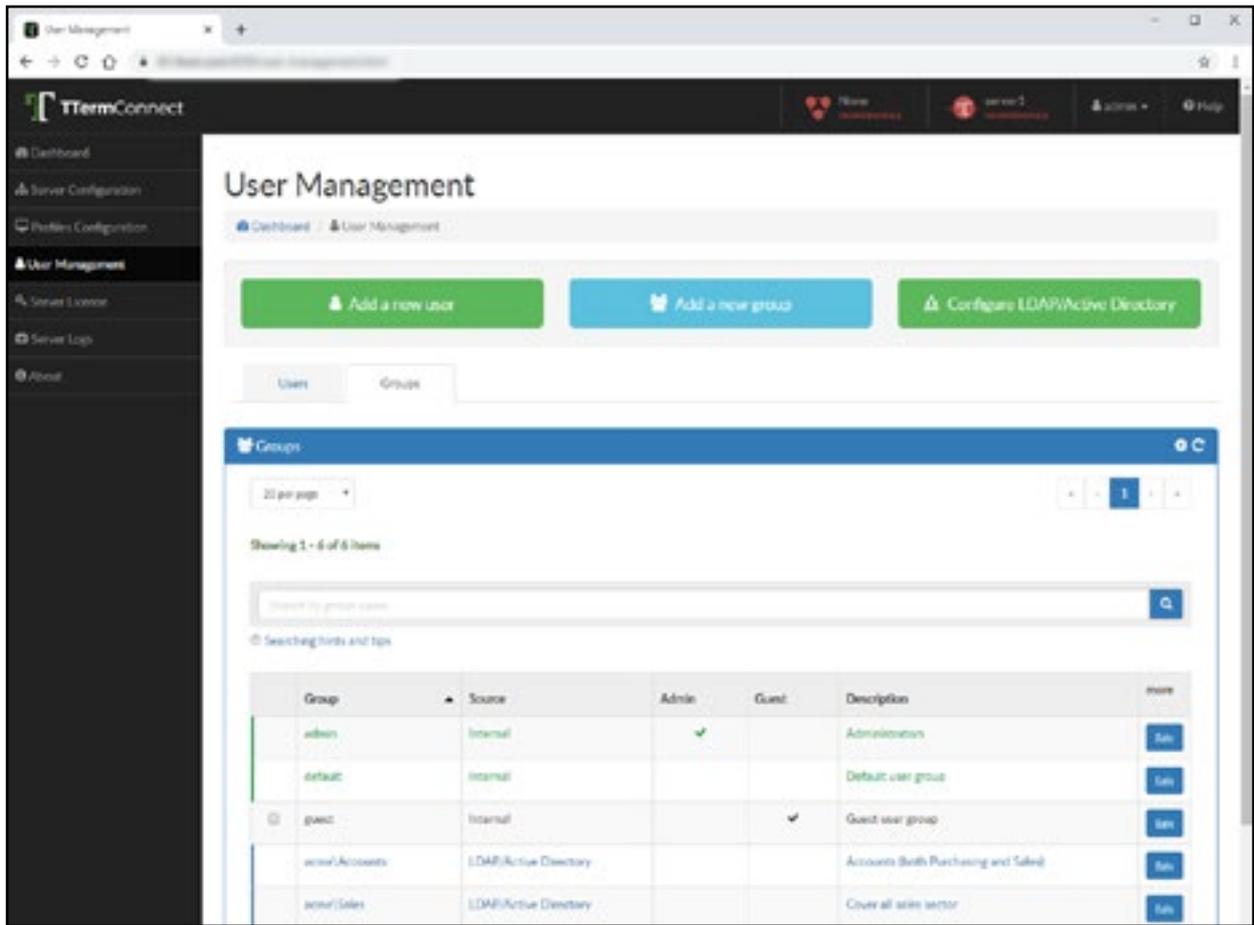


Figure 12. User Management - Groups

Adding and Managing Users

LDAP/Active Directory Integration

LDAP/Active Directory support is available in TTerm Connect for Microsoft Active Directory, OpenLDAP and Lotus Notes implementations. LDAP users and groups are displayed are colored blue on the User Management page.

To configure and sync TTerm Connect with one or more LDAP/Active Directory servers refer to the LDAP settings on page 17.

Add A New User

To add a new user, click or tap the **Add a New User** button. A new user account has the following options:

- ▶ **Login** - The login username, for example *Admin*.
- ▶ **Password** - The account password.
- ▶ **Disable Account** - When set, the created account is not accessible to the end user.
- ▶ **Full Name** - For example *John Doe*.
- ▶ **Email** - An email address tied to the account.
- ▶ **Group Membership** - A list of groups the account has membership to. To add or remove a group to a user's account, drag and drop groups between the columns shown. Group memberships can be altered at any time after creation. Note that LDAP user accounts are read only.

On completion the new user will appear listed in the user table.

Editing A User

To edit an existing user account, click or tap the **Edit** button on the desired user account listing in the **User** table. Excluding the account **login** item all other details are editable, including altering the account **password**.

Add A New Group

To add a new group, click or tap the **Add a new group** button. A new group account has the following options:

- ▶ **Display Name** - For example *Sydney Office* or *Accounting*.
- ▶ **Description** - An arbitrary description of the group.
- ▶ **Administrator Privileges** - When set, allows groups members to login to the Administration Portal.

Editing A Group

To edit an existing group account, click or tap the **More** button on the desired group item in the **Group** table.



In various parts of the Administration Portal where a user account name or group names is displayed, tap or click the text to bring up the item details on the User Management page.

Creating and Configuring Profiles

TTerm Connect defines a *profile* as a set of configuration options that is used to spawn a session to a host.

The **Profiles Configuration** page lists the existing profiles in the system and has options for creating, editing or importing new profiles. Profiles may be imported from other TTerm Connect installations or from Turbosoft's Windows terminal emulator *TTWin4* or Turbosoft's Linux Terminal Emulator *TTerm for Linux*.

Importing Profiles from TTWin4 or TTerm for Linux

Users of Turbosoft's Windows Terminal Emulator *TTWin4* or Turbosoft's Linux Terminal Emulator *TTerm for Linux* may import existing configurations into TTerm Connect. If you are not a user of either of these products, skip this step.

Exporting from TTWin4:

- 1 Open TTWin4 on a Windows system.
- 2 Ensure that the software is version 4.8.4.4634 or above. This can be confirmed by selecting **Help > About > Version** from the program menu.
- 3 From the program menu select **File > Export Configurations**.
- 4 In the window that appears select the configuration files for export to TTerm Connect, select a destination directory and filename (`file.ttexp`) and click **Export**.

Exporting from TTerm for Linux:

- 1 Open TTerm for Linux on a supported Linux system.
- 2 From the **Profile Directory** click the **More** button associated with the profile you wish to export.
- 3 Select **Export** from the list of options.
- 4 In the window that appears select a destination file name (`file.ttexp`) and click **Export**.
- 5 For additional profiles, repeat steps 2-4 as required.

Importing into TTerm Connect, this process is identical regardless of the export source:

- 1 Open a web browser and log in to the TTerm Connect Administration Portal.
- 2 Navigate to the **Profiles Configuration** page.
- 3 Select **Import** and, in the **Import Configuration File** panel that appears, click or tap **Browse** and navigate to the exported `.ttexp` file. Click or tap **Upload**.

At this point TTerm Connect will display a pop up window showing the resources contained within the `.ttexp` file. The imported file contains configuration options and, additionally, a set of resources which define settings such as character and keyboard mapping, Hotspot definitions, color schemes and so on.

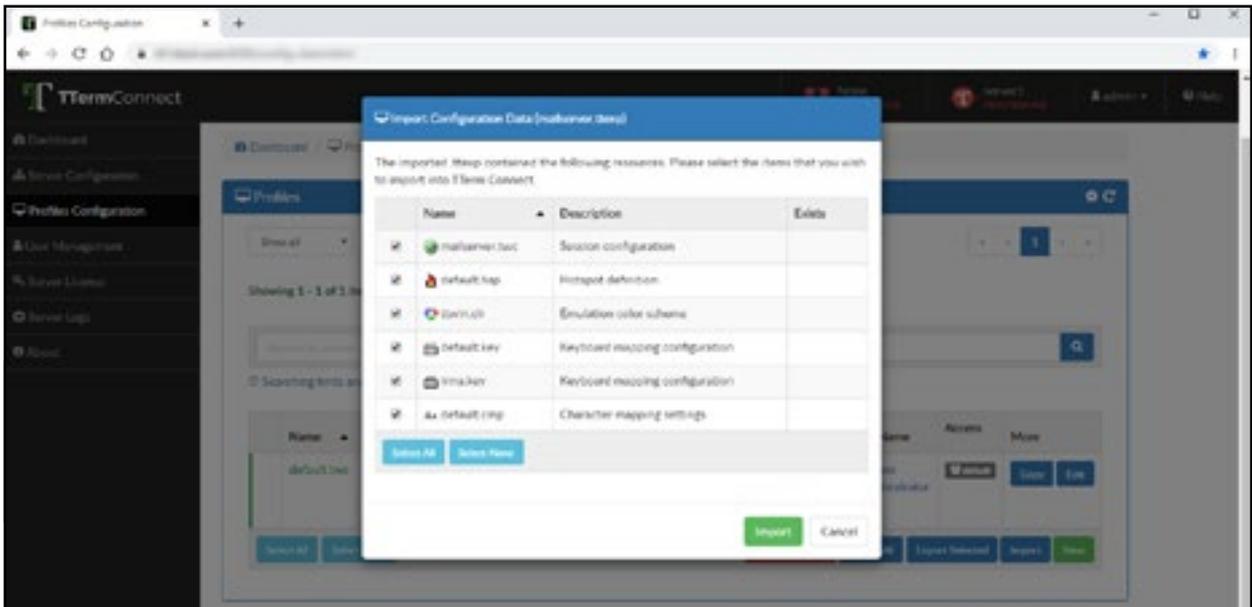


Figure 13. Importing configurations from TTerm for Linux.

In both *TTWin4* and *TTerm for Linux* resources such as color schemes may be shared in more than one profile. On occasions where you have imported a `.ttexp` previously a resource may show as already existing on your TTerm Connect server. Don't panic! An option will be given to either rename the new resources or overwrite the existing resources prior to completing the import. TTerm Connect will also highlight which supporting resources are required by a particular `.ttwc`.

- ❶ Select the resources to import into TTerm Connect and click or tap **Import**.
- ❷ Options for each selected resource and `.ttwc` will now be displayed individually. Under the **General** tab for each `.ttwc` select a user account to define as an **Owner**. By default, this will be the currently logged in account. Alternately, search for or enter the username of another account.

Should the resource already exist on the server a notification will be displayed along with options to overwrite the existing or rename the imported item.

- ❸ The **Access Control** tab specifies which users or groups should be able to use this resource. It is possible to tie a resource to a specific user OR a specific group but not both.

See page 22 for detail creating and managing users and groups.

If required, specify **Copy** and **Tailable** permissions for the resources. Copy permissions allow the owner to duplicate the item to make an entirely new profile. If a profile is tailable the owner can make a copy of the profile however it is always linked to the original. That is, if the original source profile is deleted, all tailored profiles derived from that original will be deleted too.

- ❹ **Advanced settings.** Available on imported `.ttwc` files only, NOT supporting resources. Advanced options set the editing or viewing options for specific sections of a profile configuration. For example, the communications settings or the emulation configuration. Options will vary depending on whether a profile is tailable or can be copied.
- ❺ Click or tap **next** and repeat steps 2, 3 and 4 for each resource. Once complete an **Import Summary** page is displayed - if satisfied with operations to be performed click **Import**. Please note there may be a slight delay as the import is finalized.
- ❻ The `.ttexp` will now become available in the profiles table where it may be edited as required.

Creating a New Profile

The first saved profile listed in the **Profiles** table is titled **default.twc** and acts as a template, pre-filling all settings for any subsequently created profiles. In the **Profiles** table this item will be colored green and clearly labelled with an appropriate description.

If there is requirement to create multiple profiles with similar configuration settings, for example all utilizing the same emulation and communication type, consider modifying the default profile with those common settings.



The first saved profile is used as the default system profile and acts as a template for subsequently created profiles. It can be edited but it cannot be deleted.

To create a new profile, tap or click the **New** button at the bottom of the **Profiles** table.

Give the profile a **Profile Name** as it will be displayed in the Desktop Client, for example ‘*Sydney Mailserver*’ and assign it an **Owner**. By default, ownership is assigned to the creating account, to reassign the profile simply begin typing in the **Owner** field and a list of potential user matches will be returned to choose from.

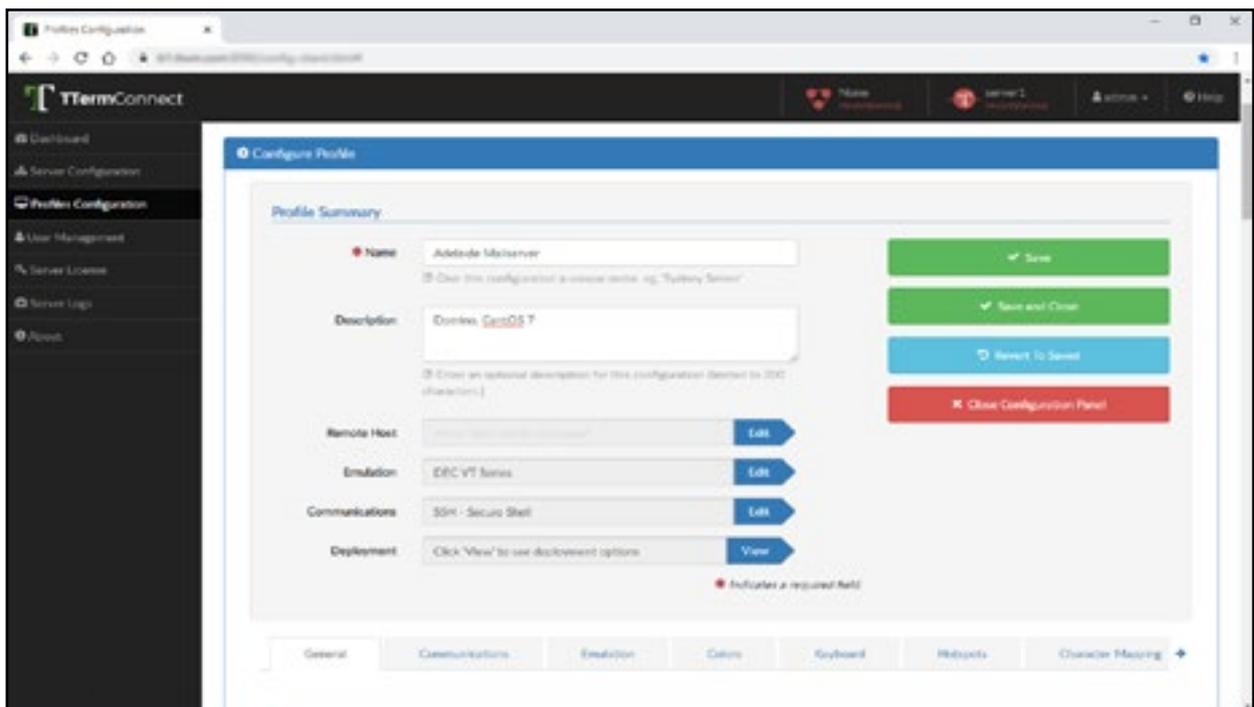


Figure 14. Configure Profile panel

A **Configure Profile** panel will appear. At the top is a **Profile Summary** section lists the basic settings for the profile, pre-filled with default values. Tapping or clicking the **Edit/Change** button next to any of the summary items will open the detail sections which are shown in tabs below. Alternately, simply click the relevant tab to begin editing.



TTerm Connect will pre-fill some profile options based on settings in the default template profile, these are all editable.

Configurations can be modified to select a preferred emulation, communication and various other session settings. Each tab covers a specific area of the profile configuration:

General

General settings including connection and disconnection settings, general display options, host-initiated macros, diagnostics, printer settings (note that some terminals, particular the IBM5250 and IBM3287 will override general printer settings) and clipboard settings.

Communications

Communications protocol settings. TTerm Connect supports SSH, Telnet and Hewlett Packard Network Services/Virtual Terminal.

Emulation

Terminal settings. Select and configure the terminal the profile will be emulating.

Colors

Terminal color configuration. Color settings will vary depending on the terminal specified in the **Emulation** tab.

Keyboard Mapping

Keyboard mapping is the process of linking the keys on a device, or physical keyboard, with equivalent key presses on the virtual, or emulation keyboard. Keyboard mappings for TTerm Connect's on screen keyboard can also be found here.

Keyboard mapping settings will vary depending on the terminal being emulated.

Screen Keyboards

TTerm Connect comes with several built-in screen keyboards which offer easy access to emulation keystrokes for end users and keyboard replacement for those on touch screen devices. On screen keyboards can be specified on a per profile basis, allowing you to customize keyboard options depending on the target host system. Multiple screen keyboards can be specified per profile and an administrator can configure which of the available keyboards will display by default.

The screen keyboards available for selection will vary depending on the terminal being emulated.

Hotspots

A Hotspot is a dynamically created button area displayed on the terminal screen which, when clicked or tapped can trigger a variety of events, enabling an otherwise keyboard driven host application to work with mouse or touch interaction. When combined with TTerm Connects built-in macro language, Hotspots are a powerful tool for automation.



For more information on Macros and the Macro Assistant refer to in-program help.

Character Mapping

Emulation character mapping allows an administrator to specify the display character generated for a given ASCII value by the relevant country code mapping. Character mapping also allows for mapping outgoing device keystrokes to alternate character codes.

Access

The *Access* tab contains options to grant and limit access to a profile based on user and group authorization.



To ensure that a user can connect to a host it is essential that they have access permissions to the corresponding session profile.

Access is explicit, meaning all entities are denied access unless a rule specifically targeting them exists. By default, the user account which created the profile, the *owner*, receives full access rights to the profile. Additionally, all user accounts which have membership of the Administration group will be granted full access rights. Additional access rules may be created to grant full or partial access to other users or groups.

An access rule grants basic read access to a profile, meaning that when an end user logs into the Desktop Client they will see a list of profile shortcuts to those profiles that have been made available to them, either directly to their user account or through groups they have membership to.

Category access permissions grant the ability for edit users to customize profile configurations through the Desktop Client, provided the ability to edit through the Desktop Client has been enabled globally. This setting can be found in the Server Configuration settings, see page 21 for more information.

Add A New Access Rule

To add a new access rule for a particular profile, click or tap the **Add New Rule** button on the **Access Control Rules** table.

In the pop-up window that appears select a user or group to create an access group for. For best results begin typing a group or username and use the search results to ensure a correct match.

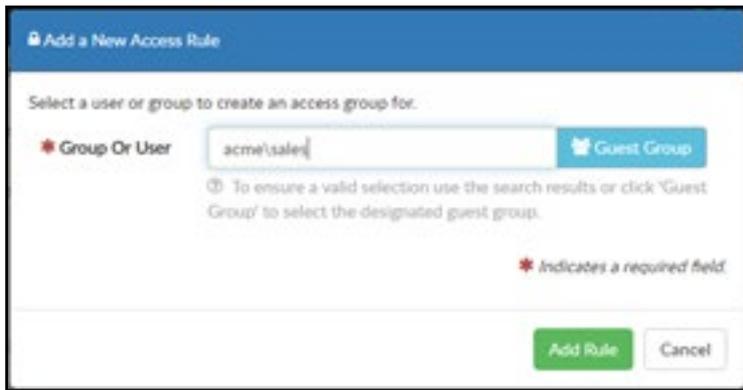


Figure 15. Add an Access Rule. When guest access is enabled a Guest Group button will be visible.

If the server has guest access enabled (see page 15) a **Guest Group** button will be attached to the **Group or User** field. Click or tap this button to automatically fill the field with the nominated guest user group.

Access rules can be further fined tuned to grant editing access to the configuration options of a profile. Permissions are divided into the following categories:

Copy

The profile may be duplicated to create a new, independent profile.

Tailor

Allows a derivative item to be created by tailoring or modifying the profile. Note that tailored items retain links to the original profile and deleting the original will also remove all tailored items created by users. This contrasts with copied items, which are independent of the original.

Communications

The communications module selection and associated settings may be altered.

Emulation

The emulation module selection and associated settings may be altered.

Session

General profile settings may be altered.

Color

The color scheme selection and associated settings may be altered.

Hotspot

The Hotspot set may be edited or altered.

Keyboard

Profile keyboard mappings may be edited or altered.

Deployment

There are several options for deploying a configured profile to your end users. This informational tab outlines the differences between each and provides a status check on server and profile settings to ensure the configuration is ready for end users to access.

Editing, Deleting an Existing Profile

To edit an existing profile, tap or click the **Edit** button next to an existing profile in the **Profiles table**. Profiles may also be duplicated or batch deleted via the controls at the bottom of the **Profiles table**.

Administration Portal Essentials

At this point, TTerm Connect is configured and ready to begin getting end users connected. However, there are a few other features and areas of the Administration Portal that an administrator should be familiar with in order to properly administer TTerm Connect.

The Dashboard

When logging into the Administration Portal the first screen shown is the system Dashboard. The Dashboard caters to the day-to-day operation of TTerm Connect, providing live information on user activity, server loads and license utilization as well as system wide controls.

A section at the dashboard top-left identifies the individual server and pool that is the source of the data being displayed. The server drop-down box filters the data and adjusts the dashboard to display information relating to an individual server of the administrator's choice. Alternately a combined, pool-wide data display is available provided that TTerm Connect is operating with two or more servers.

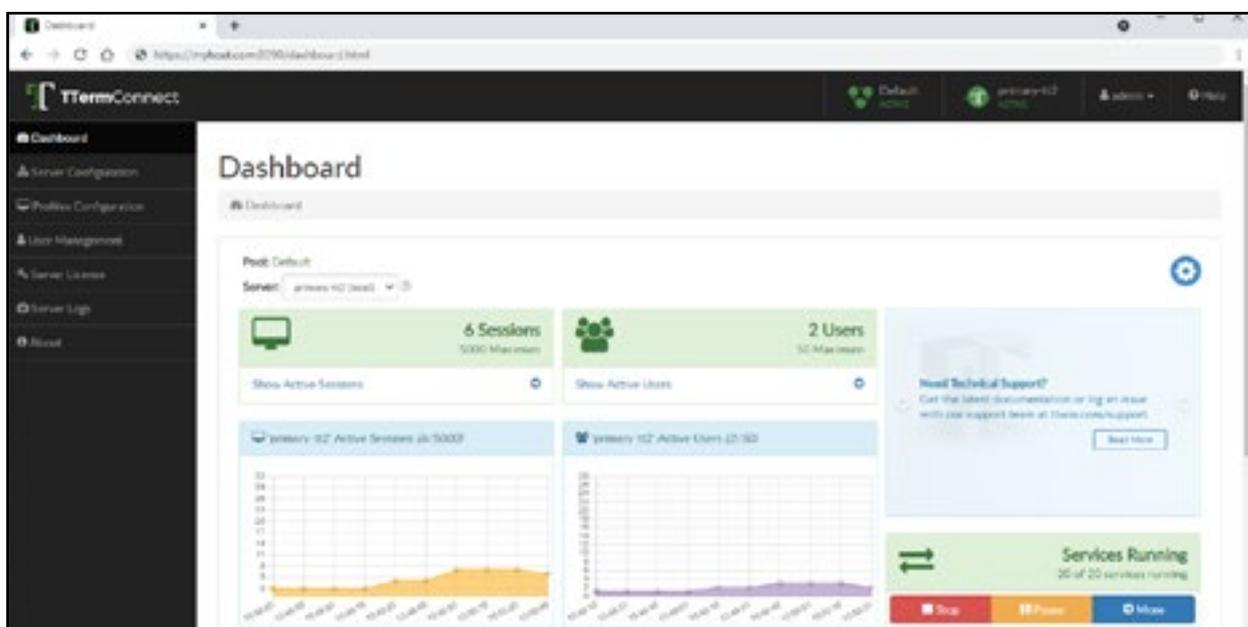


Figure 16. Filter the Dashboard on an individual server or select a combined view.

There are two parts the Dashboard, *widgets* and *activity tables*.

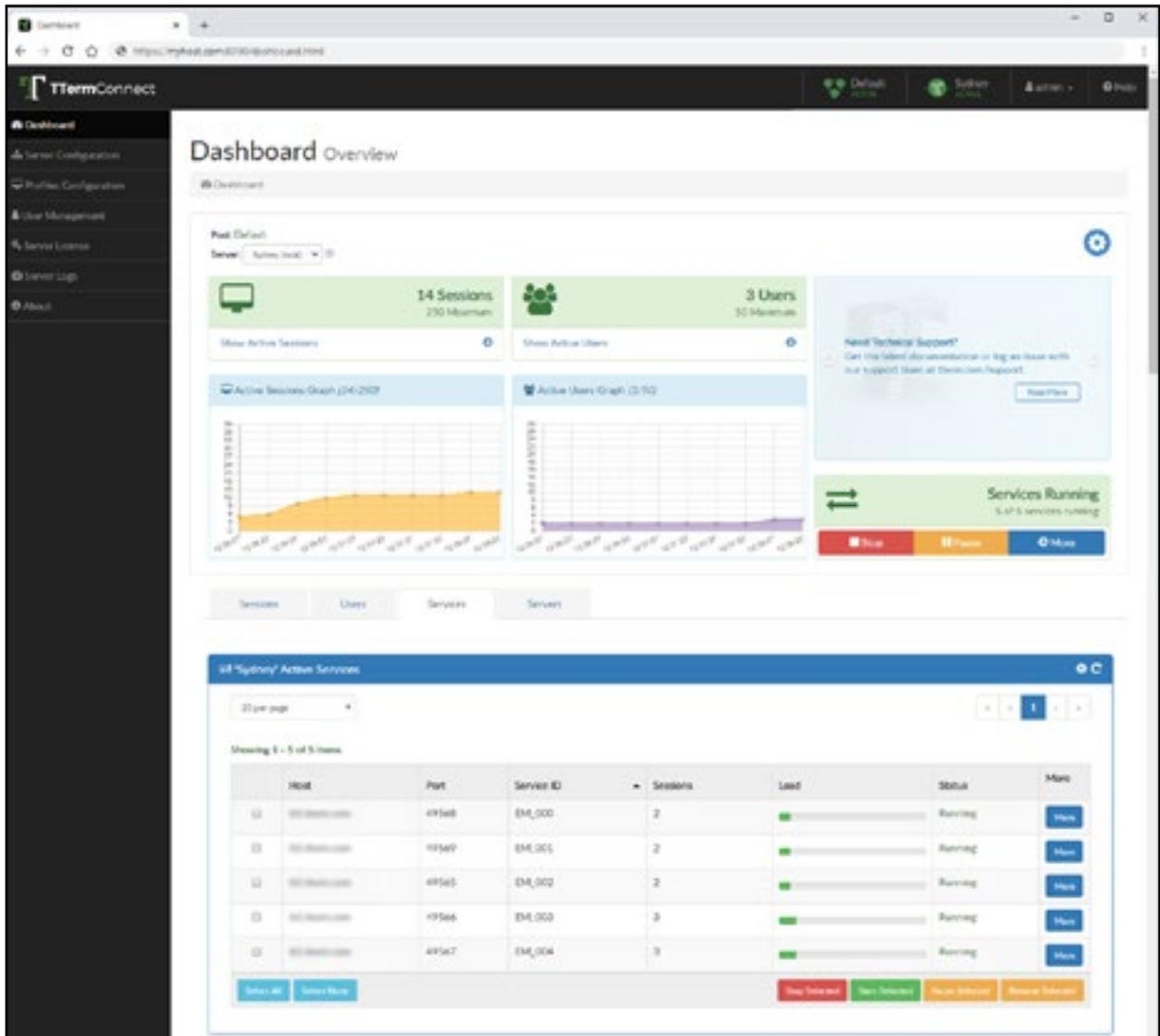


Figure 17. The Dashboard

Widgets

The Dashboard consists of a number of widgets which provide controls and feedback for TTerm Connects range of operations.

The default dashboard contains five (5) widgets selected from the TTerm Connect widget library.

Each widget may contain several configurable options, for example, the **System Event Log** contains options for determining how many log events you wish the widget to retain. Rearrange the widget layout by dragging a widget to the desired position.

Clicking the cog icon at the top right of the dashboard puts the existing widgets into an **'edit mode'** where they may be individually configured or deleted. The widget library may also be opened from this menu and additional widgets may be added to the dashboard if available.

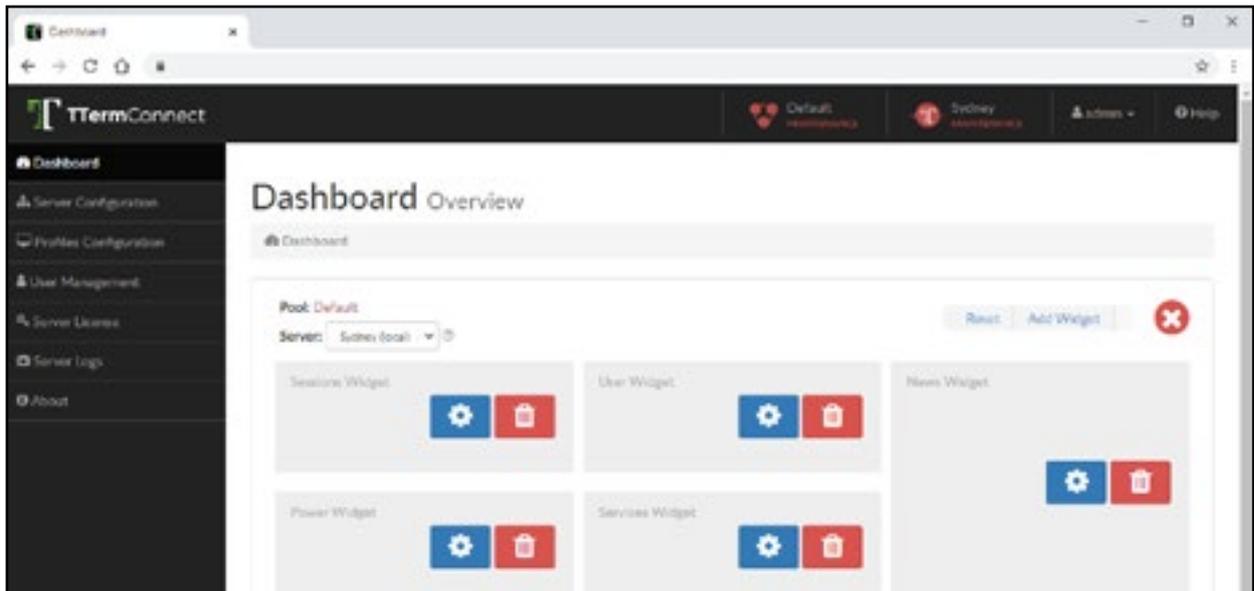


Figure 18. Clicking the cog icon on the dashboard allows widgets to be added, deleted or configured.

The Power Widget

The Power Widget displays the status of the current TTerm Connect Server and enables the quick switching of a server to and from Maintenance mode. An individual TTerm Connect server may operate in one of two modes:

- ▶ **Active Mode:** The server will serve sessions when started.
- ▶ **Maintenance Mode:** The server will not serve sessions and only administrative operations such as system configuration may be performed. This applies to the current server only and is not applied across all servers in a pool. Putting an entire pool into maintenance mode is possible via the **Server Configuration** page.



Be aware that switching to maintenance mode will end any active end user host sessions. A server may also be switched into or out of maintenance mode from the server configuration page.

The Session Widget

The Session Widget displays running totals of the active number of sessions across the TTerm Connection installation and the total number permitted by the current license. It links to the **Active Sessions** table for expanded detail on each session. The widget changes color (green, yellow and red) as the server approaches its license limitations. The thresholds for color changes are configurable.

The Session Graph Widget

The Session Graph Widget is a real-time graph equivalent of the Session Widget. It displays running totals of the number of active sessions across the system in graph form. The color of the widget graph is configurable as is the refresh interval.

The User Widget

The User Widget displays running totals of the number of active users across the system and the total number permitted by the current license. It links to the **Active Users** table for expanded detail on each user. The widget changes color (green, yellow and red) as the server approaches its license limitations. The thresholds for color changes are configurable.

The User Graph Widget

The User Graph Widget is a real-time graph equivalent of the User Widget. It displays running totals of the number of active users across the system in graph form. The color of the widget graph is configurable as is the refresh interval.

The Services Widget

The Services Widget displays the status and controls for TTerm Connect's emulation services. An Emulation Service is an independent TTerm Connect process which provides host connectivity to your end users. Services are handled separately and in multiple instances in order to balance server loads and provide separate functionality from administration and configuration handling.

The widget enables bulk pausing, starting and stopping of services. Alternately, the ability to change the status of a single emulation service is available through the **Services** table on the dashboard.

The Services Widget will report TTerm Connects Service status as one of the following:

- ▶ **Running:** Emulation Services this will allow end users to create host sessions. Normal operation.
- ▶ **Stopped:** Emulation Services are halted. This will disconnect end users currently connected to hosts and will not permit any new connections.
- ▶ **Paused:** TTerm Connect allows host connections which already exist to continue operation, however no NEW host connections will be permitted whilst the server is in a paused state.
- ▶ In instances where individual services are in different states the widget will report a combination of the above.

The **More** button is a shortcut to the **Services** table on the dashboard where the status of individual services can be viewed in greater detail.



Figure 19. The Services widget reporting services in a mixed state.

The Welcome/News Widget

On initial login the News Widget provides links to expanded documentation and tutorials to get up and running with TTerm Connect quickly, including this document. On subsequent login, if network conditions permit the News Widget will display TTerm Connect related news and updates from TurboSoft.

The Console Widget

The Console Widget displays real time event logging and system notifications. An enlarged view can be opened to display the log in a larger window. The log may be printed from the enlarged view.

The Console Widget retains a limited number of recent events, the exact number is configurable. By default, the widget stores 300 of the most recent events, however values between 100 and 500 are permitted. On a particularly active server the System Event Log may rapidly update - the scroll speed is configurable as is the display height - either as a single or double height widget.

The Pool Activity Graph Widget

The Pool Activity is a real-time graph widget designed to offer insight into the relative load and usage of multiple servers in a TTerm Connect pool. It displays session and user activity for each server in the pool.

This widget works best in multi-server installations where a load-balancing configuration is used. When running a single server configuration consider using the Sessions Widget or User Widgets instead.

Note that for a pool in load balancing configuration an end user with multiple hosts sessions may have those sessions assigned to multiple TTerm Connect servers. This widget will record that user as active on all TTerm Connect servers where their sessions are hosted, meaning the user total according to this widget may be greater than the total number of users on the system at any time. For total active users data refer to the User Widget.

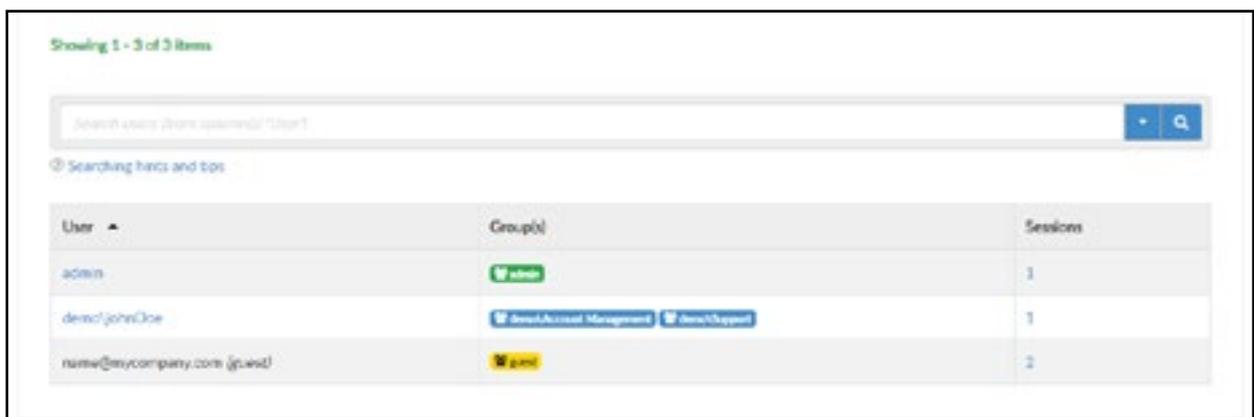
Activity Tables

Underneath the widgets several tables provide detailed views of active sessions, services and users. Note that each table can be configured by clicking or tapping the small cog icon at the top right of the panel. Columns can be added or removed from the table view on all tables. Certain tables may also contain custom configuration options only available for that specific table.

The User Table

The Users Table lists the active users and the number of host sessions they currently have open. To show a user's details in the **User Manager** click or tap the username. To view a group in the user manager detail, click or tap the group badge.

When users are members of special groups such as the **Admin** or **Default** group, these group badges will be colored green. Where a user is a member of an Active Directory/LDAP group, these will be colored blue. If guest access is enabled, the nominated guest group badge will be colored yellow.



User	Group(s)	Sessions
admin		1
david.john@corp		1
name@mycompany.com (guest)		2

Figure 20. Different user types as displayed in the dashboard Users Table.

The Services Table

The **Active Services** table lists the services running on TTerm Connect, their network location and current status. The load status indicator gives an indication of the resources and share of session being handled by each service. Configurable thresholds can be set for the Load indicator to change color, indicating heavy loads. To access table setting click or tap the cog icon to the top right of the table. Note that it is possible for a service load to be over 100% (i.e., overloaded).

An individual service may also be paused, stopped or started from the detail view. Please note that halting a service will disconnect existing users. Where host downtime is required consider alternatives for a more user-friendly experience.



Halting an individual service will disconnect any sessions connected through it. Pausing an individual service will not affect existing sessions but it will prevent any new sessions being created.

For a detailed view of service activity click or tap the **More** button on the **Active Services** table. The detail view will show information about sessions and users utilizing the service.

The Sessions Table

The Sessions Table lists the active host sessions and associated details.

- ▶ **User** - The owner of the session. Click or tap the username to view the account details in the User Manager (guest user details are not available).
- ▶ **Product** - TTerm Connect has built-in capabilities which allow it to act as a license manager for other Turbosoft software, such as TTWin4 for Windows. Unless TTerm Connect is licensed and used in this manner, the value of this table column will always read *TTerm Connect*.
- ▶ **Profile** - The profile (session configuration) which generated the session. This item can be clicked or tapped to open the profile in the Profile Editor.
- ▶ **Host** - The name or IP of the host system.
- ▶ **Client State** - The connection status of the session. From one of the following:
 - ▶ **Attached** - The session is running in the user browser window.
 - ▶ **Detached** - The end user has closed the browser window; however, the session remains connected in TTerm Connect.
 - ▶ **Shutting Down** - The session is in the process of being terminated.
 - ▶ **Shutdown** - The session has ended. After a short period of time sessions marked as shutdown are removed from the active sessions table.
- ▶ **Created** - The time (displayed as the logged in users current time zone) at which the session was created.
- ▶ **Attached** - The time (displayed as the logged in users current time zone) at which the session was attached.
- ▶ **Detached** - The time (displayed as the logged in users current time zone) at which the session was detached. This will appear blank if the session is not detached.



The display format of time and date information is defined in the logged in account user preferences. See page 40 for more detail.

- ▶ **Emulation Server** - A reference to the emulation service hosting the session.
- ▶ **Server** - The TTerm Connect server the session is running on.
- ▶ **Status** - Describes the connection status, for example, *connecting*, *connected*, *disconnected*.

Click or tap the **More** button to display the session detail view. The detail view provides options for shadowing a session or killing (force disconnecting) a session as well as greater session and service detail.

The Server Table

TTerm Connect has the capability to serve very large sites and provide a degree of redundancy and/or load balancing. It is possible to configure TTerm Connect as multiple servers operating in across a pool. For smaller sites TTerm Connect can operate as single, stand-alone server.

This table lists one or more servers that are members of a pool, along with their mode of operation, power status and various details:

- ▶ **Name** - An arbitrary server name.
- ▶ **Power State** - Describes whether the server is powered on or off.
- ▶ **Hostname** - Resolved server host name or IP address.
- ▶ **Description** - Server description.
- ▶ **Mode** - The Mode setting governs how the server operates:
 - ▶ **Active** - The server is available to serve host sessions.
 - ▶ **Stand-by** - A server in standby mode will run but will not serve sessions until needed, for example due to another server in a redundant pool unexpectedly going offline.
- ▶ **Status** - Server status:
 - ▶ **Active** - The server is operational.
 - ▶ **Maintenance** - A server in maintenance mode will not serve host sessions, only administrative functions such as system configuration may be performed.
- ▶ **Pool Type** - This setting governs how servers in the pool operate together:
 - ▶ **Single** - Single server operation.
 - ▶ **Redundant** - Two or more servers in the pool without load balancing, meaning a user is assigned to a server and all their sessions run on that server.
 - ▶ **Load Balancing** - Two or more servers in the pool with sessions spread amongst the servers and the least loaded server being assigned new sessions.
- ▶ **Local/Remote** - Local, meaning the current server. Remote, meaning other servers in the pool.
- ▶ **Sessions** - The number of active sessions running on the server.

User Preferences

User preferences may be changed at any time by selecting the drop-down menu at the top right of screen. Click or tap the menu item labelled with the current account username (for example *admin*, for the default account). Select **My Preferences**.

The preference page contains options for displaying a date and time format to be displayed across the Administration Portal as well as display language options.

These are configurable system wide through the **Server Configuration** page, however they may be overridden at a user level through the **My Preferences** page.

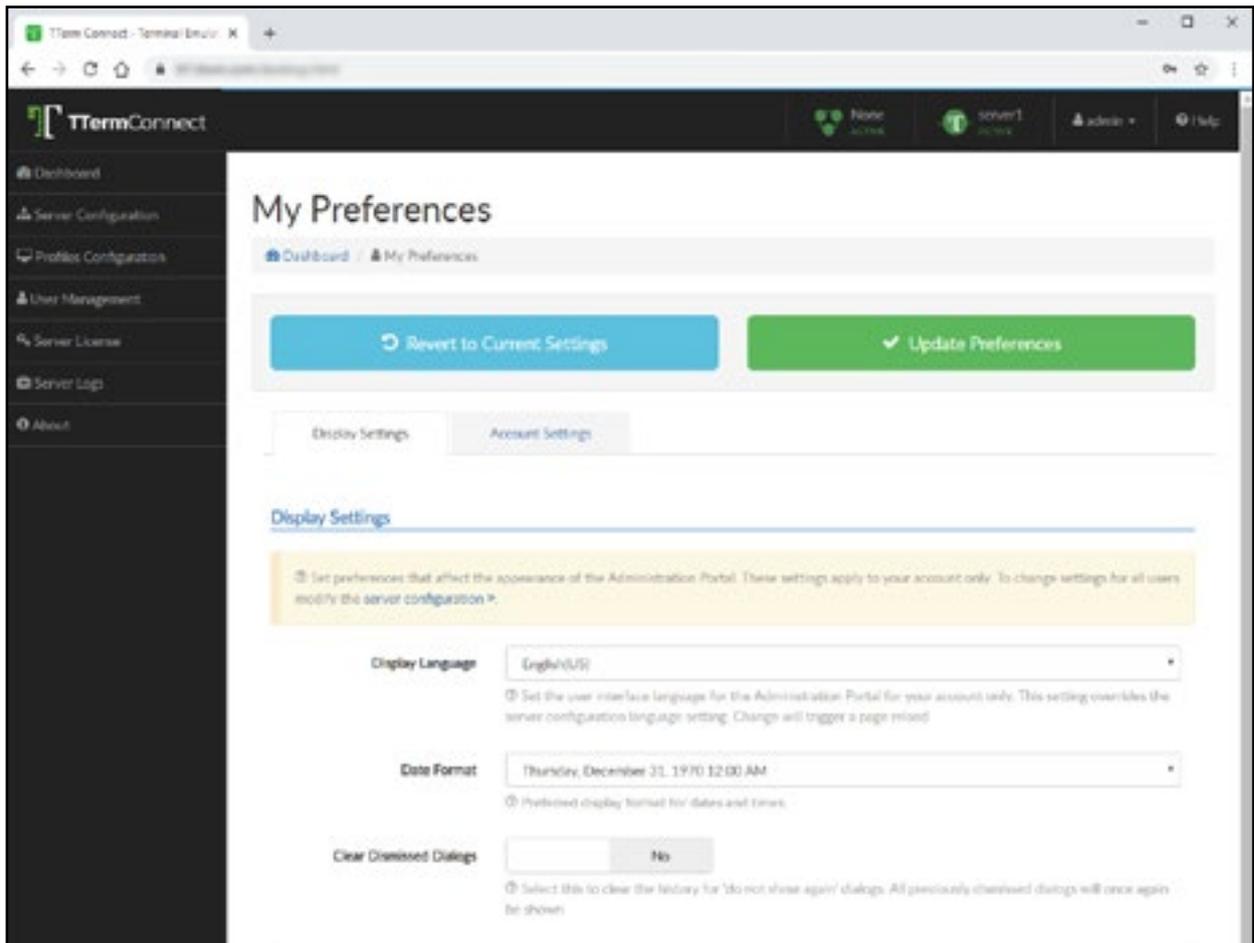


Figure 21. User Preferences

The Desktop Client

TTerm Connect offers a variety of deployment options. For desktop software replacement a web application, the *Desktop Client* is supplied.

The Desktop Client option is most suitable for replicating the functionality of a traditional desktop terminal emulation application. It should be configured to be served by existing web server software such as Apache (Linux/Windows) or IIS (Windows).

Of course, it is not essential to use the Desktop Client for host connectivity. Alternately, choose to add TTerm Connect to an existing web page or create a custom web page for terminal emulation. This topic is not covered in this Quick Start guide, instead refer to the *Embedding TTerm Connect* guide included with the TTerm Connect installation or visit the support section of www.ttwin.com to obtain the document.

Logging In

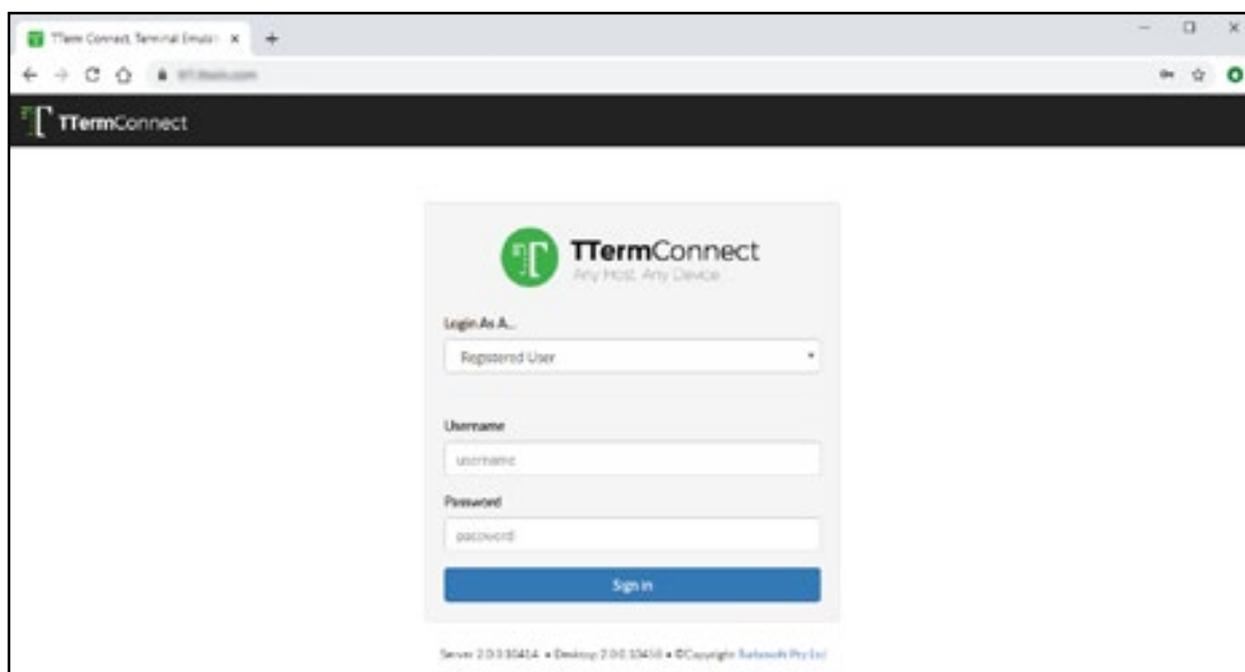


Figure 22. Desktop Client Login

To access the Desktop Client, open a browser to the host page. In a typical, default installation this will be the same URL as the Administration Portal without the trailing port details. For example:

<https://www.myhost.com:8090> (Administration Portal)

<https://www.myhost.com> (Desktop Client)



The sample URLs given are prefixed with **https://**. If TTerm Connect has been configured for non-SSL communications (See page 11) this will instead be **http://**

Login details for the Desktop Client are dependent on the user accounts and groups created through the Administration Portal (see page 22).

If guest access has been enabled (see page 15), the **Login As A...** option shown in *Figure 22* will be displayed and will contain options for login as a **Registered User** or a **Guest**. When set to **Guest** the **Password** field will be hidden.

For guest users, the Desktop Client requests that an email address is supplied for login to allow simple identification and user tracking. It does not, however, strictly enforce this and so in practice any text may be entered.

It is also possible to preselect the item shown at the **Login As A...** option. For details refer to the Login Settings section of the Desktop Client configuration described "Login Settings" on page 20.

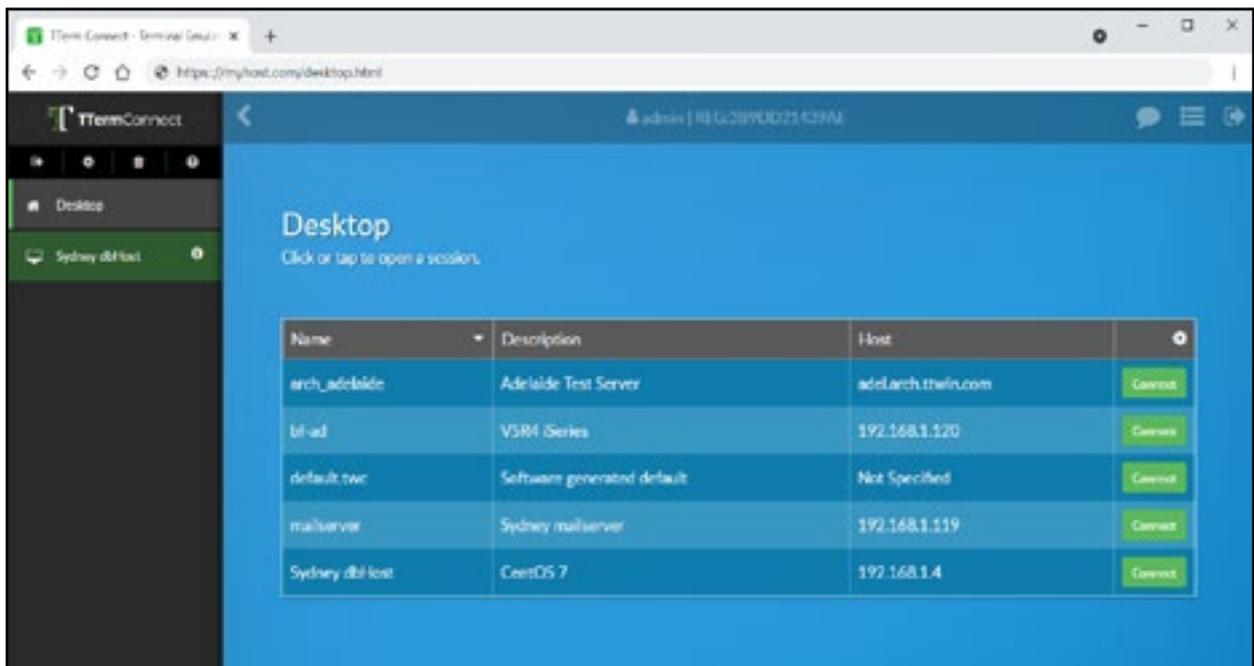


Figure 23. Desktop Client with profiles displayed in a table.

On successfully logging in the Desktop Client will display multiple profile shortcuts, depending on what has been configured for the user and group or groups they belong to. Depending on the user's preference settings and the screen size of the device they are using, the profiles may be shown as a simple list or as a table with information detailing the profile descriptions, host and other particulars.

To connect to a host, the user may simply click or tap the profile name in list display mode or, if viewing in table format, the **connect** button. A session will then be spawned and attempt to connect to the host according to the profile's configuration settings.

The Desktop Client is multi-session capable and at any time the user may return to the desktop screen shown in *Figure 23* and create an additional session.

Troubleshooting

Why am I unable to login to the Desktop Client?

Login to the Administration Portal and check firstly that the user account in question exists and secondly that its **Account Disabled** setting is NOT set to **on**. This can be determined by navigating to the **User Management** page and searching for the required user from the **User Table**. Click **More** on the user to view account details.

Why can't I see any profiles/host connection shortcuts in the Desktop Client?

Most likely because none have been assigned to the specific user account or any of the groups the user account is a member of.

Login to the Administration Portal, navigate to **Profiles Configuration** page and ensure that at least one profile is assigned to the user or group that is attempting to connect through the desktop client. If the user in question was a guest, ensure at least one profile is assigned to the user group designated for guests.

Assign or check the user groups assigned to guests on the **Server Configuration** page under **Server Components**.

Instead of profiles/host connection shortcuts, I see a notification about licensing in the Desktop Client. Why?

In an unlicensed state TTerm Connect offers limited functionality, allowing server configuration but disallowing any host connection. It is likely that TTerm Connect is either not licensed or in a state where the license process has not been completed.

Login to the Administration Portal and navigate to the **Server License** page to confirm the license status. See page 8 for information on adding a license to TTerm Connect.

I cannot establish a connection to my host/my terminal is not displaying correctly/keyboard input is not behaving as expected....

More often these symptoms indicate a profile misconfiguration. Resolving such issues is beyond the scope of this document however it is recommended that you check the emulation and communications requirements of your host system and/or check with your systems administrator.

If problems persist and you believe the issue to lie with TTerm Connect please contact the Turbosoft support team, refer to the last page of this document for contact details.

Desktop Error Code: EC0906

If an end user encounters this error in the TTerm Connect Desktop Client, it means that the server-based emulation services that provide host connectivity are not running.

This issue could occur for several reasons. It is possible that the emulation services have been deliberately halted by an administrator. Alternately, services may be in a halted state due to a configuration setting which prevents services automatically starting while the TTerm Connect server is started.

To fix this issue, an administrator should login to the TTerm Connect Administration Portal and navigate to the dashboard. The administrator must then start the services either by starting all services through the Power Widget or by starting individual services through the Active Services table.

To modify TTerm Connects configuration options to ensure that Emulation Services automatically start when the TTerm Connect is started set the **Auto Start** option to **On** in the Administration Portal Server Configuration, under **Server Components > Emulation Service Server**.

Desktop Error Code: G1 or G2

These error codes will display on the Desktop Client login page. They indicate that the Desktop Client was unable to retrieve system information from the TTerm Connect server.

This error will prevent end user login.

An administrator should login to the TTerm Connect Administration Portal and confirm that TTerm Connect services are running.

Also, confirm that the Desktop Client can connect to the TTerm Connect server using port 8080 or the alternate port defined in the server configuration.

Desktop Error Code: G3

This error code will display on the Desktop Client login page. It indicates that the client was unable to retrieve configuration information related to LDAP/Active Directory.

In such circumstances user login will still be possible using local account credentials.

Confirm that LDAP/Active Directory server is online.

Additionally, an administrator should login to the TTerm Connect Administration Portal and navigate to the server configuration. Check that TTerm Connect login details for the LDAP/Active Directory server are correct.

Support and Further Information

In-Program Help

TTerm Connect includes detailed in program help which may be accessed by clicking or tapping the  help icon at the top right of screen in the Administration Portal and at top left of page in the Desktop Client. Help is searchable and throughout the application context sensitive links will open relevant help pages.

Contacting Turbosoft Support

For issues relating directly to TTerm Connect which are not covered by this document or the in program help content, consider checking the online resources available at www.ttwin.com/support or contacting Turbosoft support staff directly. To lodge a support ticket with Turbosoft support please visit www.ttwin.com/support-form and have the following details ready:

- ▶ Your **license details** - these can be found on the **About** page of the Administration Portal. Please also include any maintenance contract number or service agreement you may have with Turbosoft.
- ▶ **TTerm Connect version number** - TTerm Connect consists of a number of components and each will have its own, slightly different version number. These components are:
 - ▶ **The Administration Portal** - The web-based administration tool.
 - ▶ **The Desktop Client** - The optional web-based end user client.
 - ▶ **The Server** - The collection of server-based components which provide the core of TTerm Connects emulation and management processes.

Please send the server license version and either the Desktop Client version OR the Administration Portal version number, depending on the source of the issue.

Version details can be found on the **About** page of the Administration Portal and the settings section of the Desktop client. These details can also be found on the respective login screens.

- ▶ **Details of the client (end user) environment**, including operating system and browser, for example, *Windows 10, Chrome version 122.0.6261.131*

This information is essential to enable Turbosoft to resolve your issue in a timely manner.

Contact Details

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