ScrewDrivers Pro and Enterprise Administrator Guide Version 7.0

Release Info

This version of the *ScrewDrivers Pro/Enterprise Administrator Guide* is applicable for all software versions of ScrewDrivers 7.0 and greater, and is current until replaced.

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Table of Contents

Preface

Welcome to the *ScrewDrivers Pro/Enterprise Administrator Guide*. The purpose of the *ScrewDrivers Essentials Administrator Guide* is to answer your questions and guide you through the procedures necessary to administer the ScrewDrivers Endpoint products efficiently and effectively.

Conventions used in the manual

The *ScrewDrivers Pro/Enterprise Administrator Guide* uses the following conventions:

- Information that can vary in a command—variable information—is indicated by alphanumeric characters enclosed in angle brackets; for example, <server address>. Do not type the angle brackets when you specify the variable information.
- A new term, or term that must be emphasized for clarity of procedures, is *italicized*.
- Page numbering is “online friendly.” Pages are numbered from 1 to x, *starting with the cover*, and ending on the last page of the guide.

Although numbering begins on the cover page, this number is not visible on the cover page or front matter pages. Page numbers are visible beginning with the first page of the Table of Contents.

- This manual is intended for both print and online viewing.
  - If information appears in blue, it is a hyperlink. Table of Contents entries are also hyperlinks. Click the hyperlink to advance to the referenced information.

Organization of the manual

In addition to this Preface, the *ScrewDrivers Pro/Enterprise Administrator Guide* contains the following chapters and appendices:

- Chapter 1, “ScrewDrivers Administration Core Concepts,” on page 9 details ScrewDrivers Administration core concepts, including the definitions and purposes of the three primary entities that you manage through ScrewDrivers Administration - *objects*, *owners*, and *assignments*. It also explains how owner inheritance and multiple assignments of objects can impact the access that a user has to an object. Finally, it details about the tasks that are required to manage objects, owners, and assignments.
- Chapter 2, “The ScrewDrivers Endpoint Client Application,” on page 33 details the functions that are available to you in the ScrewDrivers Endpoint Client app.
- Chapter 3, “Managing ScrewDrivers Endpoint Printers,” on page 49 details the configuration of the session-level settings on the ScrewDrivers Session Agent and the assignment of these configured settings to owners in ScrewDrivers Administration.

- Chapter 4, “The ScrewDrivers Scanning Client Application,” on page 61 details the configuration settings and functions that are available to you in the ScrewDrivers Scanning Client app.
- Chapter 5, “Managing ScrewDrivers Scanners,” on page 73 details the configuration of session-level settings on the ScrewDrivers Session Agent and the assignment of these configured settings to owners in ScrewDrivers Administration.
- Chapter 6, “Managing ScrewDrivers Print Server Printers,” on page 83 guides you through the essential procedures for using ScrewDrivers Print Server.
- Chapter 7, “Managing ScrewDrivers Direct Printers,” on page 111 details how to open ScrewDrivers Printer Discovery and how to use this application to import printer drivers in to the ScrewDrivers database, import printers in to the ScrewDrivers database to create the necessary Printer objects, and then assign drivers to printers. The chapter also details how to use the functions that are in ScrewDrivers Administration to assign these managed printers to your organization’s workstations, users, and/or groups.
- Chapter 8, “Managing ScrewDrivers Legacy Options,” on page 133 details the management and use of the two legacy options that are available in ScrewDrivers Administration – Local and Network printers and PDF printers.
- Chapter 9, “ScrewDrivers Maps,” on page 145 details the use of ScrewDrivers Maps, which is an administration tool that you can use to assist your users in locating the User Allowed printers that are available for self-assignment.
- Chapter 10, “ScrewDrivers Reports,” on page 159 details the ScrewDrivers Reports app, including the app layout and using the app to generate printer usage reports.
- Appendix A, “ScrewDrivers Endpoint Troubleshooting,” on page 73 provides some general considerations when troubleshooting ScrewDrivers Endpoint. It also provides information about solving some of the most common problems you might encounter when using ScrewDrivers Endpoint.
- Appendix B, “ScrewDrivers Scanning Troubleshooting,” on page 83 provides some general considerations when troubleshooting ScrewDrivers Scanning. It also provides information about solving some of the most common problems you might encounter when using ScrewDrivers Scanning.
- Appendix C, “Data Review in the ScrewDrivers Administration,” on page 197 details the two primary functions, Audits and Reports, that are available in ScrewDrivers Administration for reviewing and analyzing the data in the ScrewDrivers database.
- Appendix D, “ScrewDrivers Supporting Applications,” on page 205 details the supporting applications are available to help you analyze, configure, optimize, and maintain your ScrewDrivers database and products.

Chapter 1
ScrewDrivers Administration Core Concepts

To understand how to best use ScrewDrivers Administration to administer and control your users' printing environments, you must first learn about some core concepts, including the definitions and purposes of the three primary entities that you manage through ScrewDrivers Administration - *objects*, *owners*, and *assignments*. You must also learn how owner inheritance and multiple assignments of objects can impact the access that a user has to an object. Finally, you must learn about all the tasks that are required to manage objects, owners, and assignments.

This chapter covers the following topics:

Chapter 1
ScrewDrivers Administration Core Concepts

Starting ScrewDrivers Administration

Typically, ScrewDrivers Administration is installed on the same Windows clients on which you are installing your ScrewDrivers products. If you do not install ScrewDrivers Administration *for at least one instance* of any of your ScrewDrivers products, then you are not able to configure or manage any of your ScrewDrivers products or components. Because ScrewDrivers Administration is unlicensed, you can also install it as a standalone application on as many workstations as needed.

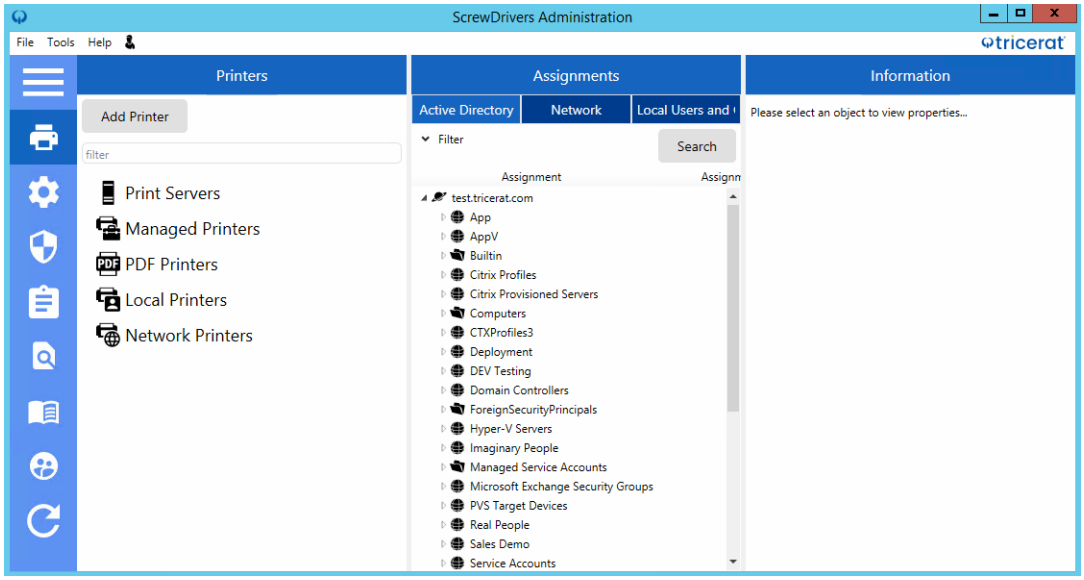
Many ScrewDrivers administrators install ScrewDrivers Administration on their workstations to provide a way to assign objects and change settings remotely. For detailed information about installing the ScrewDrivers Administration, see the ScrewDrivers Pro/Enterprise Installation Guide.

After ScrewDrivers Administration has been installed on a client, a shortcut icon for it is placed on the client's desktop and an option is also available from the Start menu. To open ScrewDrivers Administration, you can double-click the desktop icon or you can select the option from your Start menu: Start > All Programs > Tricerat > ScrewDrivers Administration.

Figure 1-1: ScrewDrivers Administration desktop shortcut

ScrewDrivers Administration consists of a single main window in which you carry out your entity management tasks. See "The ScrewDrivers Administration Layout" on page 12.

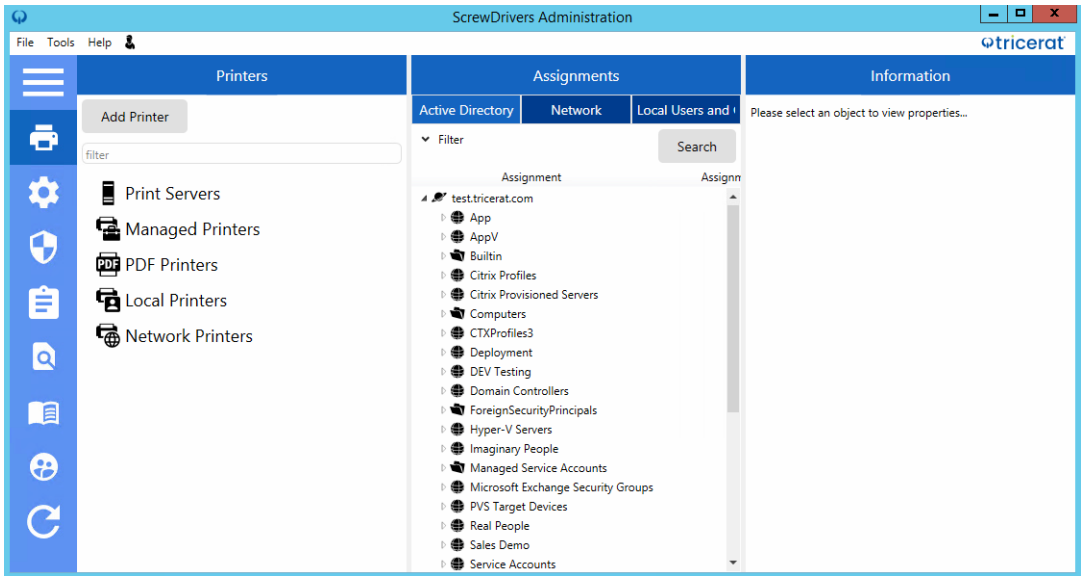
Figure 1-2: ScrewDrivers Administration



The ScrewDrivers Administration Layout

ScrewDrivers Administration consists of a single main window with a main menu, an Icon bar and three panes—an Objects pane, an Assignments pane, and an Information pane—in which you carry out the entity (objects, owners, and assignments) management tasks for your ScrewDrivers installation.

Figure 1-3: ScrewDrivers Administration



Main menu

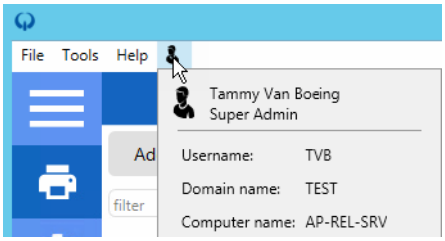
The ScrewDrivers Administration main menu is displayed at the top of the main window. The main menu is set up in a standard Windows menu format with menu commands grouped into menus (File, Tools, and Help) on the menu bar.

Command	Description
File	• Options - Opens the Options dialog box in which you can specify different settings that affect ScrewDrivers Administration, the ScrewDrivers database, and auditing of your ScrewDrivers data. See “Options dialog box” on page 14. See • Exit - Closes ScrewDrivers Administration immediately with out any prompts if you do not have any unsaved data; otherwise, you are prompted to save your changes before exiting.
Tools - Links to various applications that support your ScrewDrivers installations. These applications are also available from the Start menu for the machine on which you have installed your ScrewDrivers products or from their corresponding desktop shortcuts.	
Database Connection	Opens the ScrewDrivers Database Connection application, which you use to manage connections to your ScrewDrivers database. See “ScrewDrivers Database Connection” on page 209.

Command	Description
Maps	Opens the ScrewDrivers Maps application, which you use to assist your users in locating the User Allowed printers that are available for self-assignment. See Chapter 9, “ScrewDrivers Maps,” on page 145.
Logging	Opens the ScrewDrivers Logs application, which you use under the guidance of Tricerat when tracking issues or debugging. See “ScrewDrivers Logs” on page 212.
Licensing	Opens the ScrewDrivers Licenses application, which you use to manage and administer the license for your ScrewDrivers product. See “ScrewDrivers Licenses” on page 211.
Help	• Help Center - Opens the Tricerat support web page. • About - Opens the About dialog box, which displays information about the ScrewDrivers product that is installed on the current server such as the Version information and the features that are installed for the product. The dialog box also displays a Help Center link, which opens the Tricerat support web page.

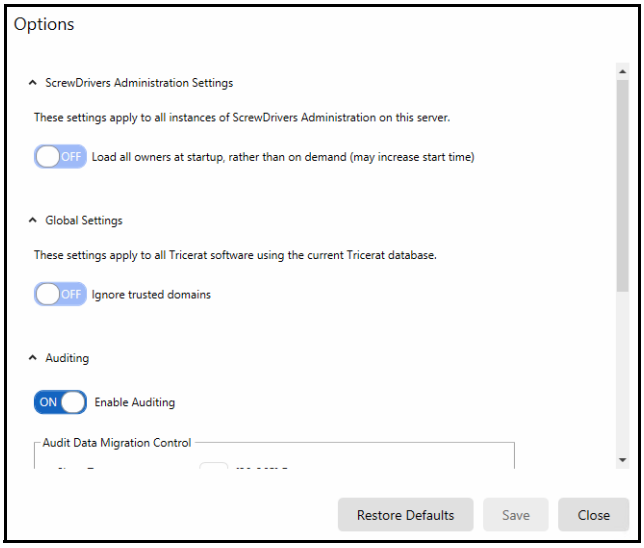
The main menu also displays a User icon. You can click this icon to open a tooltip that displays the following information for the user who is currently logged in to ScrewDrivers Administration: the name of the user in Active Directory, the classification of the user (for example, Super Admin), the username (the name used for logging in to ScrewDrivers Administration), the name of the domain that the user is logged into, and the name of the computer used to log in to ScrewDrivers Administration.

Figure 1-4: ScrewDrivers Administration main menu with tooltip



Options dialog box

Figure 1-5: Options dialog box



Settings	Description
• If you make any changes to any of these settings in the Options dialog box, then you must click Save to save these changes. • If you change any of these settings, then to restore all settings to their default values in a single step, click Restore Defaults. You cannot restore a default value for a setting on an individual basis.	
ScrewDrivers Administration Settings	Load all owners at startup, rather than on demand. By default, this setting is turned off. Whether On or Off, this setting is applicable for all instances of ScrewDrivers Administration on the current server. **Note:** If you turn this setting On, then the time to start and open ScrewDrivers Administration might increase.
Global Settings	Ignore trusted domains. By default, this setting is turned off. If you turn the setting on, then the setting is applicable for all Tricerat products that are using the ScrewDrivers database.
Enable Auditing - By default, this setting is turned on. Two audit tables are provided for each database table - one for short term audit data and one for long term audit data.	
Audit Data Migration Control	• Short Term - The time period, in days, to keep the data in the Short Term Audit data table. The default value is 30 days. • Daily Migration Hour - When to start the automatic migration process that moves data from the Short Term Audit data tables to the Long Term Audit data tables. **Tip:** You typically set this value to be a time of day when the database is not likely to be busy with other tasks.

Settings	Description
Audit Data Migration Status	Read-only panel that displays simply display the status information if a migration is currently in progress, and if applicable, when the last audit was run.
Migrate	To override the Daily Migration Hour value and force a migration operation to run immediately, click Migrate.

Icon bar

The Icon bar is displayed vertically below the main menu. The bar displays the options for quick access to the most commonly used features in ScrewDrivers Administration. The Icon bar has an accordion functionality. To expand or collapse the Icon bar, click the Hamburger icon.

Depending on the size of the ScrewDrivers Administration window and/or its panes when you expand the Icon bar, you might have to resize the window and/or its panes to view the Objects (left) pane. See "Objects pane" on page 16.

Table 1-1: ScrewDrivers Administration Icon bar

Icon	Description
	Hamburger icon - A toggle. Click once to expand the Icon bar and display the full name for each icon on the Icon bar. Click again to collapse it. **Tip:** If the Icon bar is collapsed, then hold your cursor over an icon to open a tooltip that displays the icon's name.
	Printers icon - Opens the Printer objects display in the Objects pane.
	Session Printer Settings icon - Opens the Session Printer Settings objects display in the Objects pane.
	Permissions icon - Opens the Permissions objects display in the Objects pane, which is a list of the different permission levels that can be granted to a ScrewDrivers Administration user.
	View All Assignments icon - Shows all the objects (printers, session settings, and permissions) that have been assigned to a selected owner. See "To review owner assignments" on page 29.
	Audit Search icon - Opens the Audit Search view in the main window, which provides options for searching for specific data that has been audited. See "Auditing the ScrewDrivers Database" on page 199.
	Reporting icon - Opens the Reporting view in the main window, which provides options for generating reports about object assignments (Assigned Objects by Owner or Assigned Owners by Object) in your ScrewDrivers database. See "Generating ScrewDrivers Administration Reports" on page 202.
	Logon Impersonation icon - Opens the Logon Impersonation tool, which you is a troubleshooting tool that you can use to evaluate what assignments that the system is actually generating for a user versus what the user expects based on criteria that you specify. See "To verify owner assignments" on page 30.

Table 1-1: ScrewDrivers Administration Icon bar

Icon	Description
	Refresh icon - Queries the ScrewDrivers database to refresh the entire administration display with the most current data and information.

Objects pane

An *object* in ScrewDrivers Administration is a thing that you can assign to an *owner*, such as a PDF printer that is assigned to an individual user. An *object group* is a logical collection of objects. You create, configure, and manipulate objects and object groups in the Objects pane. Objects are organized by *object type* (printer, session printer settings, and permissions) in a hierarchical tree structure the Objects pane. The object types that are displayed in the Objects pane depend upon the ScrewDrivers products that your organization has licensed. All the objects that are currently defined for the licensed object types are displayed. Objects are sorted alphabetically by name within an object type. A unique icon identifies each object type in the Objects pane.

The Objects pane name and display is dynamically updated based on the object type that you select on the Icon bar on the ScrewDrivers Administration main window. For example, if you click the Printers icon, then the Objects pane is named “Printers,” all the printer objects that you can assign to an owner are displayed in the pane, and the option to add a printer object is labeled Add Printer. If you click the Session Printer Settings icon, then the Objects pane is named “Session Settings,” all the printer session settings that you can assign to an owner are displayed in the pane, and the option to add a Session Settings object is labeled Add Session Settings.

For detailed information managing objects, see “Managing Objects and Object Groups” on page 22.

Assignments pane

The Assignments pane displays all the printers, printer session settings, and ScrewDrivers Administration permissions that have been assigned to a selected owner, where:

- An *owner* in ScrewDrivers Administration is an entity that can receive assignments and other configuration settings. A unique icon identifies each owner type in the Assignments pane.
- *Assigning* an object is the act of selecting an object or object group in the Objects pane, and then associating the object or object group with a specific owner in the Assignments pane.

These assignments are displayed in a hierarchical tree structure across three separate tabs in the pane:

- Active Directory tab – The Active Directory primary directory and its organizational units (OUs).

In ScrewDrivers Administration, OUs and Containers are considered to be the same owner type.

- Network tab – Client computers that are specified by either (DSN) name, IP address, or a range of IP addresses.
- Local Users and Groups tab – Local accounts on the Terminal Server/machine that the users have logged into.

For detailed information about managing owners, see "Managing Owners" on page 27. For detailed information about managing assignments, see "Managing Assignments" on page 32.

Information pane

The Information pane displays information about a selected object or owner. The information might be read-only, for example, a list of default printers for a selected owner, or depending on the object that is selected, a fillable *object form* might be displayed. An object form groups together related configuration parameters for the selected object. The form controls are loaded with the settings for the currently selected object. Each object type has its own unique object form.

If the object form is fillable, then the form can have one or more tabs. An Expand/Collapse icon is displayed next to a tab, which you click to open and close the tab as needed.

You might have to use the Scroll bar that is displayed on the right side of the Information pane to view all the tabs for an object form.

After you make a change to any value on any tab, you must click Save (displayed in the top right corner of the Information pane) to save the change. All current values on all tabs are saved when you click Save. You cannot save changes on a per tab basis.

Owner Inheritance and Multiple Assignment Resolution

Every time ScrewDrivers detects a new login session, the following information is analyzed to build the hierarchical structure of an Owners tree on one of the three tabs for the Assignments pane:

- The user that is logging in to the system.
- The Session Agent that the user is logging in to.
- The client that the user is logging in from.

Each of these three primary owners is used as a foundation to locate additional related owners through Active Directory memberships and Network Owners, which can be groups, computers, a single IP address, or a range of IP addresses. You can assign objects and object groups to these primary owners, or *parent owners*. Moreover, although OUs, Trusted Domains, and Containers are not primary owners in a ScrewDrivers Administration session, you can assign objects or groups of objects to them just the same. Assignments are then inherited by the children of a parent owner, which is *owner inheritance*.

Owner inheritance determines the final results for all objects that each ScrewDrivers session receives. Consequently, before you begin assigning objects and/or object groups to owners or carrying out other administrative tasks, you must understand the concept of owner inheritance. This section details the following topics that are related to owner inheritance:

- “Single assignment versus multiple assignments” below.
- “Assignment resolution” on page 20.
- “Advanced options for assignment resolution” on page 21.

Single assignment versus multiple assignments

When you are assigning objects and settings to owners, you must be aware that some objects and settings require a single final result, which means that only one assignment is possible. Other objects and settings, however, allow for multiple assignments.

Single Result Settings

- ScrewDrivers session settings. See Chapter 3, “Managing ScrewDrivers Endpoint Printers,” on page 49.
- Default printer assignment. See Chapter 6, “Managing ScrewDrivers Print Server Printers,” on page 83 and Chapter 7, “Managing ScrewDrivers Direct Printers,” on page 111.

Multiple Result Settings

- Printer assignments other than default printer. See Chapter 6, “Managing ScrewDrivers Print Server Printers,” on page 83 and Chapter 7, “Managing ScrewDrivers Direct Printers,” on page 111.

In either case, assignment resolution is required if the same object is assigned to two different owners, and the object is allowed for one of the owners, but denied for the other. For example, Jane Doe is a member of the Development Group and the Testing Group, and Printer A has been assigned to both groups; however, Printer A is allowed for the Development Group and denied for the Testing Group. In this case, assignment resolution is a two-step process:

- First, the rank of each assignment is compared, where *rank* is defined as how close the assignment is to the owner. If the ranks of the assignments are different, then the rank of the assignment that is *closest* to the owner takes priority.
- If the ranks of the assignments are the same, then the inheritance statuses of the assignments (Deny or Allow) are compared, where a Deny *always* takes precedence over Allow.

In this example, the ranks of the assignments are identical. As a result, because a Deny *always* takes precedence over an Allow, Jane Doe is denied Printer A.

See Figure 1-6 through Figure 1-8 below for an example of a Deny taking precedence over an Allow.

Figure 1-6: Printer assignment - A KONICA printer is assigned to the IP address range for a client computer (a client assignment). Any user who is at the Owings Mills site and logs in using an IP address within this range inherits the printer.

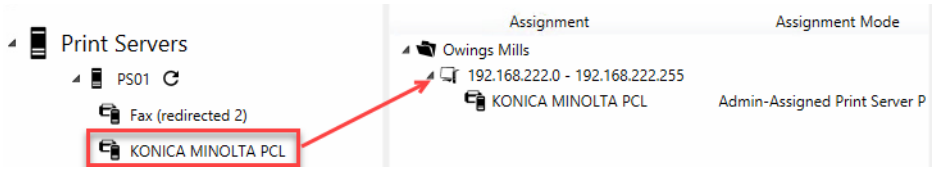


Figure 1-7: Printer assignment denied - The KONICA printer is now a denied assignment for the IP address range.

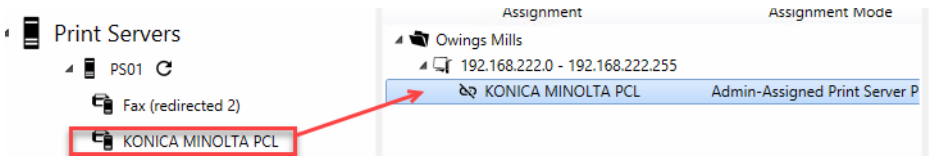
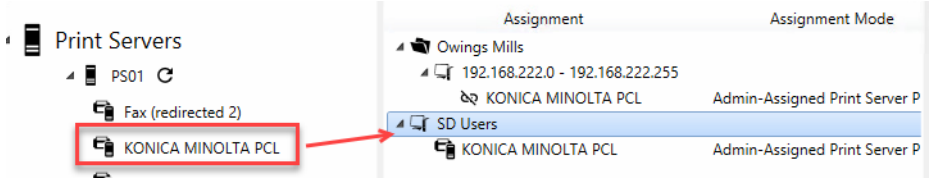


Figure 1-8: Assignment to SD Users group - Any user, however, who is a member of the SD Users group has been assigned this printer.



What are the results of denying the printer for an IP address range, but directly assigning the printer and permitting it for the SD Users group? Any member of the SD users group is assigned the KONICA printer *unless* they are logging in from a client with an IP address that falls within the indicated range. If they log in from a client with an IP address that falls within

the indicated range, then they are denied the printer assignment.

Assignment resolution

In general, when assignment resolution must be carried out between owners, the most restrictive setting takes precedence; however, there is an ordered approach to assignment resolution, and caveats do apply.

The first step in resolving owner assignment is to evaluate the owner hierarchy. For owners that are found in a tree structure, such as the Active Directory (AD), assignments are evaluated from general to specific. This means that in the event of competing owner assignments, the owner that is found at a lower level in the hierarchy of the Owners tree overrides the owner that is found at the higher level. For example, if a domain is assigned a set of printer session settings (PSP1), but an OU is assigned a different set of printer session settings (PSP2), then an owner in the OU receives PSP2 settings because this assignment is more specific to a user in the OU.

If the hierarchy is not clear, then resolution is carried out a according to the following:

- Assignments for users versus servers versus clients.
- Assignments for owners at the same level (groups).

In the event of Windows AD security groups, ScrewDrivers treats the assignments that are at this level as more general than the user, but more specific than an OU. This applies even if the group is in a different OU than the user. If both the group and the user are in different OUs, then the Owners tree is evaluated for parents of both the user and the group.

For objects that do not have an inherent order of resolution, several tests are carried out to first determine if a resolution is possible.

- For user/server/client branches, the order of importance from least to most is the following: Client < Server < User. For example, if a server has ScrewDrivers Endpoint Configuration A, and the user has ScrewDrivers Endpoint configuration B, then the end result is ScrewDrivers Endpoint configuration B.
- All groups are weighted higher than any OUs or Containers that are above them in the Active Directory. In the case of nested groups, however, the groups that contain the users directly are considered more specific to the users, and this results in the overriding of any settings that have been applied to groups of groups.

Finally, if none of these tests result in assignment resolution, then, ultimately, the order in which the objects are retrieved from the Active Directory and subsequently read from the ScrewDrivers database determines the resolution.

Although you can discover this information by reviewing the Tricerat owner enumeration on a case by case basis, Tricerat recommends that you use Deny Objects where appropriate to obtain a unique result. See "To deny an assignment of an object" on page 34.

Advanced options for assignment resolution

In addition to normal assignment operations, several options are available to manipulate the final result of owner assignments. You can:

- Deny any assignment at a lower level in an Owners tree.
- Add the object as a denied object if the object is inherited through any other means.
- Specify that an owner is to ignore entire categories of assignments, which includes blocking all objects that are inherited from the tree above them, blocking server assignments, blocking client assignments, or blocking user assignments. For example, if an administrator is to receive assignments based solely on user membership, then the administrator can instruct the domain level to ignore all server and client assignments.

For detailed instructions about implementing advanced blocking options for assignment resolution, see "To block an owner from receiving an assignment" on page 35.

Managing Objects and Object Groups

Managing objects includes adding objects or object groups, deleting objects and object groups, disabling/enabling objects, and auditing objects. When you add an object, you can add it as a new object, or you can duplicate an existing object, and then modify the duplicated object. You must manually save any new object or any changes that you make to an existing object for the object to be updated in the ScrewDrivers database. Before you add a new object, you might first search for the object to confirm that it does not already exist, or you can search for an object to view its information.

For information about auditing objects, see "Auditing the ScrewDrivers Database" on page 199..

To search for an object and view its information

When you search for an object in the Objects pane:

- You enter your search string in the filter field that is displayed at the top of the Objects pane.
- Your search is carried out all object types that are currently displayed in the Objects pane. You cannot limit the search to a single object type. For example, if the Objects pane is currently displaying printer objects, then the search is carried out across all Print Server objects, all Managed Printer objects, all PDF Printer objects, all Local Printer objects, and all Network Printer objects.
- The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results. As you enter the search string, the list of matching search results is dynamically updated.

For example, if you enter a search string of **PDF**, and the Objects pane is currently displaying all printer objects, then search results could include the following: all print server printers that contain **PDF** in their names (for example, Microsoft Print to **PDF)** and all PDF printers.

You might have to expand a top-level object group and/or an object folder to view a list of matching search results.

When you view information about a selected object:

- If you select the object in the *Objects* pane, then the Information pane displays information about the object itself, including all the owners to which the object is currently assigned. The owner assignment information is displayed on the Assignments tab in the Information pane. See "To view all the owners assigned to a single object" on page 25.
- If you select the object in the *Assignments* pane, then the Information pane displays status information about the object's assignments, such as whether the assignment is inherited or blocked.

A View Object Properties option is also displayed. If you click View Object Properties, then the Information pane no longer displays information about the object's assignments. Instead, it displays information about the object itself.

After you click View Object Properties, then the object selection is cleared in the Assignments pane and the object is automatically selected in the Objects pane.

To manage an object or object group

When you use the "Add Object" option that is displayed at the top of the Objects pane, the system automatically selects the correct folder level in the Objects tree for adding the new object. If you decide, however, to manually select the folder level at which to add a new object or object group, be aware that you cannot add a new object or object group at all folder levels in the Objects tree. The options to add a new object or object group are available only for the lowest level folders where it is appropriate to add a new object or object group. For example, if the Objects pane is currently displaying printer objects, then you cannot add a new object or object group at the printer object type folder level (Print Servers, Managed Printers, and so on), but you can add a new printer object or printer object group in the Print Server folder.

If you can add a new object or object group to a folder in the Objects tree, then when you right-click the folder, a context menu opens with two options: New <Object> and New Group. If you can add only a new object, then just the New <Object> option is displayed.

- If you are adding a new object, then after you click New <Object>, an Add <New Object> dialog box opens that contains all the necessary fields for adding the new object, including the object name.
- If you are adding a new object group, then a placeholder folder named <New Group> is created. To name the new object group, right-click the <New Group> placeholder, and on the context menu that opens, click Rename. The <New Group> placeholder is automatically selected for renaming.

After you add an object or object group, the following options are available on the context menu for the object or object group:

- <New Object> - Available only for object groups. Use this option to add individual objects to the object group.

You can also click and drag any object from its current location in the Objects tree to the <New Object> group folder.

- Rename - Object names are stored internally by an object ID. As a result, you can use the same object name as needed; however, to avoid confusion, Tricerat does not recommend that you do so.
- Duplicate - Available only for objects, not object groups. You can duplicate an existing object, and then edit the name and settings as needed to add a new object to the same Objects folder. When you duplicate an object, its assignments are *not* duplicated.

- Delete - You can delete individual objects or object groups from the Objects tree, you can delete individual objects from an object group, or you can delete an entire object group. To select multiple objects or object groups for deletion, use CTRL-click or SHIFT-click.

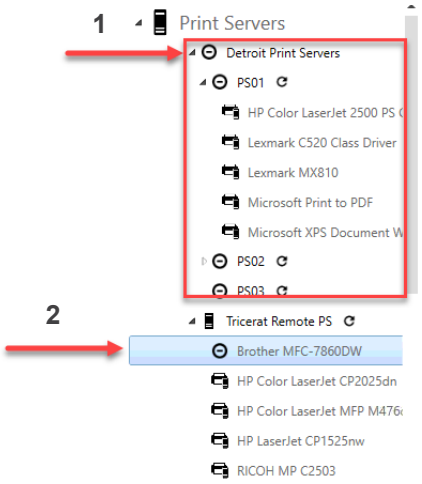
To delete individual objects from an Objects group, you must expand the group to view and select the individual objects.

When you delete objects from the Objects tree, the objects are removed from the ScrewDrivers database and all assignments for the objects are also deleted. If an object must again be assigned to an owner or owners, then you must first add the object back to the Objects tree.

- Disable/Enable - You can disable/enable individual objects, you can disable/enable individual objects in an object group, or you can disable/enable all the objects in an object group in a single step. To select multiple objects or object groups for disabling/enabling, use CTRL-click or SHIFT-click.

To disable/enable individual objects in an Objects group, you must expand the group to view and select the individual objects.

Figure 1-9: Disabled objects in the Objects tree



Item	Description
1	All objects in an object group disabled at the group level.
2	Object individually disabled.

When you disable objects in the Objects tree, the objects are not removed from the Objects tree nor are any associated assignments deleted. The object is simply not effective/operational for any owner to which it is assigned. For example, if you need to take a printer down for maintenance, but you do not want to delete any associated assignments, then you can disable the printer object. Although the printer assignments

remain intact, any affected owner is not able to print from the printer. After the printer is repaired, you can enable the printer, and all the affected owners can then print from it again.

To view all the owners assigned to a single object

The following information details how to view all the owners to which a single object is assigned. To view all the owners assigned to all objects in the ScrewDrivers database, see "Generating ScrewDrivers Administration Reports" on page 202.

When you are viewing information about a selected object, if you select the object in the Objects pane, then the Information pane displays information about the object itself, including all the owners to which the object is currently assigned. This owner assignment information is displayed on the Assignments tab for the object form in the Information pane, and from this tab, you can delete one or more direct assignments for an owner.

You an also individually delete direct assignments for an owner from the object's context menu in the Assignments pane. See "To delete a direct assignment of an object for an owner" on page 34.

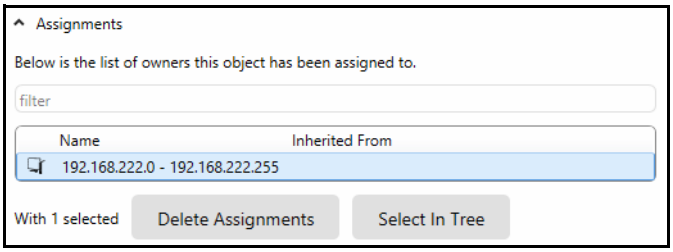
1. Confirm that the Objects pane is set the correct display. For example, to view the owners to which a set of printer session settings are currently assigned, click the Session Printer Settings icon on the ScrewDrivers Administration Icon bar.
2. Select the object for which you are viewing the list of current owners.

Remember, you can search for a specific object in the ScrewDrivers database. See "To search for an object and view its information" on page 22.

3. In the Information pane, open the Assignments tab on the object form.

   The tab displays a complete list of the owners to which object is currently assigned. If applicable, the list also indicates if the object was inherited by the owner and from whom.

Figure 1-10: Assignments tab example (ScrewDrivers Session Settings object form)



4. Select an object owner, or optionally, in the filter field, enter your search criteria to search for a specific owner.

   If you search for an owner, then note the following about the search:

   - The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results.
   - As you enter the search string, the list of matching search results is dynamically updated.

   For example, a search string of **Sales** could return results of **Sales** Demo and NE **SALES**.

5. Optionally, for the selected owner, do one or both of the following:

   - To view the owner in the Owners tree in the Assignments pane, click Select in Tree.

The owner is displayed on the correct branch of the Owners tree regardless of the tab (Active Directory, Network, or Local Users and Groups) that was opened in the Assignments pane at the time you clicked Select in Tree.

   - If the assignment is a direct assignment, then to delete the assignment for the selected owner, click Delete Assignments.

You can delete only direct assignments. If the assignment is inherited, then you can only deny the assignment. See "To deny an assignment of an object" on page 34. To select multiple direct assignments for deletion at the same time, use CTRL-click or SHIFT-click.

Managing Owners

Managing owners includes reviewing owner assignments, verifying owner assignments, and blocking specific owner assignments. It also includes managing (adding, deleting, and/or renaming) Network (“custom”) owners and auditing owners. Before you add a new Network owner, you might want to first search for the owner to confirm that it does not already exist.

For information about blocking an assignment for an owner, see “To block an owner from receiving an assignment” on page 35. For information about auditing an owner, see “Auditing the ScrewDrivers Database” on page 199.

To search for owners

The ScrewDrivers Administration pulls in all the entities that are in Active Directory based on the Windows domain in which it is running and displays these entities in hierarchical tree structures in the Assignments pane across three separate tabs (Active Directory, Network, and Local Users and Groups). When you search for an owner, you can search only for loaded owners, or you can search for all owners, where:

- A loaded owner is an owner that has been dynamically loaded in the instance that you are running.
- All owners are the owners in your Active Directory, whether loaded or not.

When you carry out a search that shows results for all owners, you can limit the search scope to a specific branch (Active Directory, Network, or Local Users and Groups) of the Owners tree, or you can search the entire tree.

To search for loaded owners

Expand the Filter tab that is displayed at the top of the Assignments pane, and then in the filter field, enter your search string.

- Your search is carried out for the entire hierarchy of loaded owners across all three tabs at the same time. It is not limited to the currently active tab.
- The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results. As you enter the search string, the list of matching search results is dynamically updated.

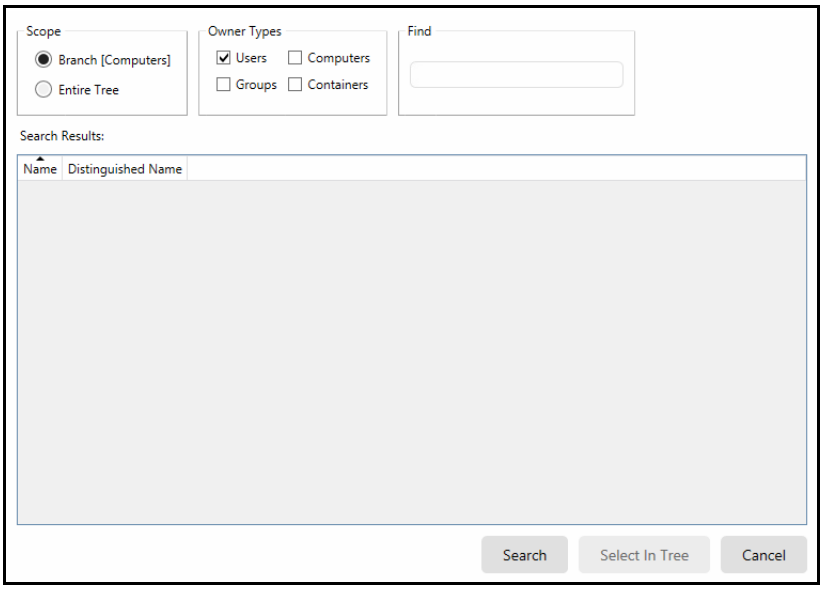
For example, if you enter a search string of **com** with the Local Users and Groups tab as the active tab, then the search results could display the following owners on the tab: Certificate Service D**COM** Access and Distributed **COM** Users. If you open the Network tab, then the following search result, **Com**munications Group, could be displayed on the tab.

You might have to expand a top-level owner folder to view a list of matching search results.

To search for all owners

1. If you are limiting the search to a specific branch of the Owners tree, then before you carry out the search, make sure open the appropriate tab (Active Directory, Network, or Local Users and Groups) in the Assignments pane.
2. At the top of the Assignments pane, click Search to open a search dialog box.

Figure 1-11: Search dialog box (for all owners)



3. Set the options for the search.

Option	Description
Scope	• Branch - The default selection. Searches only the indicated branch of the Owners tree. The branch is based on the tab that was open in the Assignments pane at the time you initiated the search. • Entire tree - Searches across all three branches of the Owners tree, regardless of the tab that was opened in the Assignments pane at the time you initiated the search.
Owner Types	Users is selected by default. You can select any combination of Owner Type to search.
Find	Enter the search criteria in this field. The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results. For example, a search string of **main** can return owner with a name of Do**main** Controllers.

4. Click Search.

   All the owners that match your search criteria are displayed in the Search Results pane of the dialog box.

5. Optionally, to view an owner in its branch of the Owners Tree, select the owner in the Search Results pane, and then click Select in Tree.

   The search dialog box closes, and you return to the ScrewDrivers Administration main window with the entry for the selected owner automatically highlighted in the Owners tree.

To review owner assignments

The following information details how to view all the objects to a single owner. To view all the objects assigned to all owners in the ScrewDrivers database, see "Generating ScrewDrivers Administration Reports" on page 202.

1. Based on the owner assignments that you are viewing, select the appropriate icon on the ScrewDrivers Administration Icon bar:

Option	Description
To view all the printer assignments for an owner	Select the Printers icon.
To view all the printer session settings assignments for an owner	Select the Printer Session Settings icon.
To view ScrewDrivers Administration permissions for an owner	Select the Permissions icon.
To view all the assignments (printers, session settings, and permissions) for an owner	Select the View All Assignments icon.

2. In the Assignments pane, open the appropriate tab (Active Directory, Network, or Local Users and Groups), and then select the owner in the Owners tree.

If you are having difficulty locating the correct owner, you can always search for the owner. See "To search for owners" on page 27.

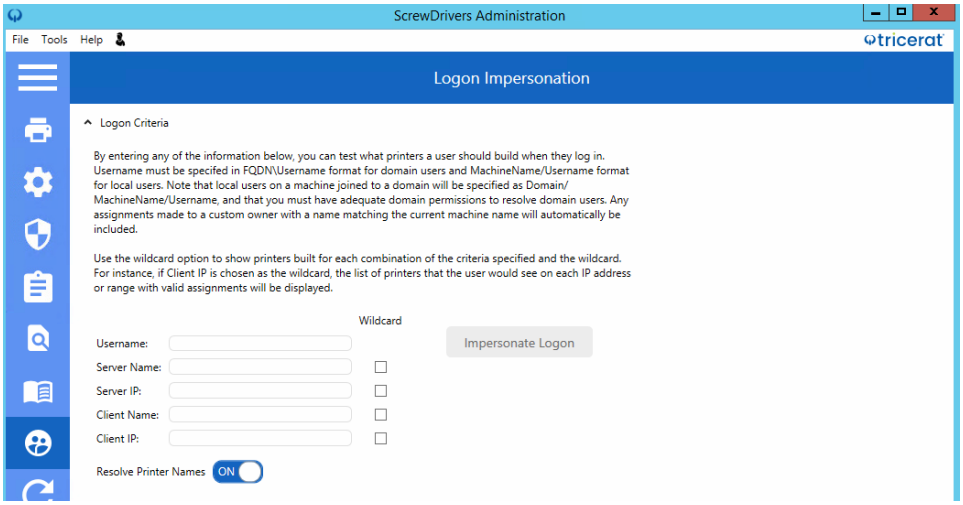
In addition to the owner assignments that you are reviewing, the Information pane always displays the following information for the owner:

- Default Printers tab: The list of default printers assigned to the owner. You can remove default printers for the owner through the Information pane only if the default printer is displayed in **bold**.
- Blocked Assignments tab: The list of direct blocked assignments and, by default, inherited blocked assignments for the owner. To hide all inherited assignments for the owner, including Inherited Blocked Assignments, in the Assignments pane, select Hide Inherited Assignments.
- The Audit tab: The history of all the assignments that have ever been made to the owner.

To verify owner assignments

Logon Impersonation is a troubleshooting tool that you use to verify the assignments that an owner is *actually* receiving after logging in to a ScrewDrivers Session Agent versus what the owner is expecting. For example, one of your users logs in to a ScrewDrivers Endpoint Session Agent and expects to see four print server printers available; however, only three printers are being built. Click the Logon Impersonation icon on the Icon bar to open the Logon Impersonation tool, and specify the criteria that allows you to evaluate what assignments that the system is actually generating for the user versus what the user is expecting.

Figure 1-12: Logon Impersonation tool



To manage Network owners

You can use a Network owner to organize your enterprise's owners by something that best suits your working needs. For example, you can use Network owners to dynamically assign printers to owners based on either the hostnames, IP addresses, or range of IP addresses of the clients that the owners are using to connect to the ScrewDrivers Session Agent. You can add, rename, and delete Network owners.

1. In the Assignments pane, open the Network tab.
2. Right-click anywhere on Network tab, and on the context menu that opens, select one of the following options to create the Network owner:

Option	Description
New Group	An organizational grouping of one or more groups, computers, IP addresses, and/or IP address ranges. After you name the group, you must add owners to the group. To add owners, right-click the group name, and on the context menu that opens, select one of the following: • New Computer. See "New Computer." • New IP Address Range. See "New IP Address Range." **Note:** To nest groups within other groups, select New Group.

Option	Description
New Computer	The complete device name for the client machine from which the owner is connecting to the ScrewDrivers Session Agent, and not the fully qualified domain name, or its IP address. After you enter the device name, you can make assignments to the device in the same manner that you make assignments to a group, a user, and so on. You can use wildcard characters in the device name, including a question mark (?) to specify a single character and an asterisk (*) to specify multiple characters. **Note:** To specify a range of IP addresses, see "New IP Address Range."
New IP Address Range	The range of IP addresses for the client machines from which the owners are connecting to the ScrewDrivers Session Agent. This is the low IP address and the high IP address of the appropriate range. **Note:** To limit the range to a single IP address, use the New Computer option.

After you add a Network owner, the following options are available on the context menu for the owner:

- Rename – An owner name must be unique for each owner in the ScrewDrivers database.
- Delete – If you delete a Network owner, or you delete a Network owner group, then all the nested owners and groups and all their associated assignments are also deleted.

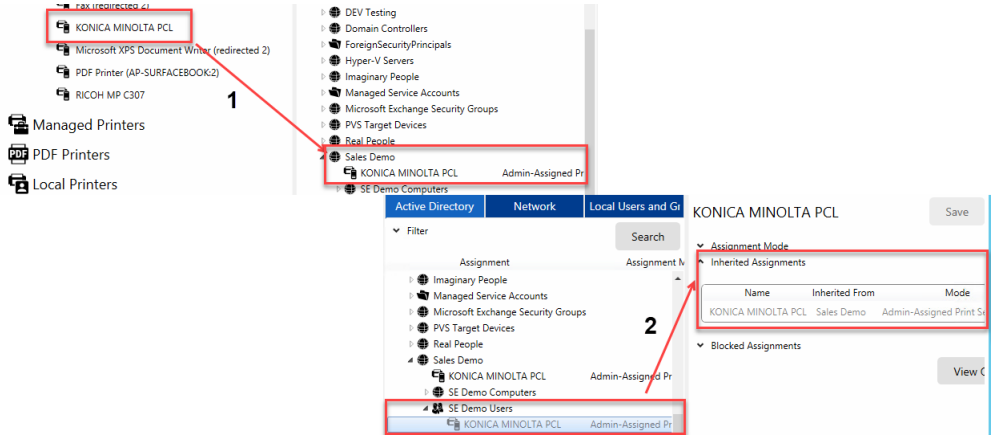
Managing Assignments

Assigning an object is the act of selecting an object or object group and associating the object or object group with a specific owner. To assign an object or object group, you select the object or object group, and then you drag the selected object or object group to the appropriate owner on one of the three tabs in the Assignments pane.

Assignments are made in three primary locations:

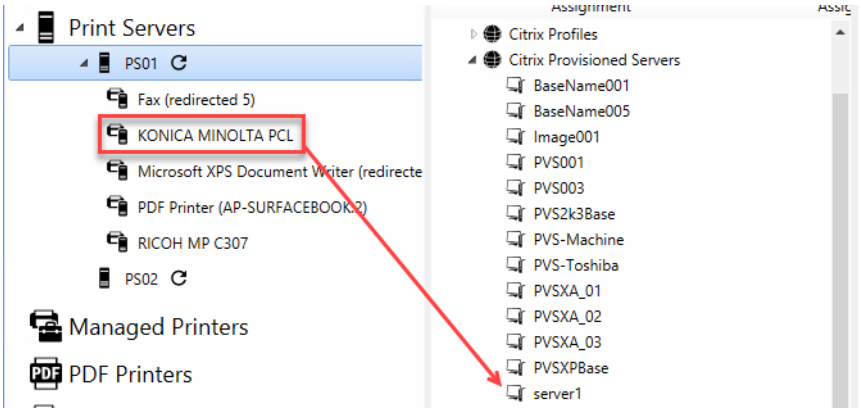
- The user assignments – Any object that is assigned directly to the user who is logging in, or any Group/Domain/OU of which the user is a member. For example, in Figure 1-13 below, (1) a KONICA MINOLTA printer is assigned directory to the Sales Demo OU, and the SE Demo Users group is a member of this OU. As a result, (2) any user who is a member of the SE Demo Users group inherits this KONICA MINOLTA printer.

Figure 1-13: User assignment example



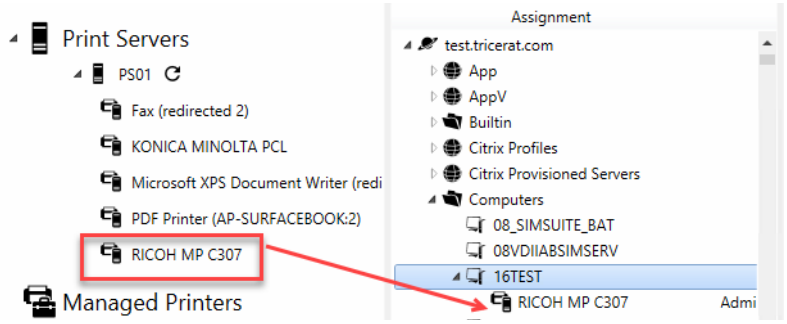
- The Session Agent assignments – Any object that is assigned directly to the Session Agent (Terminal Server or Virtual Desktop) or any Group/OU/IP range of which the Session Agent is a member. For example, in Figure 1-14 below, the KONICA printer is assigned to server1. This printer is built on the desktop/client of any user who logs in to server1.

Figure 1-14: Server assignment example



- The client assignments – Any object that is assigned to the client in the Active Directory, a client in Network Owners, or to an IP address. For example, in Figure 1-15 below, an HP printer is assigned to the client/workstation in the Computers container. Any user who logs in to a Virtual Desktop/Terminal Server from the client inherits the printer.

Figure 1-15: Client assignment example



As the ScrewDrivers Administrator, in addition to making direct assignments, your duties for managing assignments include making or deleting direct assignments, denying or permitting assignments, and blocking an owner from receiving one or more assignment types.

To make a direct assignment of an object or object group to an owner

When you make a direct assignment of an object or object groups to an owner, the assignment is automatically saved to the ScrewDrivers database. No manual action to save the assignment is required. The only objects that you cannot directly assign to an owner are Print Server objects. You can assign only the nested printers. Also, groups are not allowed for the Print Server objects.

If ScrewDrivers Print Server or ScrewDrivers Direct has been licensed, then an owner can have one or more different printers assigned to it, and you can set one of these printers as the owner's default printer. For detailed information about ScrewDrivers Print Server or ScrewDrivers Direct, including the specifying of a default printer for an owner, see *Chapter 6, "Managing ScrewDrivers Print Server Printers," on page 83* or *Chapter 7, "Managing ScrewDrivers Direct Printers," on page 111.*

1. In the Assignments pane, select the owner to which you are assigning the objects or object group.
2. In the Objects pane, select the object or object group that you are assigning. Note the following:
   - To select multiple objects or object groups, use CTRL-click.
   - To assign all the objects in the object group in a single step, select the top-level object group folder.
   - To assign only specific objects in an object group, expand the top-level object group

folder, and then select the objects.

You can multi-select only objects and groups. You cannot multi-select a group and one or more of its nested objects.

3. Drag the selected objects or object groups to the selected owner in the Assignments pane.

To delete a direct assignment of an object for an owner

You can delete only direct assignments and you can delete only one direct assignment of an object at a time.

To delete multiple direct assignments of objects for an owner, see "To review owner assignments" on page 29.

Although you cannot delete an inherited assignment, you can deny it. See "To deny an assignment of an object" below.

1. In the Assignments pane, select the owner from which you are deleting the object.
2. Expand the owner entry to view all the object and object groups that are assigned to the owner.
3. Right-click the object that you are deleting, and on the context menu that opens, click Delete Assignment.

   The direct assignment is immediately deleted.

To deny an assignment of an object

You can delete or deny any direct assignment; however, if an owner has *inherited* an unnecessary or unwanted assignment, you cannot delete the assignment. Instead, you must deny the assignment. When you deny either a direct assignment or an inherited assignment, the denied state of the assignment is also inherited – if a parent owner is denied an assignment, then all its children are also denied the assignment.

Remember, a Denied assignment of an object always overrides any Allowed assignment, so make sure that when you are denying an object, that you set the deny at the appropriate level in the Owners tree.

You can deny only inherited assignment for one owner at a time using the following procedure. To deny all inherited assignments for an owner in a single step, see "Advanced options for assignment resolution" on page 21.

1. In the Assignments pane, select the owner for which you are denying the object.
2. Expand the owner entry to view all the objects and object groups that are assigned to the owner.
3. Right-click the object and on the context menu that opens, click Deny Assignment.

   The object is marked with a Denied icon.

To permit an assignment of an object

You can always override the Denied status of an object and permit its assignment again. You can permit the assignment of an object at the parent owner level, which means that the assignment is also permitted for all the parent owner's children, or you can selectively permit the assignment of any child one at a time.

Remember, a Denied assignment of an object always overrides any Allowed assignment, so if you cannot enable the assignment for an object, check to see if the assignment is denied for its parent owner.

1. In the Assignments pane, select the owner for which you are permitting the object.
2. Expand the owner entry to view all the objects and object groups that are assigned to the owner.
3. Right-click the object and on the context menu that opens, click Permit Assignment.

   The Denied icon is removed from the object.

To block an owner from receiving an assignment

The following settings are typically used only in advanced configurations. Contact support@tricerat.com for assistance.

In addition to normal assignment operations, several options are available to manipulate the final result of owner assignments, including specifying that an owner is to ignore entire categories of assignments. For example, if an administrator is to receive assignments based solely on user membership, then the administrator can instruct the domain level to ignore all server and client assignments.

In the Assignments pane, right-click the owner, and on the context menu that opens, select the appropriate option or options.

Option	Description
Note: If an option is already selected for an owner, then the when you right-click the owner, the option reads as "Unblock," on the context menu, for example, "Unblock Inherited Assignments."	
Block Inherited Assignments	Block all objects that are inherited from the folder above the owner.

Option	Description
Block Server Assignments	Blocks all assignments that the owner inherits from the server that is being logged in to.
Block Client Assignments	Blocks all assignments that are made to client computers as well as all the computers that are defined in the Computers container.
Block User Assignments	Blocks all of the user's (owner's) direct assignments as well as all the user's inherited assignments.

Chapter 2
The ScrewDrivers Endpoint Client Application

The ScrewDrivers Endpoint client does not require your users to configure their printers for a remote session. As long as the ScrewDrivers Endpoint client is installed on the connecting workstations and the ScrewDrivers Session Agent is installed on the remote machine, then the printers are built for your users. You access the settings for the ScrewDrivers Endpoint client through the ScrewDrivers Endpoint Client application (app). The app contains the settings for the defining and configuring of the client printers that are to be made available to the remote machine. This chapter details the functions that are available to you in the ScrewDrivers Endpoint Client app.

The ScrewDrivers Session Agent dictates the client settings. A client setting is applicable only if the ScrewDrivers Session Agent allows (Force or Suggest) it.

This chapter covers the following topics:

Introduction

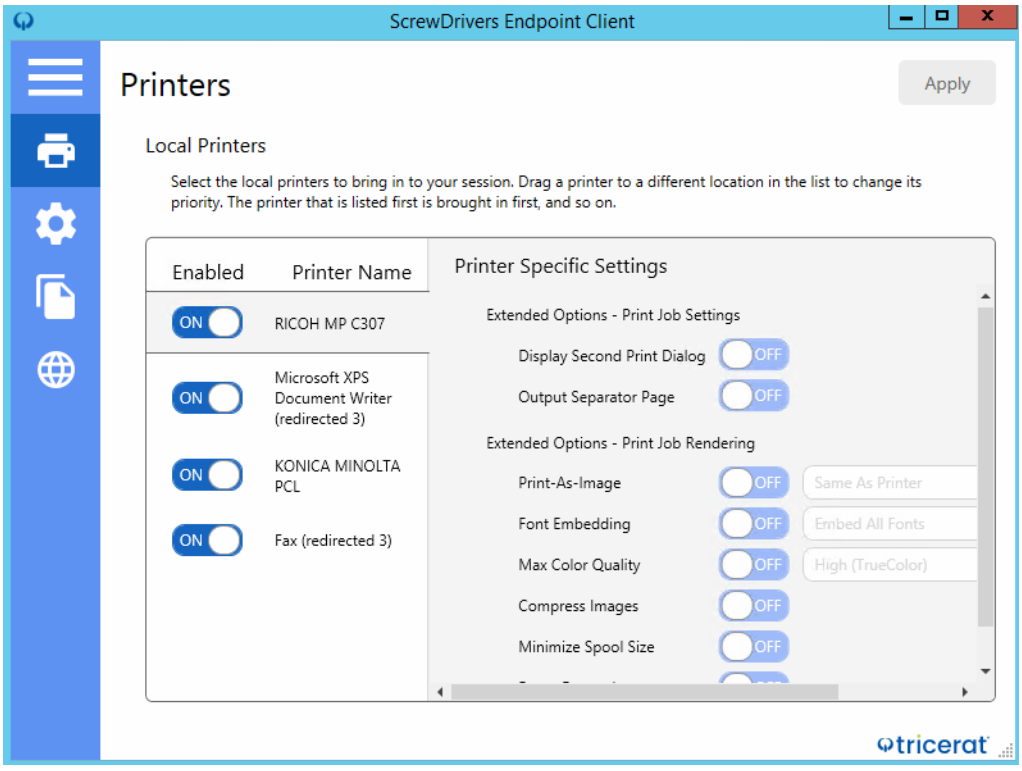
The ScrewDrivers Endpoint client is installed on every client workstation that your users are using to log in to the remote machine. You access the settings ScrewDrivers Endpoint client through the ScrewDrivers Endpoint Client app. The app contains the settings for the defining and configuring of the client printers that are to be made available to the remote machine. To open the ScrewDrivers Endpoint Client app, do the following:

Open the Start menu, and then under Programs, click ScrewDrivers Endpoint Client.

Although you do not need to provide your users access to the ScrewDrivers Endpoint Client app, this access can be very helpful for your power users that connect to multiple environments.

You can automate the configuration for your users by deploying registry settings to their clients that mimic the settings that are available in the ScrewDrivers Endpoint Client app. Contact support@tricerat.com for more information and assistance.

Figure 2-1: ScrewDrivers Endpoint Client app



The ScrewDrivers Endpoint Client app has four tabs for managing your client functions. Each tab is represented by an icon on a Tab bar that is displayed on the left side of the main window. Click an icon to view the corresponding tab.

Tab	Description
Tip: When the ScrewDrivers Endpoint Client app first opens, the Tab bar is collapsed. You can hold your cursor over an icon on the Tab bar to display a tooltip that shows the name of the corresponding tab, or you can click the Hamburger icon to expand the Tab bar and view the complete name of each tab.	
	Printers tab - Contains options for the configuration of the printers in your users' environments. See "Printers Tab" on page 37.
	General Settings tab - Contains options for configuring your users' remote sessions and options for specifying the printer data cache method. See "General Settings Tab" on page 40.
	Logging tab - Provides options for diagnostic logging from the ScrewDrivers Endpoint Client. See "Logging Tab" on page 42.
	About tab - Provides information about the ScrewDrivers Endpoint client. See "About Tab" on page 43.

With the exception of the About tab, all the tabs have the following features in common:

- After you make a change to any value on any tab, you must click Apply (displayed in the top right corner of the app) to save the change. All current values on all tabs are saved when you click Apply. You cannot save changes on a per tab basis.

Figure 2-2: Apply button

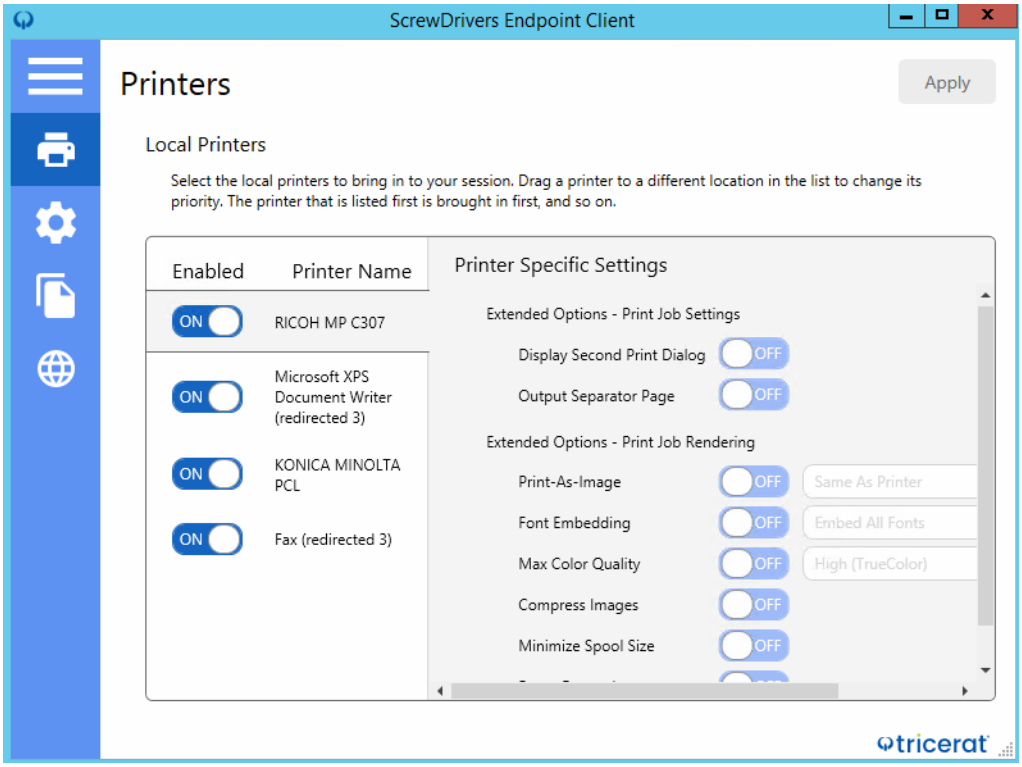
- After you have made and applied all the needed changes for your ScrewDrivers Endpoint client, click Close (x) in the upper right corner of the app to close and exit out of the app.

If you make any changes to the client settings on a tab, and do not immediately apply these changes, then you are prompted to do so before opening another tab or exiting the app.

Printers Tab

When the ScrewDrivers Endpoint Client app first opens, the Printers tab is the open tab. The tab contains options for the configuration of the client printers in your users' environments.

Figure 2-3: ScrewDrivers Endpoint Client app, Printers tab



The Printers tab displays a list of all the printers (locally attached and network) that are available for the client workstation and turned on on the remote machine. The list is arranged in order of decreasing printer priority. To change the priority of a printer, click and drag the printer to a different location in the list. You can also turn on and turn off the availability of a printer, regardless of its priority. If a printer is turned on, then after a user logs in to a remote session, the Session Agent makes the printer available to the user during the session.

You can apply printer-specific settings to each printer on the Printers tab. To apply any of the following printer-specific settings to a printer, select the printer, and then enable or disable the settings as appropriate.

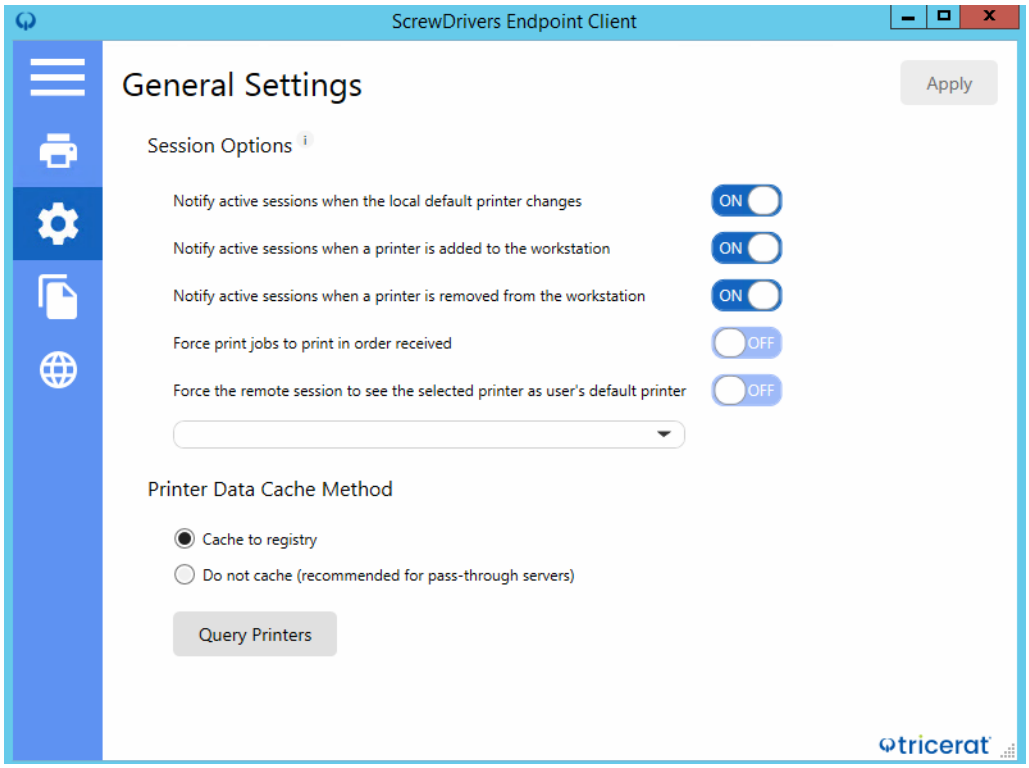
Option	Description
Extended Options - Print Job Settings	
Display Second Print Dialog	The second print dialog box is the Client Print Spooler dialog box, and by default, this dialog box is not displayed. If turned on, then this dialog box is displayed when a print job begins to spool on the client, and your users can carry out advanced printing functions such as stapling, booklet printing, hole punching, and so on.
Output Separator Page	If turned on, then an additional page that contains information about the print job, such as the name of the user who submitted the job, is printed.
Extend Options - Print Job Rendering: Enable these options to implement workarounds when your users encounter printing issues related to font, scaling, and/or graphics.	
Print-As-Image	If turned on, then ScrewDrivers Endpoint converts each page of the print job to a BMP. **Note:** Although enabling this option can resolve output issues such as font issues, uncompressed printing can also use a significant amount of bandwidth. **Caution:** Do not automatically choose the default DPI as the DPI for a job. Because each doubling of DPI results in four times the amount of data that is sent, select the lowest possible DPI that results in acceptable output. Typically, 300DPI is sufficient.
Font Embedding	If turned on, ScrewDrivers Endpoint embeds a temporary copy of the font or font data in the print jobs. • Embed All Fonts - The default setting. If turned on, and the fonts that are used in the print job are not available on the client, then ScrewDrivers Endpoint sends a temporary copy of each font to the client with the print job. After the print job is complete, then ScrewDrivers Endpoint removes the temporary copies from the client. • Pre-Render Embedded - If turned on, and the fonts that are used in the print job are not available on the client, then ScrewDrivers Endpoint sends these fonts as images to the client, and then integrates the corresponding text back into the job file. • Pre-Render All - If turned on, then ScrewDrivers Endpoint sends *all* fonts as images to the client (it does not matter whether the font is available on the client or not), and then integrates the corresponding text back into the job file. **Note:** Typically, you select Pre-Render All only when Tricerat support directs you to do so. This option is useful for situations in which the client's fonts are unreliable or incomplete, or there are font mismatches between the ScrewDrivers Session Agent and client.

Option	Description
Max Color Quality	If turned on, then, by default, ScrewDrivers Endpoint renders images in High (TrueColor), which is 24-bit. You can select a different default value: • Medium (HighColor), which is 16-bit • Low, which is 8-bit. • Monochrome, which is 1-bit. (True black and white). **Note:** If you lower the color quality, then the document spool size is reduced; however, the quality of the output is affected. The difference between 24-bit and 16-bit is negligible, but the difference becomes more pronounced as you continue to lower the color quality.
Compress Images	If turned on, then a lossy compression algorithm is carried out for images in the document for additional reduction in spool size.
Minimize spool	Turned on by default. Breaks large images up into multiple smaller images, which allows data to be streamed to the printer faster and also allows the printer to discard the “data chunks” as they are rendered, resulting in less memory in use at any given time.
Force Grayscale	If turned on, then all images in the document are converted to grayscale, which is 8-bit gray and reduces file size.

General Settings Tab

The General Settings tab on the ScrewDrivers Endpoint Client app contains options for configuring your users' remote sessions and options for specifying the printer data cache method.

Figure 2-4: ScrewDrivers Endpoint Client app, General Settings tab



Option	Description
Session Options - Use only if Terminal Server allows.	
Notify active sessions when the local default printer changes	If turned on, then a notification is sent to the remote machine anytime any information about the default printer changes during a remote session, including if another printer is set as the default printer on the client workstation.
Notify active sessions when a printer is added to the workstation	If turned on, then a notification is sent to the remote machine when any new printer is added to the client workstation during a remote session.
Notify active sessions when a printer is removed from the workstation	If turned on, then a notification is sent to the remote machine when any printer is removed from the client workstation during a remote session.
Force print jobs to print in order received	If turned on, then the local print spool is forced to process print jobs in the order in which they were received, instead of printing the spooled documents first.

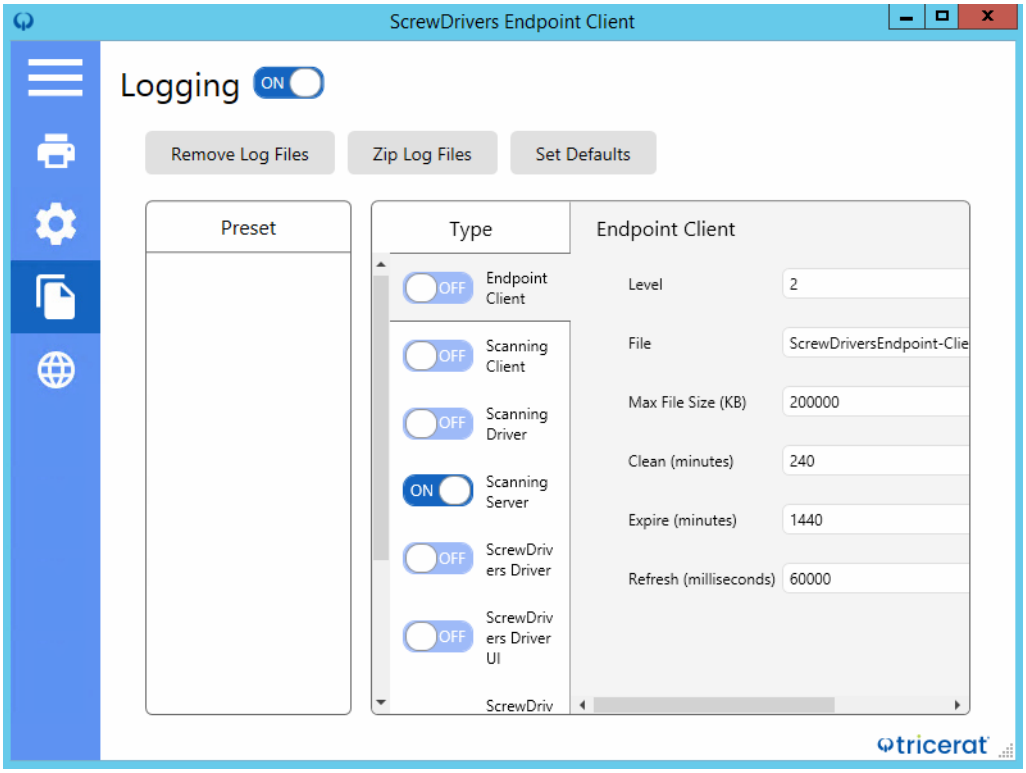
Option	Description
Force the remote session to see the selected printer as user's default printer	If turned on, then a dropdown list opens that displays all the available printers for the client workstation. Select the appropriate printer on this list that is to be the default printer during the remote session instead of the printer that is set as the default printer on the client workstation.
Printer Data Cache Method	
Cache to registry	If selected, then the printer data is stored in the client workstation registry, and is sent to the remote machine after a user logs in to the workstation.
Do not cache (recommended for pass-through servers)	Selected by default. Printer data is not cached. Instead, ScrewDrivers Endpoint queries the printers at log in. **Note:** If this option is selected, then slower printer creation is the result; however, this option is recommended for pass through servers, for example, when users nest multiple remote sessions.
Query Printers	Click to query all enabled printers and save to the registry.

Logging Tab

The Logging tab on the ScrewDrivers Endpoint Client app provides options for diagnostic logging from a ScrewDrivers Endpoint client workstation. This logging information is used for debugging or problem tracking purposes.

Because Tricerat support primarily uses this information, you should not change any of the default values or use any of the commands on this tab unless Tricerat Support instructs you to do so.

Figure 2-5: ScrewDrivers Endpoint Client app, Logging tab

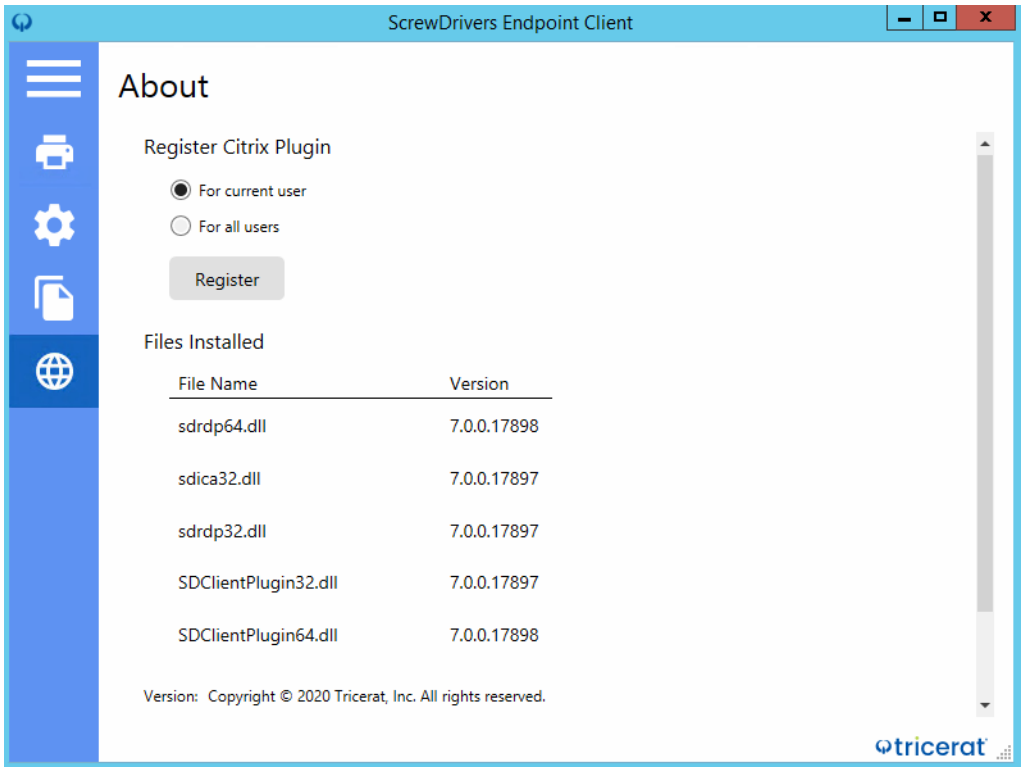


About Tab

The About tab on the ScrewDrivers Endpoint Client app contains an option for registering Tricerat's Citrix plugin, either for the currently logged in user, or for all users.* The tab also displays all the dlls, alphabetically by name, that were installed for the ScrewDrivers Endpoint client. The version number for each dll is also displayed. Hold your mouse pointer over the name of a dll to open a tooltip that displays the full path to the installation directory for the dll. The tab also displays a Help link for documentation and support.

**If you must re-register the Citrix plugin, then generally, the "For all users" option is the better selection as the typical end user does not have the correct permissions to execute this action.*

Figure 2-6: ScrewDrivers Endpoint Client app, About tab



Chapter 3
Managing ScrewDrivers Endpoint Printers

Managing ScrewDrivers Endpoint printers consists of configuring the ScrewDrivers session-level settings for these printers and assigning these session settings to the appropriate owners. You configure these session-level settings on the ScrewDrivers Session Agent and assign these configured settings to owners in ScrewDrivers Administration.

This chapter covers the following topics:

Managing ScrewDrivers Endpoint Printers Session Settings

Tricerat supplies a single set of ScrewDrivers Printers Session Settings—Default ScrewDrivers Settings—in ScrewDrivers Administration for managing ScrewDrivers Endpoint printer session settings. You can assign these Default ScrewDrivers Settings as-is to an owner, you can modify the default settings, and then assign the settings to an owner, or you can create your own unique ScrewDrivers Session Settings, and then assign these settings to an owner. When you assign ScrewDrivers Session Settings to an owner, the settings affect *all* the ScrewDrivers Endpoint printers for the owner. You cannot assign the settings on a per printer basis.

To assign ScrewDrivers Endpoint printers session settings

1. Confirm that the Objects pane is set to Session Printer Settings objects. (You might need to click the Session Printer Settings icon on the ScrewDrivers Administration Icon bar.)

Before continuing, you can click the Expand/Collapse icon that is displayed next to the ScrewDrivers Session Settings folder to expand the folder and view all the printer session settings objects that have already been added, or you can search for specific printer session settings objects. See "To search for an object and view its information" on page 22.

2. Do one of the following in the Objects pane:

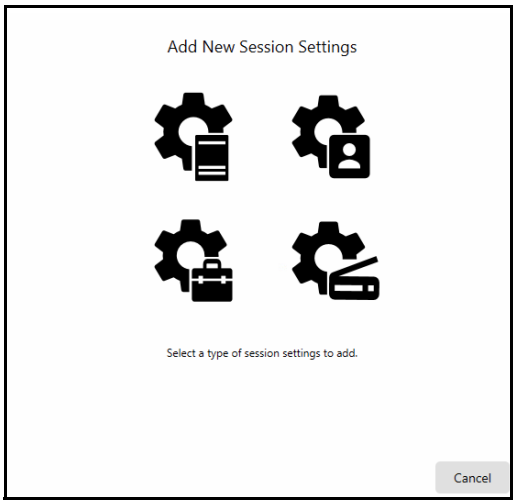
Action	Steps
To assign a set of currently available ScrewDrivers Session Settings to an owner as-is.	Select the settings, and then drag the selected settings to the owner in the Assignments pane. **Note:** If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.
To edit an existing set of ScrewDrivers Session Settings, and optionally, assign these settings to a new owner.	1. Select the settings. The Information pane displays the ScrewDrivers Session Settings object form. The form has seven tabs, and the General tab is the open tab. All the values on all the tabs are set to their current values. 2. Continue to Step 7.
To assign new ScrewDrivers Session Settings to an owner.	Continue to Step 3.

3. In the Objects pane, click Add Session Settings.

   The Add New Session Settings dialog box opens. The dialog box displays icons for the types of printer session settings objects that you can add to the ScrewDrivers database.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

Figure 3-1: Add New Session Settings dialog box

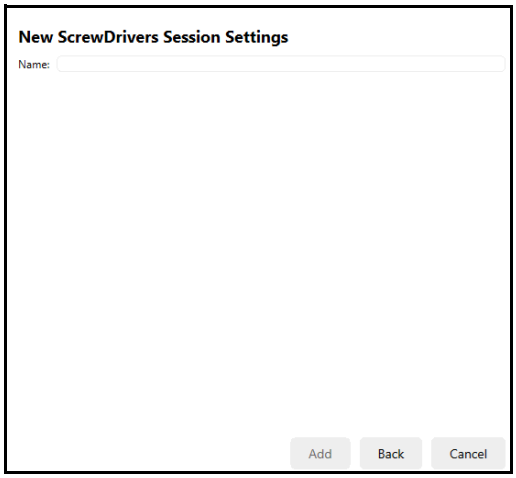


4. Click the ScrewDrivers Session Settings icon.

   The New ScrewDrivers Session Settings dialog box opens.

You can also right-click the ScrewDrivers Session Settings folder in the Objects pane, and on the context menu that opens, click New ScrewDrivers Session Settings.

Figure 3-2: New ScrewDrivers Session Settings dialog box



5. Enter a name for the new session settings, and then click Add.

   The dialog box closes, and the new session settings are displayed in the ScrewDrivers Session Settings folder in the Objects pane.

6. Select the newly added Session Settings object.

   The Information pane displays the ScrewDrivers Session Settings object form. The form has seven tabs, and the General tab is the open tab. All the values on all the tabs are set to their default values.

The Assignments tab and the Audit tab are not discussed here. For information about the Assignment tab, see "To review owner assignments" on page 29. For information about the Audit tab, see Appendix C, "Data Review in the ScrewDrivers Administration," on page 197.

7. Specify the values for the newly added session settings, or edit the values for the selected session settings.

   - General tab

Setting	Description
Printer Creation - Determines which of the user's printers are built on the ScrewDrivers Session Agent after the user logs in. You can select only one Printer Creation option at a time.	
Do not add any client printers	If turned on, then the Session Agent does not build any of the client's printers after a user logs in. **Note:** You typically enable this option only when Tricerat Support instructs you to do so.
Add all client printers	Turned on by default. Add all the client's printers to the ScrewDrivers Session Agent after a user logs in.
Add only the client's default printer	If turned on, then add only the client's default printer to the ScrewDrivers Session Agent after a user logs in.
Add clients first 0 printers	Change the default value of 2 as needed. The first "n" number of printers that are displayed in the list of available printers for the ScrewDrivers client are added to the ScrewDrivers Session Agent after a user logs in with the following caveat:
Always add client's default	Automatically turned on if Add clients first 0 printers is also turned on. The Session Agent builds the client's default printer after a user logs in, even if the client's default printer is not contained in the first "n" number of printers that are displayed in the list of available printers for the ScrewDrivers Endpoint client.
Extended Settings - Provide additional printing features that can be useful depending on your users' environments.	
Allow default printer spoofing	Turned on by default. A user can specify a printer that is not defined as the default printer on the ScrewDrivers client to be the default printer for the user's remote session. **Note:** This option is applicable for situations in which a user can work locally or through a remote session, but requires a different default printer in each case.

Setting	Description
Recapture the default printer after 30 seconds	Turned on by default. The default printer for the ScrewDrivers client is set again for the remote session after the specified time period. This prevents the traditional “server printers” from being set as the user’s default printers during a remote session. You can change the default value of 30 seconds as needed.
Monitor client for changes to the default printer, and reflect in session	If turned on, then a user can change the default printer on the ScrewDrivers Endpoint client, and have this change reflected immediately during a remote session.
Monitor client for new printers, and add in session	If turned on, then when a new printer is added to the ScrewDrivers Endpoint client during a remote session, it is also added to the remote session.
Monitor client for removed printers, and remove from session	If turned on, then a notification is sent to the ScrewDrivers Session Agent when any printer is removed from the client workstation during a remote session.
Delete printers on session disconnect, and add on reconnect	Turned on by default. When a remote session is disconnected, all the client printers are removed from the remote session. When the remote session is reconnected, then the Session Agent builds the printers again.

- Printer Naming tab

Action	Steps
Naming Scheme	
Use a default naming scheme	Select one of the four default schemes. • Printer Name (MACHINE:SESSION) - Turned on by default. • MACHINE:SESSION (Printer Name) • Printer Name (USER:SESSION) • USER:SESSION (Printer Name)
Edit and use a default naming scheme	1. Select one of the four default schemes. (Printer Name is selected.) 2. Do one or both of the following: • Turn on “Limit name component lengths,” and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Turn on the options in the printer name that you are replacing, and then leave a default replacement value as-is, or modify it as needed. For example, if you turn on “Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

Action	Steps
Use a custom naming scheme	**Note:** Special characters other than an exclamation point (!), backslash (\) or period (.) are allowed in any of the free text fields. 1. Select Custom. 2. Set the format of the scheme using Session ID and one or more of the following: Printer, Machine Name, and User. In addition to the Session ID, the name can have up to three components, but you can specify a single component (for example, Machine Name), two components (for example, Machine Name and Printer), or all three components (for example, Machine Name, Printer, and User). **Caution:** Tricerat does not support a format without a Session ID. A user could log in to multiple sessions, which can result in a naming conflict. 3. Optionally, do one or both of the following: • Turn on “Limit name component lengths,” and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Turn on the options in the printer name that you are replacing, and then leave a default replacement value as-is, or modify it as needed. For example, if you turn on “Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

- Advanced tab

Setting	Description
Spool Options - You can select only a single spool option at a time.	
Note: For the first two spool options that are detailed below, Windows spools the printed documents to a specified spool directory on the print server, where they are then despooled to the printer.	
• Start printer after last page is spooled	• Start printing a job only after the print job has been spooled completely on the client.
• Start printing immediately with spooling	• Selected by default. The printer starts printing a document before it is completely spooled on the client, which means it is printed sooner, and the application from which the user is printing returns control to the user faster.
• Print directly to the printer without spooling	• Windows sends the documents directly to the printer instead of queuing them to the spool directory. **Tip:** If the spooling computer is low on disk space, or if you have an especially large print job to spool, it might be better to print directly to the printer.

Setting	Description
Printing Options	
Print spooled documents first	If turned on, then the Windows print spooler prints the documents that have completed spooling first, and then the documents that are still in the process of spooling. If no documents are completely spooled, then print spooler prints the documents in order of decreasing file size. **Note:** This option provides the best overall printer efficiency. If the option is disabled, then the print spooler prints the documents based on the priority of the associated printer. The priority for a printer is set on the Printers tab on the ScrewDrivers Endpoint Client control panel. See "About Tab" on page 43.
Windows Advanced Printing - You can select only one advanced printing option at a time.	
Note: The options in this section control EMF Spooling. For most print drivers, you should leave this setting turned on to allow for faster application return time; however, because ScrewDrivers Endpoint can use RAW data and convert it into triMetaFile (TMF) data, this option has little influence over application return time in ScrewDrivers Endpoint. In certain scenarios, if Advanced Printing Features are turned on, then conversion of data from EMF to TMF might slow down the printing, or spool the data to a large size. In these situations, disabling the Advanced Printing Features can resolve the spooling issues for ScrewDrivers Endpoint.	
• Use client printer setting	• Selected by default. References the client's Enable Advanced Printing setting (On or Off) for the ScrewDrivers Endpoint driver on the Session Agent machine.
• Force advanced printer features to be enabled for all printers	• If selected, then the Enable Advanced Printing setting is forced on for all printers that are using the ScrewDrivers Endpoint driver on the Session Agent machine.
• Force advanced printer features to be disabled for all printers	• If selected, then the Enable Advanced Printing setting is forced off for all printers that are using the ScrewDrivers Endpoint driver on the Session Agent machine.

- Printer UI tab

Setting	Description
Action pane - The Action pane contains an option for displaying the Action tab for your users on the ScrewDrivers Endpoint Printing Preferences dialog box. The Action tab contains options for tying executables to ScrewDrivers Endpoint print functions on the ScrewDrivers Endpoint Session Agent or client. If you are displaying the Action tab, then you must also specify the client availability—Deny, Force, or Suggest—for each option on the tab.	
Enable action settings	If turned on, then the Action tab is displayed for your users on the ScrewDrivers Endpoint Printing Preferences dialog box. **Tip:** Although the Action feature is not commonly used, it is beneficial for environments in which users carry out repetitious tasks after printing.
Action	
Launch Session Process	If turned on, indicates whether the Action function is to be Denied, Forced, or Suggested by the Session Agent.

Setting	Description
Path	If turned on, you must specify the full directory path to the application.
Arguments	If turned on, you must specify the arguments and switches that are to be sent to the specified application.
Open Session Export	If turned on, then any PDF or BMP file that the Session Agent has saved through the Export function is automatically opened.
Launch Client Process	If turned on, indicates whether the Action function is to be Denied, Forced, or Suggested by the ScrewDrivers Endpoint client.
Path	If turned on, you must specify the full directory path to the application.
Arguments	If turned on, you must specify the arguments and switches that are to be sent to the specified application.
Open Client Export	If turned on, then any PDF or BMP file that the ScrewDrivers Endpoint client has saved through the Export function is automatically opened.
Export pane - The Export pane contains an option for displaying the Export tab for your users on the ScrewDrivers Endpoint Printing Preferences dialog box. If you are displaying the Export tab, then you must also specify the client availability—Deny, Force, or Suggest—for each option on the tab.	
Enable export settings	If turned on, then the Export tab is displayed for your users on the ScrewDrivers Endpoint Printing Preferences dialog box.
Export	
Print Method	If turned on, determines whether the file is printed or exported (saved) to a selected format. • Print Normally: The file is physically printed from the selected printer. • Export to File: The user can save on the Session Agent machine or client in one of two allowed formats (PDF or BMP).
Save as type	The two file formats in which a user can save a file on the Session Agent machine: PDF or BMP.
Deny export of file to session	If turned on, then a user cannot save a file on the Session Agent machine.
Save Mode	• Do not Save: If selected, then a user cannot save a file on the Session Agent machine. • Display Save Dialog: If selected, then a Save File message opens when a user saves a file on the Session Agent machine. • Use Input Pathname: If selected, then you must specify a Destination (the directory) in which users can save the file on the Session Agent machine.
Destination	Applicable if Use Input Pathname is selected for Save Mode. Makes the path text field available. You must enter either the full directory path for saving the file on the Session Agent machine, or you can enter the name of an existing file (filename.pdf or filename.bmp) on the Session Agent machine.

Setting	Description
If File Exists	Applicable if Save Mode is Use Input Pathname and the file that is being saved already exists on the Session Agent machine. • Overwrite: Automatically overwrite the existing file with the new file. • Prompt: Prompt the user to overwrite the existing file, or take other actions. • Cancel: Cancel the saving of the file. The existing file remains unchanged and no new file is saved. • Append: Add the new file to the end of the existing file. A single file is produced that contains both the existing (old) content and the new content.
Deny export of file to client	If turned on, users cannot save a file on the ScrewDrivers Endpoint client.
Save Mode	• Do not Save: If selected, then a user cannot save the file on the ScrewDrivers Endpoint client. • Display Save Dialog: If selected, then a Save File message opens when a user saves a file on the ScrewDrivers Endpoint client. • If selected, then you must specify a Destination (the directory) in which users can save the file on the ScrewDrivers Endpoint client.
Destination	Applicable if Use Input Pathname is selected for Save Mode. Makes the path text field available. You must enter either the full directory path for saving the file on the ScrewDrivers Endpoint client, or you can enter the name of an existing file on the ScrewDrivers Endpoint client (filename.pdf or filename.bmp).
Dest. Option	If turned on, then the saved file is automatically generated without any user input. Autogenerate Filename: Available if Dest. Option set to Force or Suggest. If turned on, then the saved file, including its name, is generated without any user input.
If File Exists	Applicable if Save Mode is Use Input Pathname and the file that is being saved already exists on the ScrewDrivers Endpoint client. • Overwrite: Automatically overwrite the existing file with the new file. • Prompt: Prompt the user to overwrite the existing file, or take other actions. • Cancel: Cancel the saving of the file. The existing file remains unchanged and no new file is saved. • Append: Add the new file to the end of the existing file. A single file is produced that contains both the existing (old) content and the new content.

Setting	Description
Extended Options pane - The Extended Options pane contains an option for displaying the Extended Options tab for your users on the ScrewDrivers Endpoint Printing Preferences dialog box. If you are displaying the Extended Options tab, then you must also specify the client availability—Deny, Force, or Suggest—for each option on the tab.	
Enable extended options settings	If turned on, then the Extended Options tab is displayed for your users on the ScrewDrivers Endpoint Printing Preferences dialog box.
Print Job Settings	
Second Print Dialog	The second print dialog box is the Client Print Spooler dialog box, and by default, this dialog box is not displayed. If turned on, then this dialog box is displayed when a print job begins to spool on the client, and your users can carry out advanced printing functions such as stapling, booklet printing, hole punching, and so on.
Separator Page	If turned on, then an additional page that contains information about the print job, such as the name of the user who submitted the job, is printed.
Print Job Rendering	
Print-As-Image	If turned on, then the Session Agent converts each page of the print job to a BMP. **Note:** Although enabling this option can resolve output issues such as font issues, uncompressed printing can also use a significant amount of bandwidth. **Caution:** Do not automatically choose the default DPI as the DPI for a job. Because each doubling of DPI results in four times the amount of data that is sent, select the lowest possible DPI that results in acceptable output. Typically, 300DPI is sufficient.
Font embedding	If turned on, then the Session Agent embeds a temporary copy of the font or font data in the print jobs. • Embed All Fonts - The default setting. If turned on, and the fonts that are used in the print job are not available on the client, then the Session Agent sends a temporary copy of each font to the client with the print job. After the print job is complete, then the Session Agent removes the temporary copies from the client. • Pre-Render Embedded - If turned on, and the fonts that are used in the print job are not available on the client, then the Session Agent sends these fonts as images to the client, and then integrates the corresponding text back into the job file. • Pre-Render All - If turned on, then the Session Agent sends *all* fonts as images to the client (it does not matter whether the font is available on the client), and then integrates the corresponding text back into the job file. **Note:** Typically, you select Pre-Render All only when Tricerat support directs you to do so. This option is useful for situations in which the client's fonts are unreliable or incomplete, or there are font mismatches between the session host and client.

Setting	Description
Color quality	If turned on, then, by default, the Session Agent renders images in High (TrueColor), which is 24-bit. You can select a different default value: • Medium (HighColor), which is 16-bit • Low, which is 8-bit. • Monochrome, which is 1-bit. (True black and white). **Note:** If you lower the color quality, then the document spool size is reduced; however, the quality of the output is affected. The difference between 24-bit and 16-bit is negligible, but the difference becomes more pronounced as you continue to lower the color quality.
Compression	If turned on, then a lossy compression algorithm is carried out for images in the document for additional reduction in spool size.
Minimize spool	If turned on, then large images are broken up into multiple smaller images, which allows data to be streamed to the printer faster and also allows the printer to discard the “data chunks” as they are rendered, resulting in less memory in use at any given time.
Force grayscale	If turned on, then all images in the document are converted to grayscale, which is 8-bit gray and reduces file size.

- Denial tab

Setting	Description
General Settings	
Deny creation of the client’s local printers	If turned on, then prevents the Session Agent from automatically building all locally attached printers when a user logs in.
Deny creation of the client’s network printers	If turned on, then prevents the Session Agent from automatically building all network printers when a user logs in.
Driver Settings - To prevent the Session Agent from automatically building printers on a per print driver basis after a user logs in, then do the following: 1. Click Add. A new line with the placeholder entry of Denied Driver is displayed in the Driver Settings field. 2. Double-click the placeholder entry to place it in editing mode, and then enter the name of the driver for the client printer. The denied drivers are displayed in a list below the Driver Settings field. For example, entering Microsoft XPS Document Writer prevents the Session Agent from automatically building any printer that uses this driver when a user logs in. To remove a client driver from the Denied list, select the driver entry in the list, and then click Remove.	

8. Click Save.
9. In the Objects pane, select the session settings again, and then drag the settings to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See “To manage Network owners” on page 30.

Chapter 4
The ScrewDrivers Scanning Client Application

The ScrewDrivers Scanning client does not require your users to configure their scanners for a remote session. As long as the ScrewDrivers Scanning client is installed on the connecting workstations and the ScrewDrivers Scanning Session Agent is installed on the remote machine, then the scanners are built for your users. Your users, however, can still access the settings for the ScrewDrivers Scanning client through the ScrewDrivers Scanning application (App). The App contains the settings for the defining and configuring of the client scanners that are to be made available to the remote machine. The client supports both major scanning protocols, TWAIN and WIA, as well as a proprietary protocol, RPOS, that Tricerat has developed. This chapter details the configuration settings and functions that are available to you in the ScrewDrivers Scanning Client app.

This chapter covers the following topics:

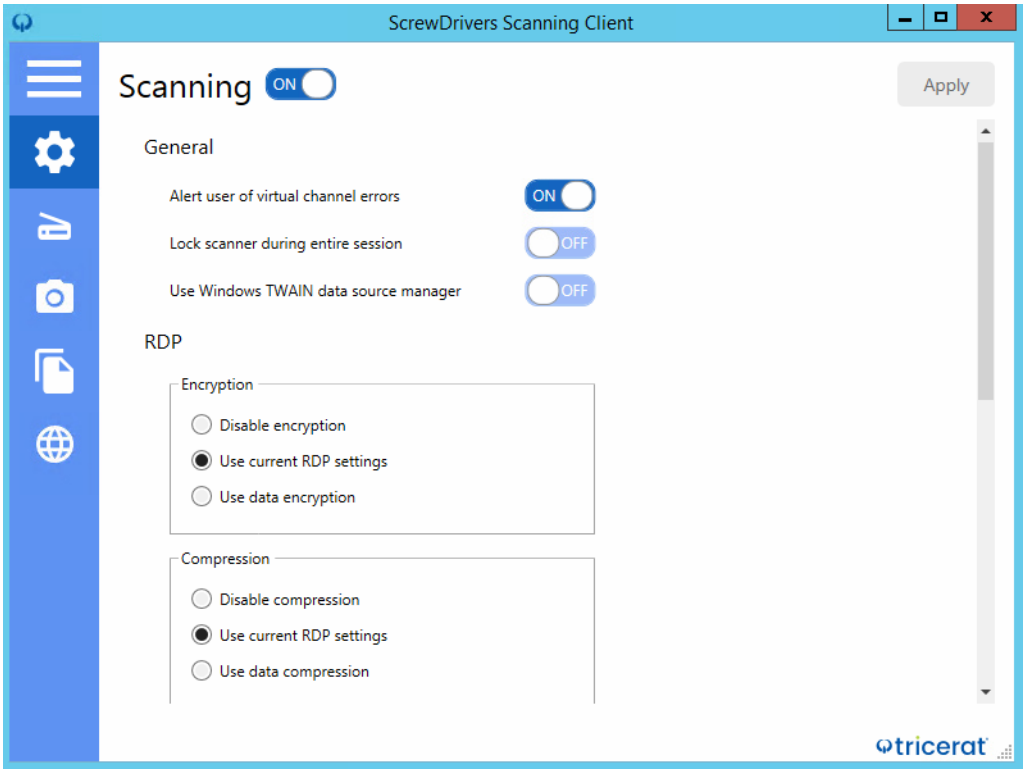
Introduction

The ScrewDrivers Scanning client is installed on every client workstation that your users are using to log in to the Session Agent. You access the settings for the ScrewDrivers Scanning client through the ScrewDrivers Scanning application (app). The app contains the settings for the defining and configuring of the client scanners that are to be made available to the remote machine. To open the ScrewDrivers Scanning Client app, do the following:

Open the Start menu, and then under Programs, click ScrewDrivers Scanning Client.

Although you do not need to provide your users access to the ScrewDrivers Scanning Client App, it is a rare occurrence that the scanner that is set to the default scanner is the correct scanner, or that it even has the correct driver type. By providing your users access to the ScrewDrivers Scanning client App., then your users can test and then select the correct scanners/driver types for their sessions.

Figure 4-1: ScrewDrivers Scanning Client app



The ScrewDrivers Scanning Client app has five tabs for managing your client functions. Each tab is represented by an icon on a Tab bar that is displayed on the left side of the main window. Click an icon to view the corresponding tab.

Tab	Description
Tip: When the ScrewDrivers Scanning Client app first opens, the Tab bar is collapsed. You can hold your cursor over an icon on the Tab bar to display a tooltip that shows the name of the corresponding tab, or you can click the Hamburger icon to expand the Tab bar and view the complete name of each tab.	
	Scanning Settings tab - Contains options for specifying the settings for a user's remote scanning session. See "Scanning Settings Tab" on page 65.
	Scanners tab - Displays all the scanner drivers, by name, that were detected on the client or client's network. See "Scanners Tab" on page 67.
	Camera tab - Contains the options for configuring the settings for a digital camera that a ScrewDrivers Scanning client is using. See "Camera Tab" on page 69.
	Logging tab - Provides options for diagnostic logging from the ScrewDrivers Scanning client. See "Logging Tab" on page 70.
	About tab - Provides information about the ScrewDrivers Scanning client. See "About Tab" on page 71.

With the exception of the About tab, all the tabs have the following features in common:

- After you make a change to any value on any tab, you must click Apply (displayed in the top right corner of the app) to save the change. All current values on all tabs are saved when you click Apply. You cannot save changes on a per tab basis.

Figure 4-2: Apply button

- After you have made and applied all the needed changes for your ScrewDrivers Scanning client, click Close (x) in the upper right corner of the app to close and exit out of the app.

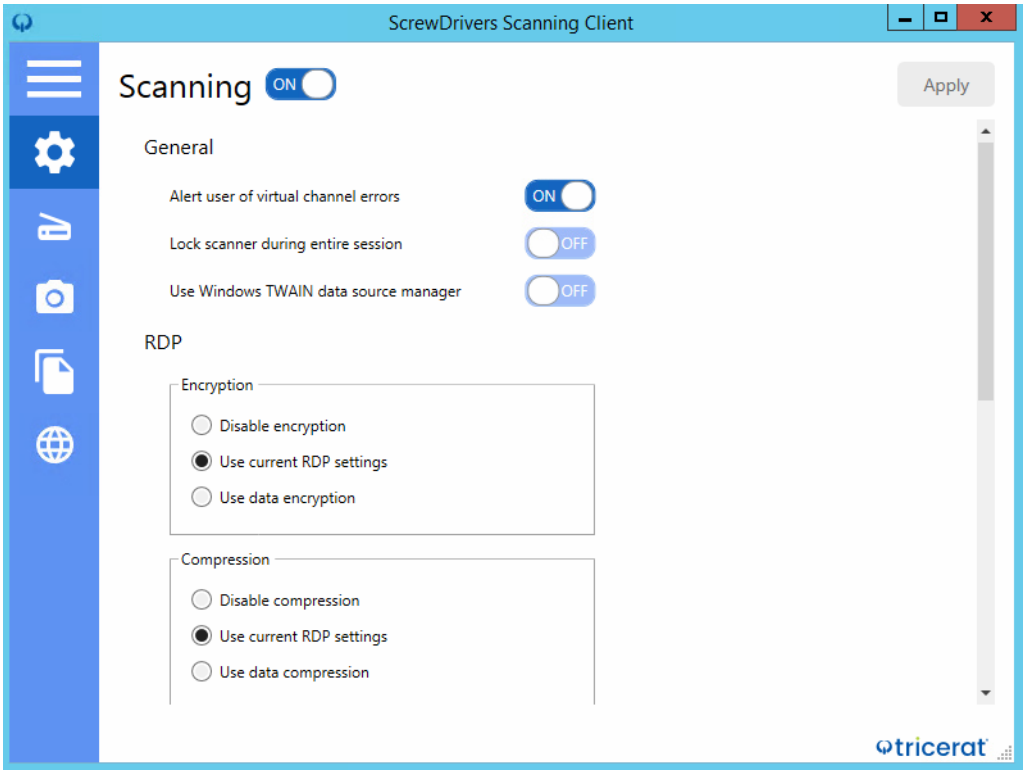
If you make any changes to the client settings on a tab, and do not immediately apply these changes, then you are prompted to do so before opening another tab or exiting the app.

Scanning Settings Tab

When the ScrewDrivers Scanning Client app first opens, the Scanning Settings tab is the open tab. The tab contains options for configuring a user's remote scanning session.

Contact your ScrewDrivers Administrator for assistance with these settings.

Figure 4-3: ScrewDrivers Scanning Client app, Scanning tab



Option	Description
Scanning	By default, Scanning is turned on for a client. If you turn off Scanning, then all users are prevented from scanning on the client.
General	
Alert user of virtual channel errors	Turned on by default. Leave this option selected to display a notification to the user anytime an error in communication between the ScrewDrivers remote machine and client occurs.
Lock scanner during entire session	Typically, a scanner driver is locked before a scan and unlocked after a scan. Select this option to keep the scanner driver locked for the entire user session. **Note:** This option is useful for some network scanner drivers.
Use TWAIN data source manager (DSM)	Enable only if Tricerat support directs you to do so.

Option	Description
RDP	
Encryption - You can select only one option at a time.	
• Disable encryption	• Forces the disabling of RDP encryption.
• Use current RDP settings	• Turned on by default. Use the RDP encryption settings as specified by the ScrewDrivers Administrator.
• Use data encryption	• Forces the enabling of RDP encryption.
Compression - You can select only one option at a time.	
• Disable compression	• Forces the disabling of RDP compression..
• Use current RDP settings	• Turned on by default. Use the RDP compression settings as specified by the ScrewDrivers Administrator.
• Use data compression	• Forces the enabling of RDP compression.
Duplex	
Detect and skip blank second page	Turned on by default. During a duplex scan, use the current threshold setting to detect blank second pages. Blank second pages are not sent to the remote machine.
Threshold	Adjust the Threshold setting to set the percentage of white or black pixels that determine if a page is blank or not.
Margins	Specify the margin size for the paper. You can do one of the following: • Select from a pre-defined list (Narrow, Normal, or Wide). • Set a margin other than a pre-defined value. To do so, select Other, and then enter the margin values. Any data that falls outside the specified margins is not evaluated.

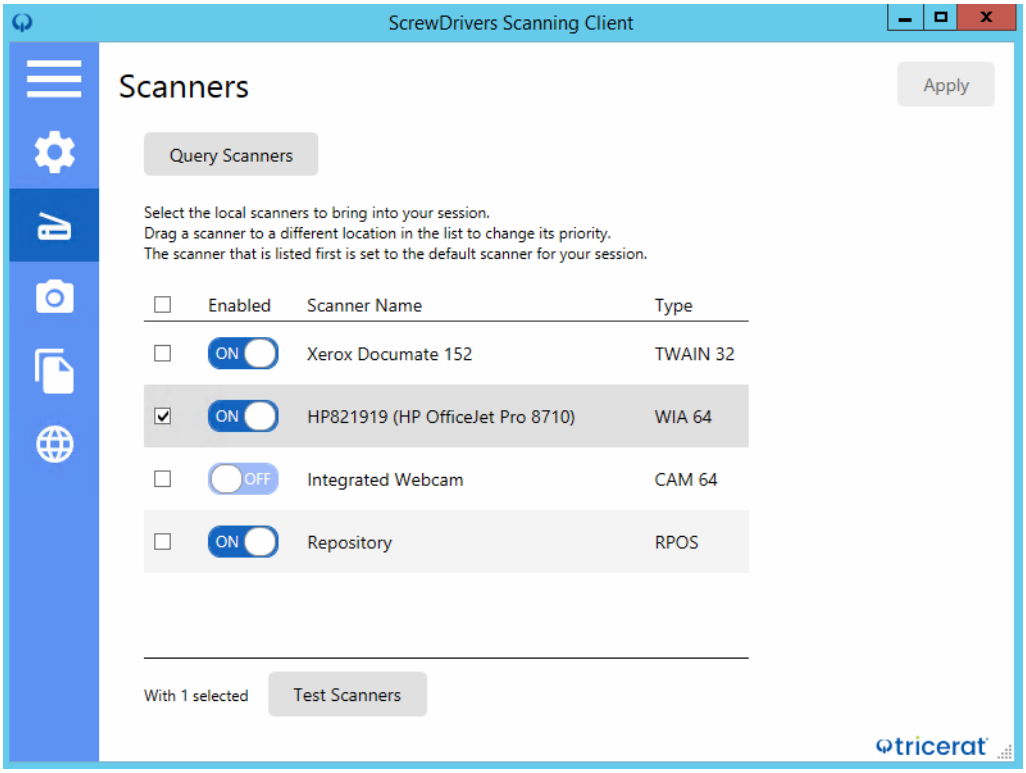
Scanners Tab

The Scanners tab on the ScrewDrivers Scanning Client app displays all the scanner drivers, by name, that were detected on your client or client's network that can be brought in to your session. The Type column for each scanner indicates the protocol, TWAIN, WIA, or CAM that the scanner uses. RPOS, which stands for Repository, is always displayed on the tab, and it is a proprietary protocol developed by Tricerat. If this protocol is selected, then you can "scan" an image that is currently stored elsewhere; for example, on an external and connected USB drive, the C: drive of the client, or a digital camera's storage location when the digital camera is connected to the ScrewDrivers Scanning client by USB and using a file browser to select the image and digitally transfer it.

Currently, the RPOS protocol supports only bitmap (.bmp) images.

The list of available scanners is displayed in decreasing priority of scanners. The first scanner that is displayed in the list of available scanners is *always* set to the default scanner for your session.

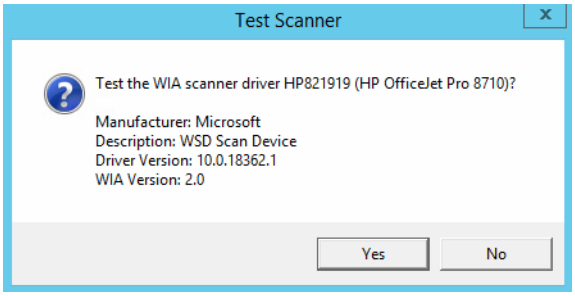
Figure 4-4: ScrewDrivers Scanning Client app, Scanners tab



You can do any or all of the following for the list of available scanners:

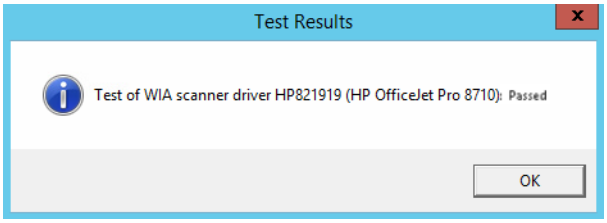
- Change the order of scanners that are displayed in the list of available scanners. Select a scanner, and then drag the scanner to a new location in the list. If you drag a scanner to the first position in the list of scanners, then the scanner is automatically set as the default scanner for your session.
- View information about a scanner. Select a scanner, and then click Test Scanners to open a Test Scanner dialog box. The dialog box displays name of the scanner's manufacturer, the scanner's product name and product family, its current version, and the scanning protocol that is uses. The dialog box also prompts you about testing the scanner.

Figure 4-5: Test Scanner dialog box



- To test a scanner before opening a scanner session, open a Test Scanner dialog box (see Figure 4-5 above), and then click Yes. The results of the test are displayed in a Test Results dialog box.

Figure 4-6: Test Results dialog box

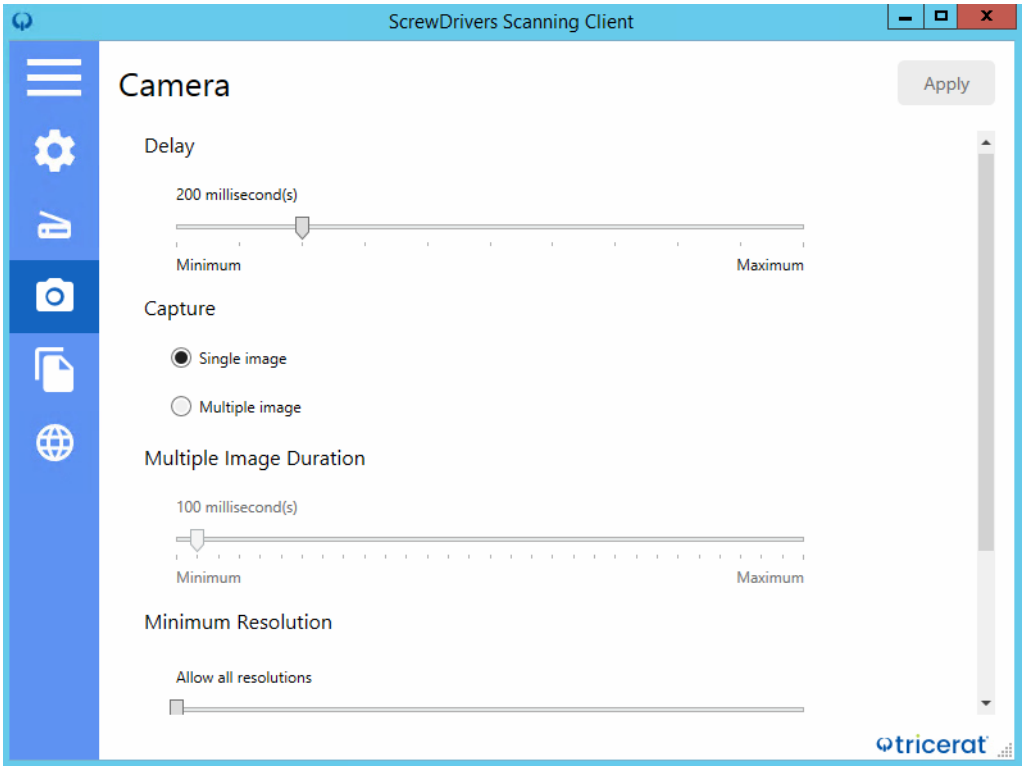


- To update the information about the scanners that are installed on your client, click Query Scanners. Note that after you query your installed scanners, the order of the scanners that are displayed in the list of available scanners might change. Also, if any scanner driver fails this simple query, then after the query is complete, the scanner is turned off.

Camera Tab

In addition to traditional scanners, ScrewDrivers Scanning client supports digital camera output. For example, the camera can be connected via USB to a client on which the ScrewDrivers Scanning client is installed, or the camera can be an integrated camera as is common on many laptops. The Camera tab on the ScrewDrivers Scanning Client app contains the options for configuring the settings for a digital camera that is being used with the ScrewDrivers Scanning client.

Figure 4-7: ScrewDrivers Scanning Client app, Camera tab



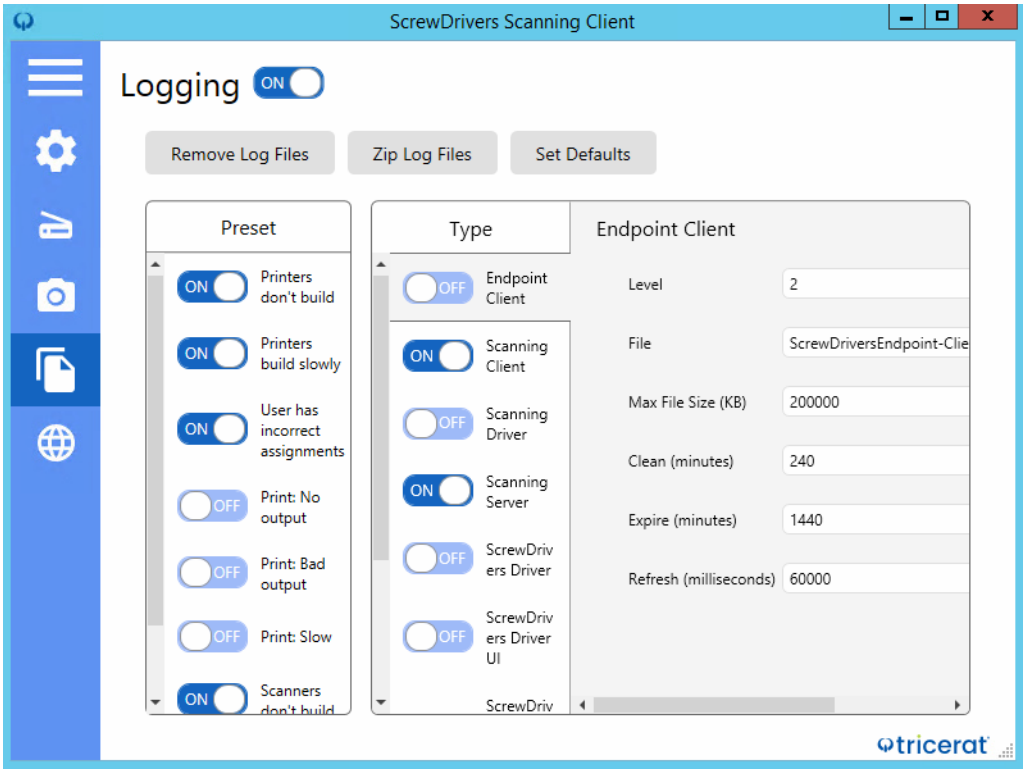
Option	Description
Delay	The time to delay before capturing a picture with the camera.
Capture	You can select only one option. • Single image • Multiple images
Duration	Turned on only for multiple images. The duration for capturing multiple images, which are collated from a video.
Min Resolution	The minimum resolution required for pictures. You can adjust the value on the slider bar to allow for all camera resolutions all the way to the highest resolution for the camera.
Use a custom minimum resolution	Turn on this option, and then enter the appropriate DPIs (height and width) for the minimum resolution.

Logging Tab

The Logging tab on the ScrewDrivers Scanning Client app provides options for diagnostic logging from the ScrewDrivers Scanning client. This logging information is used for debugging or problem tracking purposes.

Because Tricerat support primarily uses this information, you should not change any of the default values or use any of the commands on this tab unless Tricerat Support instructs you to do so.

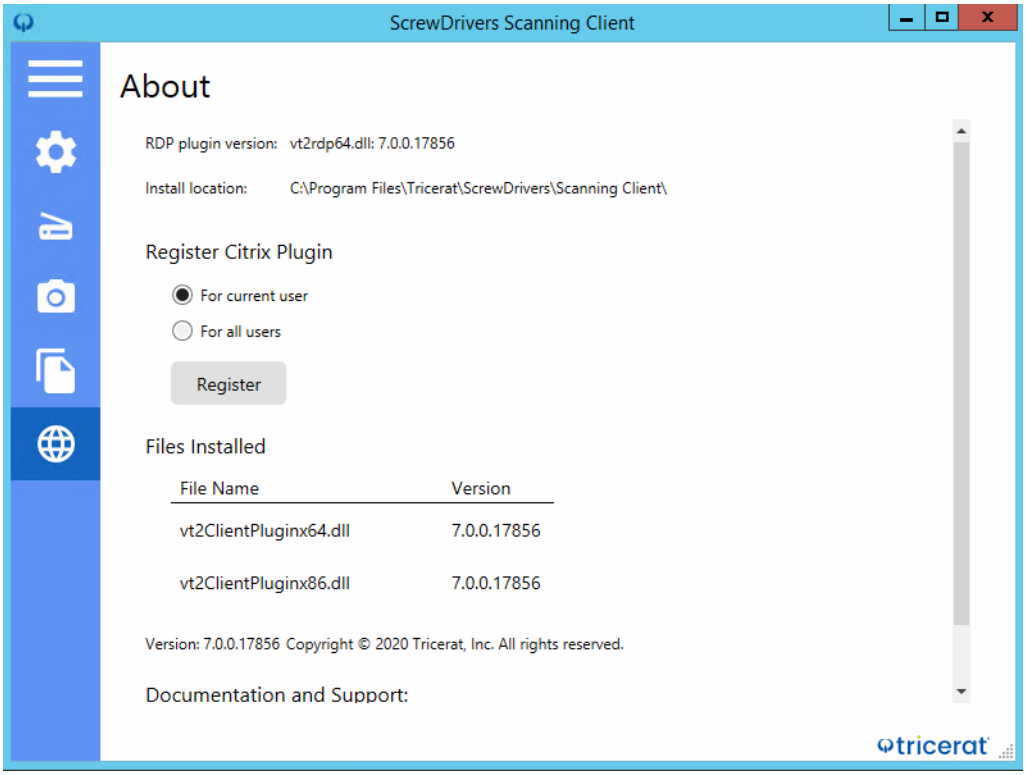
Figure 4-8: ScrewDrivers Scanning Client app, Logging tab



About Tab

The About tab on the ScrewDrivers Scanning Client app displays critical information about the ScrewDrivers Scanning client software. The tab also displays a Help link for documentation and support.

Figure 4-9: ScrewDrivers Scanning Client app, About tab



Option	Description
RDP Plugin Version	The version of the RDP plugin dll that the ScrewDrivers Scanning client software uses.
Install location	The detected installation location for the ScrewDrivers Scanning client.
Register Citrix Plugin	If you update the Citrix app after installing ScrewDrivers Scanning, then you might need to register the Tricerat plug-in again. You can register the plug-in for the current user or for all users. **Tip:** If you must re-register the Citrix plugin, then generally, the "For all users" option is the better selection as the typical end user does not have the correct permissions to execute this action.
Files Installed	A list of all the plugins (name and version) that the ScrewDrivers Session Agent automatically downloaded to the client for the purpose of upgrading the client and keeping the versions on the remote machine and the client in sync.

Option	Description
Version	The major version for the ScrewDrivers Scanning client software.
Note: The RDP Plugin Version and the ScrewDrivers Scanning version should be identical. If they are not, then contact support@Tricerat.	

Chapter 5
Managing ScrewDrivers Scanners

Managing ScrewDrivers scanners consists of configuring the ScrewDrivers Scanning session-level settings for these scanners and assigning these session settings to the appropriate owners. You configure these session-level settings on the ScrewDrivers Session Agent and assign these configured settings to owners in ScrewDrivers Administration.

This chapter covers the following topics:

Managing Session Settings for ScrewDrivers Scanners

Because internally programmed default values typically provide sufficient scanning results, Tricerat does not supply a default set of scanning session settings. You can still create your own unique Scanning Session Settings, and then assign these settings to an owner. When you assign Scanning Session Settings to an owner, the settings affect all the ScrewDrivers scanners for the owner. You cannot assign the settings on a per scanner basis.

To manage session-level settings for ScrewDrivers scanners

1. Confirm that the Objects pane is set to Scanning Session Settings objects. (You might need to click the Session Printer Settings icon on the ScrewDrivers Administration Icon bar.)

Before continuing, you can click the Expand/Collapse icon that is displayed next to the Scanning Session Settings folder to expand the folder and view all the session settings objects that have already been added, or you can search for specific session settings objects. See "To search for an object and view its information" on page 22.

2. Do one of the following in the Objects pane:

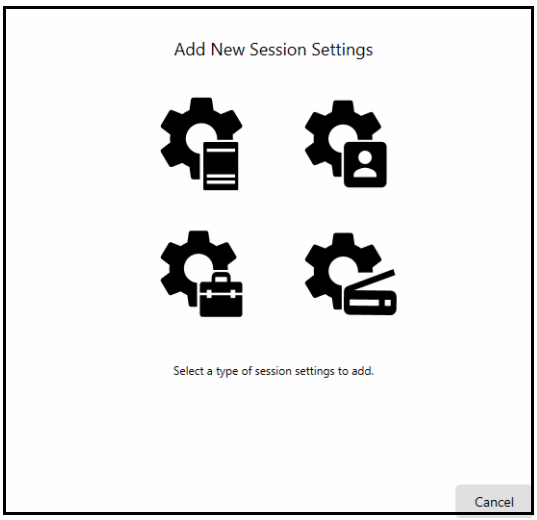
Action	Steps
To assign a set of currently available Scanning Session Settings to an owner as-is.	Select the settings, and then drag the selected settings to the owner in the Assignments pane. **Note:** If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.
To edit an existing set of Scanning Session Settings, and optionally, assign these settings to a new owner.	1. Select the settings. The Information pane displays the Scanning Session Settings object form. The form has five tabs, and the General tab is the open tab. All the values on all the tabs are set to their current values. 2. Continue to Step 7.
To assign new Scanning Session Settings to an owner.	Continue to Step 3.

3. In the Objects pane, click Add Session Settings.

   The Add New Session Settings dialog box opens. The dialog box displays icons for the types of session settings objects that you can add to the ScrewDrivers database. See Figure 5-1 on page 76.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

Figure 5-1: Add New Session Settings dialog box

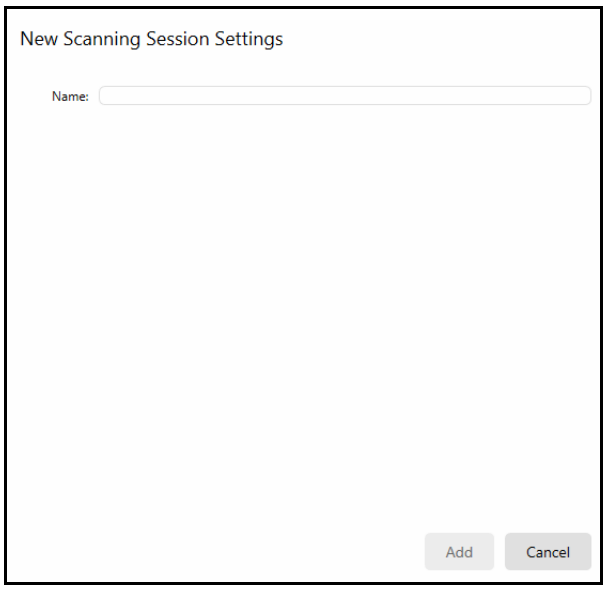


4. Click the Scanning Session Settings icon.

   The New Scanning Session Settings dialog box opens.

You can also right-click the Scanning Session Settings folder in the Objects pane, and on the context menu that opens, click New Scanning Session Settings.

Figure 5-2: New ScrewDrivers Scanning Session Settings dialog box



5. Enter a name for the new session settings, and then click Add.

   The dialog box closes, and the new session settings are displayed in the Scanning Session Settings folder in the Objects pane.

6. Select the newly added Scanning Session Settings object.

   The Information pane displays the Scanning Session Settings object form,. The form has seven tabs and the General tab is the open tab. All the values on the tab are set to their default values.

7. Specify the values for the newly added scanning session settings, or edit the values for the selected session settings.

The Assignments tab and the Audit tab are not discussed here. For information about the Assignment tab, see "To review owner assignments" on page 29. For information about the Audit tab, see Appendix C, "Data Review in the ScrewDrivers Administration," on page 197.

- General tab

Option	Description
Scanning Enabled	By default, Scanning is turned on for the remote machine. If you turn off Scanning, then all users are prevented from scanning on the remote machine.
Alerts	
Alert user if no scanner is configured	If turned on, then a notification is displayed if no scanner is configured for the user's client.
Alert user if no client plugin is detected	if turned on, then a notification is displayed if the ScrewDrivers Scanning client software is not installed on the user's client.
Automatic client updates	If turned on, then ensures that the software versions that are running on the ScrewDrivers Scanning remote machine and a ScrewDrivers Scanning client are always in sync. If the ScrewDrivers Scanning Session Agent detects that any client that connects to the remote machine is running a version of the software that is different than what it is currently running on the remote machine, then the Session Agent automatically carries out an upgrade or downgrade as necessary to synchronize the versions between the remote machine and the client. (Upgrades are typically more common than downgrades). **Note:** The plugins that the Session Agent has downloaded are displayed on a per client basis on the About tab of the ScrewDrivers Scanning Client App. See "About Tab" on page 71.

Option	Description
User Interface	
Always display primary user interface	Some TWAIN applications might prevent the ScrewDrivers Scanning data source from displaying a user interface. Enable this option to ensure that the ScrewDrivers Scanning user interface is always displayed. **Note:** The preview features in the ScrewDrivers Scanning user interface make this a useful option.
Suppress secondary user interface	Enable this option to ensure that the ScrewDrivers Scanning secondary user interface is *not* displayed. **Note:** The secondary user interface is a progress bar that displays the progress of the image transfer.

- Naming Scheme tab

Option	Description
Naming Scheme - Indicates how the names of the scanners that are available to the user are displayed. Five options are available. You can select only one option at a time.	
Append driver type to name	If turned on, then this option applies for any naming scheme that you select.
• Scanner Name (Machine:Session)	The default value.
• Scanner Name (User:Session)	
• Machine:Session (Scanner Name)	
• User:Session (Scanner Name)	
• Scanner Name	

- Compression tab

Option	Description
General	
General compression	Turned on by default. Results in compression of all non-image data.
Image data compression	Turned on by default. Results in image data compression. **Note:** This option has no effect on any image attribute. It simply ensures that the image data is compressed before being transferred.
Priority	
• Speed (quicker compression)	• Turned on by default. Results in the running of a compression algorithm that increases the rate of image data compression but the size of the compressed data is larger than if you select Size.

Option	Description
• Size (smallest compression)	• Select this option to enable a compression algorithm that is slower than the algorithm that is used if you select Speed, but decreases the size of the compressed image data.
Image Packet Size	Before the compressed image data is sent to the remote machine, it is broken into packets. This setting controls the size of these packets. The default value of 512K is appropriate for most servers; however, for ultimate network utilization, you can select a size that matches your network requirements.

- Profiles tab

  You manage scan profiles for the scanning settings on the Profiles tab. This includes adding new scan profiles, editing scan existing profiles, and deleting scan profiles. See "To manage scan profiles for scanning session settings" below.

8. Click Save.
9. In the Objects pane, select the scanning session settings again, and then drag the settings to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.

To manage scan profiles for scanning session settings

The Profiles tab on the Scanning Session Settings object form specifies scanning settings, known as a *scan profile*, that can be assigned to a client scanner. A scan profile can specify up to three types of settings: the scanning DPI, the scanning color mode, and the scanning source. Because a profile forces these settings for a client scanner, a user cannot override and/or change these settings.

When you open the Profile tab, if no profiles have been assigned to the scanning setting sessions, then the following message is displayed: No profiles have been assigned to this scanning configuration; otherwise, the tab lists the profiles that have been assigned to the settings in the order in which they were assigned to the settings.

Before you add a new scan profile, you can always search the existing profiles to confirm that profile has not already been added. To search for an existing scan profile, in the filter field that is displayed above the list of currently assigned profiles, enter a search string. Note the following about the search string:

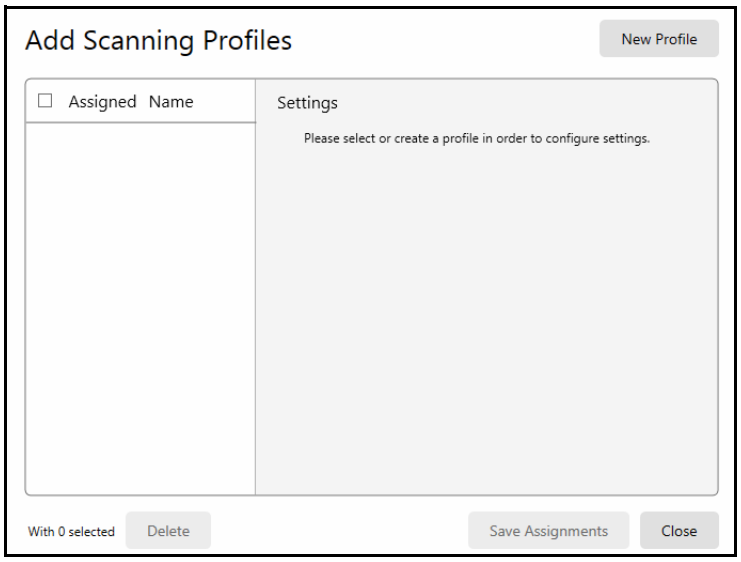
- The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results.
- As you enter the search string, the list of matching search results is dynamically updated.

- For example, if you enter a search string of **Doc**, then search results could include the following profiles: **Doc**umentation Test Group, Quality Assurance **doc**umentation

1. To enable profiles for the scanning settings, turn on Profiles Enabled.
2. Click Configure Profiles.

   The Add Scanning Profiles dialog box opens. This dialog box contains all the options for managing the scan profiles for the scanning setting sessions, including adding new profiles and editing or deleting existing profiles.

Figure 5-3: Add Scanning Profiles dialog box



3. Continue to any of the following:
   - "To add a new scan profile" below.
   - "To edit a scan profile" on page 81.
   - "To delete a scan profile" on page 82.

To add a new scan profile

1. Click New Profile.

   A placeholder for a new scan profile—New Profile—is displayed in the Profiles (left) pane of the Add Scanning Profiles dialog box.
2. Select the New Profile placeholder.

   The Settings (right) pane is retitled New Profile and the pane is updated with options for the profile, including its name.
3. Click in the Display Name field, and then enter the name for the new scan profile.

   The name that you enter here is the name that is displayed to your users when they are selecting a scan profile.

4. Specify the values for the profile settings of DPI, Color Mode, and Source.

Option	Description
DPI	
Allow All	Turned on by default. All DPIs are allowed for client scanning. To set a specific DPI value, turn off Allow All, and then select one of two options: Max DPI or Selective DPI.
Max DPI	Available only if Allow All is turned off. If you turn on Max DPI, then DPIs *up to and including* the maximum amount that you specify here are allowed for client scanning.
Selective DPI	Available only if Allow All is turned off. If you turn on Selective DPI, then you must select a single value from the list of preset DPI values for client scanning.
Color Mode	
Allow All	Turned on by default. All three color modes (Color, Grayscale, and Black/White) are allowed for client scanning. To allow only specific modes, turn off Allow All, and then selectively turn on and/or turn off any of the three color mode options.
Source	
Always display primary user interface	Some TWAIN applications might prevent the ScrewDrivers Scanning data source from displaying a user interface. Enable this option to ensure that the ScrewDrivers Scanning user interface is always displayed. **Note:** The preview features in the ScrewDrivers Scanning user interface make this a useful option.

5. Turn on the new profile.

You can turn on a new profile before you specify its settings, or afterwards. Regardless, to save a new profile, the profile must be turned on. After you initially save the profile, then you can turn it off or on as required. See "To edit a scan profile" below.

6. Click Save Assignments.
7. Click Close.

   The Add Scanning Profiles dialog box closes. You return to the Profiles tab on the Scanning Session Settings object form.

To edit a scan profile

You can edit a profile, including renaming it, or turning it off or on. If you edit a scan profile, then any jobs that were in progress before the profile was edited are completed based on the "old" settings. Going forward, the scans are completed based on the "new" settings.

1. In the Profiles (left) pane, select the profile that you are editing.
2. Edit the name and/or any of the profile settings, including turning or turning off the profile.

3. Click Save Assignments.
4. Click Close.

   The Add Scanning Profiles dialog box closes. You return to the Profiles tab on the Scanning Session Settings object form.

To delete a scan profile

If you delete a scan profile, then any jobs that were in progress before the profile was deleted are completed.

1. Do one of the following:
   - To delete one or more individual profiles, in the Profiles (left) pane, select the profiles that you are editing.
   - To select all profiles for deletion, click Assigned Name.
2. Click Delete.

   A Delete Profiles message opens, asking you to confirm the deletions.
3. Click OK.

   The Delete Profiles message closes and the selected profiles are removed immediately from the ScrewDrivers Scanning remote machine.

Chapter 6
Managing ScrewDrivers Print Server Printers

ScrewDrivers Print Server is a cross-platform print management solution that provides your users access to printing from any application to any available printer. With ScrewDrivers Print Server, you can statically assign printers on a per user basis, or you can dynamically assign printers based on the client location using client hostname, IP address or range of IP addresses. This chapter guides you through the essential procedures for using ScrewDrivers Print Server.

This chapter covers the following topics:

For additional information about configuring and administering ScrewDrivers Gateway, visit Tricerat's support center at http://tricerat.com/support-center/technical-documentation.

ScrewDrivers Print Server Environment Considerations

When are you setting up your ScrewDrivers Print Server environment (for example, consolidating the print drivers and spooling to your print servers), you must consider the following factors:

- Are failover print servers necessary for your environment?

  If one or more failover print servers are necessary for your ScrewDrivers Print Server environment, then *before* you add your ScrewDrivers Print Server objects to the ScrewDrivers database, you *must* set up these failover servers. See “Adding a Failover Print Server” on page 86.

- Is a cloud connector (a proxy) necessary for your environment?

  If a cloud connector is necessary for your ScrewDrivers Print Server environment, then *before* you add your ScrewDrivers Print Server objects to the ScrewDrivers database, you *must* set up this connection. See “Setting up a ScrewDrivers Cloud Connector” on page 89.

- Is it appropriate for all printers on a print server to be reported to ScrewDrivers Administration? For example, typically, as the system administrator, you do not want to make a FAX or a Microsoft XPS Document Writer printer available to your end users, but you do want to make a MINOLTA or KONICA printer available. If your print servers have printers on them that you do not want to make available to your end users, then, optionally, *after* you install the ScrewDrivers Print Server service, but *before* you add your ScrewDrivers Print Server objects to the ScrewDrivers database, you should run the ScrewDrivers Printers application. You can use this application to determine which print server printers are to be reported to ScrewDrivers Administration and which are not. As a result, when you query a ScrewDrivers Print Server object, the query returns only a limited set of printers, instead of all printers, and these are the printers that you can make available to your end users. See “ScrewDrivers Print Server” on page 215.

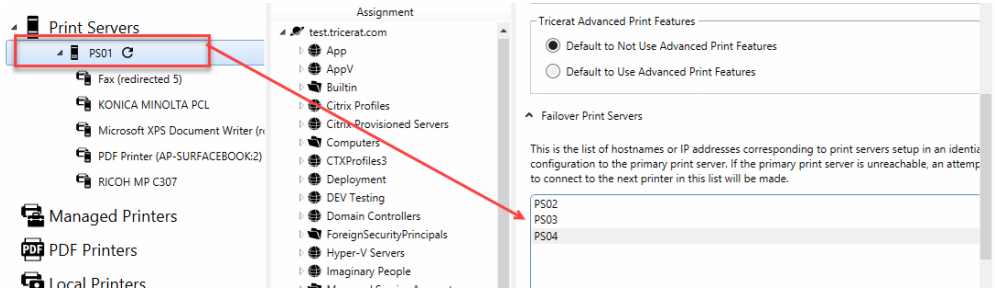
Adding a Failover Print Server

ScrewDrivers Administration provides an option for you to add a failover print server for any of your primary print servers. The failover printer server is a true failover server - it is not a load balancer. To set up a failover print server, you must first set up at least two *identical* print servers, for example, PS02 and PS04. These multiple identical print servers must have the same print queues, the same queue names, the same print drivers, and so on, and they must have identical operating systems. One of these identical print servers is designated as the primary print server for your users, for example, PS02. You would then assign the printers for PS02 to your users and you would assign PS04 to the list of available Failover Print Servers. As a result, if there is any failure to communicate with any printer that is assigned to PS02, then the list of available Failover Print Servers is queried in the order that the print servers are displayed until one of the following happens:

- A failover print server is queried successfully and the print job is completed from this print server.
- No failover print servers are queried successfully (the list of available print servers is failed all the way through) and the print job is not completed.

For example, as shown in Figure 6-1 below, if there is any failure to communicate with any printer that is assigned to PS01, then the list of available Failover Print Servers is queried in the order that the print servers are displayed (PS02, PS03, and then PS04) until a print job can be completed successfully from any of these failover print servers or the job is failed all the way through.

Figure 6-1: Failover Print Servers



If you added a failover print server in error, or if a failover print server is no longer required, then you can always remove a failover print server from the network.

To add a failover print server

1. Add, assign, and configure the necessary primary print server printers for your users. See “Adding and Configuring ScrewDrivers Print Server Printers” on page 90.

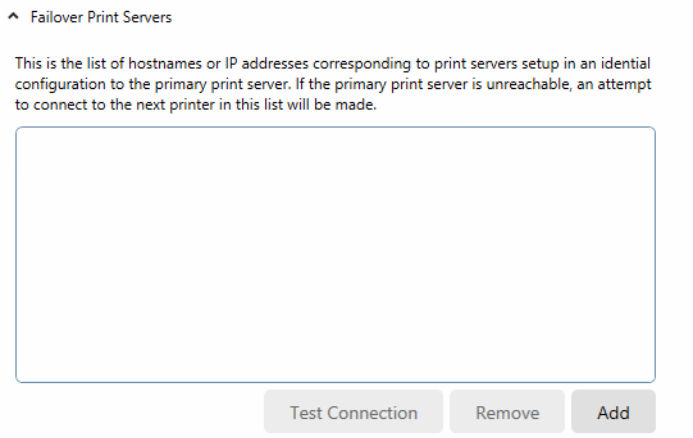
The failover print servers must have the same print queues, the same queue names, the same print drivers, and so on as the primary print servers.

2. In the Objects pane, select the primary Print Server object.

   The object form for the selected Print Server object is displayed in the Information pane.

3. Open the Failover Print Servers tab.

Figure 6-2: Failover Print Servers tab



4. For each failover print server printer that is to be assigned to the selected primary print server, do the following:

   a. Click Add.

      The entry “New Failover Print Server” is displayed on the Failover Print Servers tab.

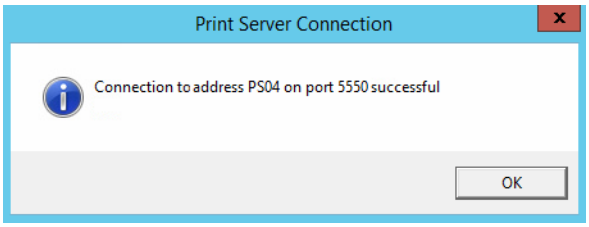
Figure 6-3: New Failover Print Server entry

   b. Click the entry to select it, and then enter the name for the failover print server.

   c. With the newly added failover print server still selected in the Failover Print Servers list, click Test Connection.

      If the connection is successful, then a Print Server Connection message opens, indicating this; otherwise, if the connection is not successful, then a Print Server Connection Error message opens. Resolve the issues that resulted in the error, and then repeat this step until the Print Server Connection successful message is displayed.

Figure 6-4: Print Server Connection message



d. Click OK.

The message closes and the failover print server is now connected and active for the selected primary print server.

5. Click Save.

To remove a failover print server

If you added a failover print server in error, or if a failover print server is no longer required, then you can always remove a failover print server. If you remove a failover print server, then the print server is removed immediately from the network. Any jobs that were in progress before the print server was removed are completed. Any jobs that were still in a printer's queue at the time the print server was removed cannot be completed.

1. Confirm that the Objects pane is set to Printer objects. (You might need to click the Printers icon on the ScrewDrivers Administration Icon bar.)

Before continuing, you can click the Expand/Collapse icon that is displayed next to the Print Servers folder to expand the folder and view all the available Print Server objects in the ScrewDrivers database. You can also search for specific Print Server objects. See *"To search for an object and view its information" on page 22.*

2. In the Objects pane, select the primary *Print Server object* for which you are deleting one or more failover print server printers.
3. In the Information pane, on the Print Server object form, open the Failover Print Servers tab.
4. In the Failover Print Servers list, select the failover printer that you are deleting, or CTRL-click to select multiple failover print servers, and then click Remove.

A prompt does not open asking you to confirm your selection. Instead, the failover print server is removed immediately, so before you click Remove, ensure that you have selected the correct failover print server.

5. Click Save.

Setting up a ScrewDrivers Cloud Connector

In a typical ScrewDrivers Print Server installation for ScrewDrivers Enterprise, you install two components - the ScrewDrivers Print Server Session Agent, which enables runtime creation of your user's print server printers and the ScrewDrivers Print Server. However, for some managed service provider (MSP) environments, a third component, a ScrewDrivers Cloud Connector (also known as a proxy) might be required. This proxy feature reverses the direction of the initial communication between the ScrewDrivers Print Server clients and the ScrewDrivers Print Server. This feature requires the installation of one additional component where the end users are creating printers such as your Terminal Servers, VDIs, and so on, and one additional component for *each* remote connection that is hosting the ScrewDrivers Print Servers.

- For the installation of one additional component where the end users are creating printers such as your Terminal Servers, VDIs: During the installation of ScrewDrivers Enterprise, on the Features to Install page, under Services, select the ScrewDrivers Cloud Connector service, and then on the Connector Mode page, select Internal.
- For the installation of one additional component for *each* remote connection that is hosting the ScrewDrivers Print Server, During the installation of ScrewDrivers Enterprise, on the Features to Install page, under Services, select the ScrewDrivers Cloud Connector service, and then on the Connector Mode page, select Remote.

For detailed information about installing the ScrewDrivers Cloud Connector, including the correct locations and the connector settings, see the ScrewDrivers Pro/Enterprise Installation Guide.

Wherever you install the ScrewDrivers Cloud Connector, a ScrewDrivers settings application, ScrewDrivers Connector, is also automatically installed. You use the ScrewDrivers Connector application to maintain and administer the proxy settings *after* installation. See "ScrewDrivers Connector" on page 207.

Adding and Configuring ScrewDrivers Print Server Printers

If one or more failover print servers and/or a cloud connector are required for your ScrewDrivers Print Server environment, then before you add your print server objects, you must set up these components. See "Adding a Failover Print Server" on page 86 and/or "Setting up a ScrewDrivers Cloud Connector" on page 89.

After you have set up your ScrewDrivers Print Server environment (for example, consolidating the print drivers and spooling to your print servers), at a minimum, you must add, assign, and configure the necessary print server printers for your users. Adding and configuring print server printers consists of the following steps:

1. Creating the Print Server object and adding the printers for the Print Server object to the ScrewDrivers database. See "To create the Print Server object and add the associated printers to the ScrewDrivers database" below.
2. Assigning the print server printers to the appropriate owners. See "To assign the print server printers" on page 95.
3. Configuring the assigned print server printers. See "To configure the assigned print server printers" on page 97.

To create the Print Server object and add the associated printers to the ScrewDrivers database

After you create a Print Server object, you have the option of adding one or more of its printers to the ScrewDrivers database. You must do the following procedure for *each* print server on which the ScrewDrivers Print Server Session Agent was installed.

The order of steps presented below for creating the ScrewDrivers Print Server object is not absolute. You can determine which order best suits your working needs.

1. Confirm that the Objects pane is set to Printer objects. (You might need to click the Printers icon on the ScrewDrivers Administration Icon bar.)

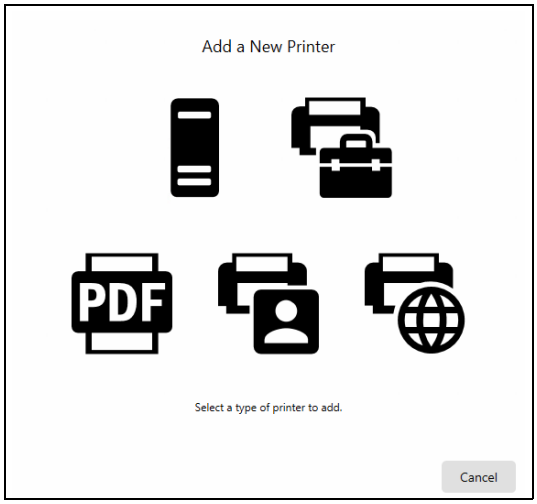
Before continuing, you can click the Expand/Collapse icon that is displayed next to the Print Servers folder to expand the folder and view all the print server objects that have already been added, or you can search for specific print server objects. See "To search for an object and view its information" on page 22.

2. In the Objects pane, click Add Printer.

   The Add a New Printer dialog box opens. The dialog box displays icons for the types of printer objects that you can add to the ScrewDrivers database. See Figure 6-5 on page 91.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

Figure 6-5: Add a New Printer dialog box

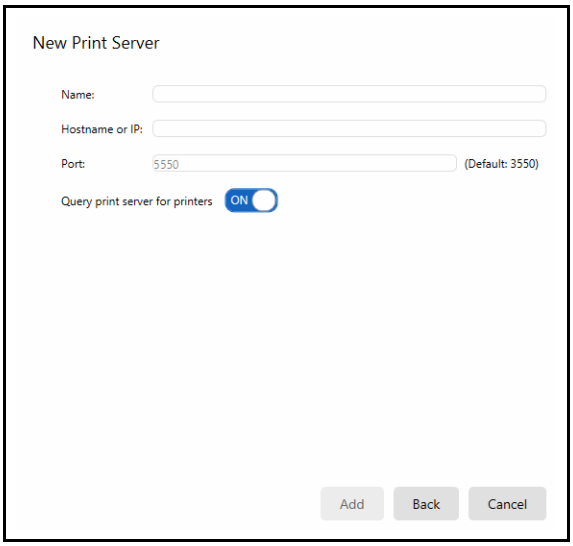


3. Click the Print Server icon.

   The New Print Server dialog box opens.

To open the New Print Server dialog, you can also right-click the Print Servers folder in the Objects pane, and on the context menu that opens, click New Print Server.

Figure 6-6: New Print Server dialog box



4. Enter the information for the new Print Server object.

Option	Description
Name	The name of the Print Server object. Tricerat recommends that you use the print server hostname for the object name.
Hostname or IP	The hostname or IP address of the print server.
Port	Indicates the port on which the print server listens. The default value is 5550 and you should change this value only if there is a conflict on the port.
Query print server for printers	Turned on by default. Opens a connection to the print server and requests to generate the entire list of printers that are currently installed on the print server. **Tip:** Remember, if you have run ScrewDrivers Print Server prior to this step, the number of printers that are reported for the print server might be limited. See "ScrewDrivers Print Server" on page 215.

5. Click Add.

   The New Print Server dialog box closes. The newly added Print Server object is displayed in the Print Servers folder.

6. Select the newly added Print Server object.

To view the newly added Print Server object, you might need to click the Expand/Collapse icon that is displayed next to the Print Servers folder to expand the folder

The Information pane displays the Print Server object form. The form groups together related configuration parameters for the selected Print Server object. The form has seven tabs and the General tab is the open tab.

To view all the tabs that are available on the Print Server object form, use the scroll bar that is displayed on the right side of the Information pane.

7. Configure the information for the newly added Print Server object.

Only four tabs—the General tab, the Bandwidth Control tab, the Cloud Connector tab, and the Information tab—are discussed here. All other tabs are discussed where appropriate in this chapter or other chapters and appendices in this guide.

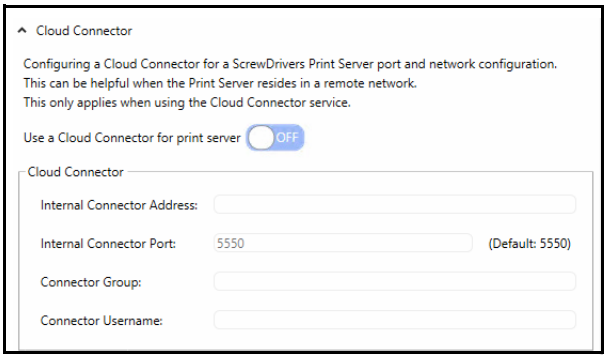
Option	Description
General tab	
Print Server Properties	
Name	The name of the Print Server object. You entered this value in Step 4 but you can edit here if necessary.
Hostname or IP	The hostname or IP address of the print server. You entered this value in Step 4 but you can edit here if necessary.

Option	Description
Port	Indicates the port on which the print server listens. The default value is 5550 and you should change this value only if there is a conflict on the port.
Connection ID	Unique system-generated ID for the connection to the Print Server.
Test Connection	Used to verify the print server communication after you add or modify a Print Server object.
Update Printers	Opens the Update Printers dialog box for the Print Server Object. You can select the printers that are to be imported in to the ScrewDrivers database from this dialog box.
Options	
Use Database Cached Printer Information	Turn on this option to build your users' printers based on information that is cached in the ScrewDrivers database instead of querying the print server during login. **Caution:** This option can improve performance, but if changes have occurred for the print server in place such as updating a print driver, then before you can us this option, you must refresh the list of printers.
Impersonate User When Printing	Turned on by default and Tricerat recommends that you leave this option turned on. When a job is sent to the print spooler, the print job shows as being originated by the user instead of by the system.
Tricerat Advanced Print Features - See "To enable/disable access to the advanced features for a print server printer" on page 100.	
Bandwidth Control tab	
Limit bandwidth for print server	Turn this option on if you are configuring bandwidth control for the ScrewDrivers Print Server.
Bandwidth rate (KB/per second)	Enter the value for the bandwidth rate for the ScrewDrivers Print Server.
Information tab - Displays read-only information about the ScrewDrivers Print Server, such as the OS Platform ID, OS Major Version, and so on. You can click Refresh Server Information at the bottom of this tab to update this information in real time.	

8. If you are *not* using the Cloud Connector service, then go to Step 9; otherwise:

   a. Open the Cloud Connector tab.

Figure 6-7: Print Server object form, Cloud Connector tab



b. Turn on Use a Cloud Connector for print server.

c. Enter the following values.

Value	Description
Internal Connector Address	Indicates the port on which the ScrewDrivers Print Server connector listens. This is the value that was specified for the Internal Mode of the ScrewDrivers Connector app. By default, the value is set to 5550 and you should change this value only if there is a conflict on the port.
Connector Group Connector Username	The values that you enter must be identical to the values that you entered for the Remote Mode of the ScrewDrivers Connector app. **Tip:** Remember, you initially set these values during the installation of ScrewDrivers Cloud Connector, but you an always edit them as necessary through the ScrewDrivers Connector app. See "ScrewDrivers Connector" on page 207.

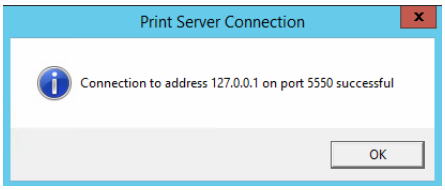
d. Go to Step 9.

9. Click Save.

10. On the General tab, click Test Connection to verify the print server communication.

    If the connection is successful, then a Print Server Connection message opens, indicating this; otherwise, if the connection is not successful, then a Print Server Connection Error message opens. Resolve the issues that resulted in the error, and then repeat this step until the Print Server Connection successful message is displayed.

Figure 6-8: Print Server Test Connection successful message

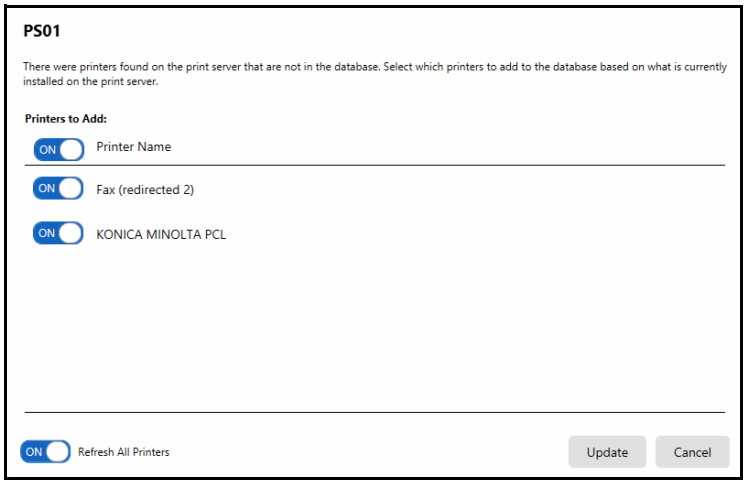


11. Click OK to close the message.

12. Click Update Printers.

    An Update Printers dialog box opens. The dialog box lists all the printers that were found on the Print Server but have not been added to the ScrewDrivers database. The list includes printers that were added to the Print Server since the last update. By default, all the listed printers are selected for adding to the database. See Figure 6-9 on page 95.

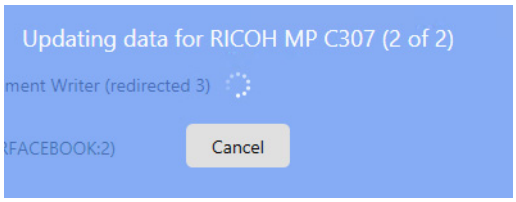
Figure 6-9: Update Printers dialog box



13. Leave all the printer selections turned on, or optionally, turn off the printer selections that you are not adding to the ScrewDrivers database, and then click Update.

    A series of printer data messages opens, with a message being displayed for each printer that is being added to the ScrewDrivers database.

Figure 6-10: Updating printer data message



Be patient during the update process as it can take a while depending on the number of printers that are being added to the ScrewDrivers database. ScrewDrivers Administration is unavailable during this time. You must wait for the update process to complete for the print server.

After all the data for all the printers is gathered and added to the database, and the last Updating printer data message closes, the Objects pane remains open. An entry for each added printer is displayed in the pane.

14. Continue to "To assign the print server printers" on page 95.

To assign the print server printers

After you have added the Print Server object and imported the associated printers, the next step is to assign the print server printers to the correct owners. You can assign the printer server printers in one of two ways:

- You can directly assign the printer. See "To directly assign a print server printer to an owner" on page 96.

- You can dynamically assign the printer. See “To manage Network owners” on page 30.

To directly assign a print server printer to an owner

When you directly assign a print server printer to an owner, you must specify one of the following three statuses for the printer:

- Always show this printer – Referred to as “Admin Assigned.” Any print server printer that you assign to an owner as Admin Assigned is always built for the owner. The owner does not have the option of whether to build the printer, nor does the owner have the option of removing the printer from a ScrewDrivers Print Server session. You should add print server printers to the Admin Assigned location to prevent an owner from being able to affect the building of specific printers. An owner always has the option of setting any Admin Assigned printer as the default printer for a session through the ScrewDrivers Printers application.
- Show this printer by default, but allow users to remove it – Referred to as “User Assigned.” If you assign a print server printer to an owner as User Assigned, then the owner must use the ScrewDrivers Printers application to add this printer to the list of printers that are to be built for the current ScrewDrivers Print Server session. The owner can always delete and re-add the printer as needed.

To assist your users in locating available printers for self-assignment, see Chapter 9, “ScrewDrivers Maps,” on page 145.

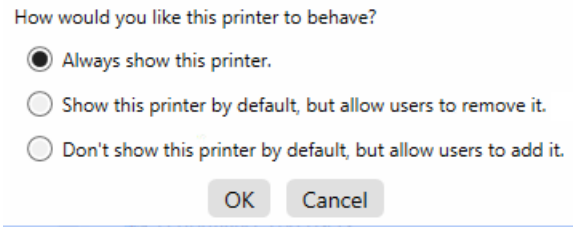
- Don’t show this printer by default, but allow users to add it – Referred to as “User Allowed.” If you assign a print server printer to an owner as User Allowed, then this printer is automatically built for every ScrewDrivers Print Server session for the owner. If the owner does not want the printer to be built for a ScrewDrivers Print Server session, then the owner can use the ScrewDrivers Printers application to delete the assignment. The printer is no longer built for the owner’s ScrewDrivers Print Server session and the owner *cannot* add this printer back to the list of printers that are to be built for any session.

1. In the Objects pane, select the print server printer that you are assigning to an owner, and then drag the selected printer to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See “To manage Network owners” on page 30. After you create the necessary Network owner and assign the printer, continue to “To configure the assigned print server printers” on page 97.

A message opens, asking you how the printer is to behave. By default, “Always show this printer” is selected. See Figure 6-11 on page 97.

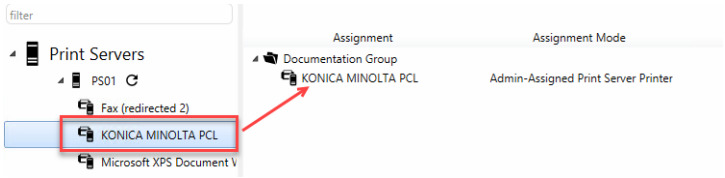
Figure 6-11: ScrewDrivers Gateway printer assignment options message



2. Leave “Always show this printer” selected, or select the appropriate option, and then click OK.

   The message closes and the printer is assigned to the selected owner. The assigned printer is displayed beneath the Owner entry in the Assignments pane and the Assignment Mode is displayed for the printer.

Figure 6-12: Direct assignment of a printer to an owner



3. Continue to “To configure the assigned print server printers” below.

To configure the assigned print server printers

After you have assigned the print server printers to their correct owners, then you must configure the print server printers. Configuring print server printers consists of setting the naming scheme for the printers, which determines how the printers are named on the server and also specifying which print server printer is to be the default printer for an owner. You can also enable or disable access to the advanced features for a print server printer. When you configure the naming scheme for the print server printers, you can set the naming scheme globally (the same print server naming scheme is applied to all printers on the print server, which is the default value), or you can set the naming scheme on a per printer basis. After you specify a particular printer to be the default printer for an owner, the owner can always use the ScrewDrivers Connector application to override this assignment and select a different printer to be the default printer.

To set the printer naming scheme

1. Do one of the following:

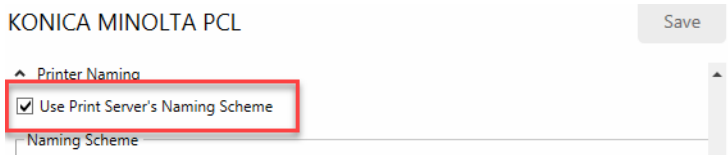
   - To configure a global naming scheme for your printer server printers, in the Objects pane, select the appropriate *print server object*.
   - To configure the printer naming scheme on a per printer basis, in the Objects pane, select the appropriate print server *printer*.

   The corresponding object form is displayed in the Information pane.

2. On the object form, click the Printer Naming tab to open it.

   The tab displays all the options that are available for specifying the printer naming scheme. If the tab is opened for a print server *printer*, than an additional option, Use Print Server's Naming Scheme, is displayed at the top of the tab, and by default, it is selected.

Figure 6-13: Print Server Printer object form, Printer Naming tab



3. Do one of the following:

   - If you are configuring a global naming scheme for all the printers on the selected Print Server object, then configure the scheme on the Printer Naming tab on the *Print Server object* form. By default, the naming scheme is set to Printer Name (MACHINE:SESSION). Go to Step 4.
   - If you are configuring the printer naming scheme on a per printer basis, then for the selected print server printer, clear the option Use Print Server's Naming Scheme at the top of the Printer Naming tab, and then continue to configure the scheme on the tab. By default, the naming scheme is set to Printer Name (MACHINE:SESSION). Go to Step 4.

If you do not clear the Use Print Server's Naming Scheme option for a print server printer, then the print server object's naming scheme is used for the printer.

4. Do one of the following:

Option	Action
Naming Scheme	
Use a default naming scheme	Select one of the four default schemes. • Printer Name (MACHINE:SESSION) - Selected by default. • MACHINE:SESSION (Printer Name) • Printer Name (USER:SESSION) • USER:SESSION (Printer Name)
Edit and use a default naming scheme	1. Select one of the four default schemes. (Printer Name MACHINE:SESSION is the default value.) 2. Do one or both of the following for modifications: • Turn on "Limit name component lengths," and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Turn on the options in the printer name that you are replacing, and then leave a default replacement value as-is, or modify it as needed. For example, if you turn on "Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

Option	Action
Use a custom naming scheme	**Note:** Special characters other than an exclamation point (!), backslash (\) or period (.) are allowed in any of the free text fields. 1. Select Custom. 2. Set the format of the scheme using Session ID and one or more of the following: Printer, Machine Name, and User. In addition to the Session ID, the name can have up to three components, but you can specify a single component (for example, Machine Name), two components (for example, Machine Name and Printer), or all three components (for example, Machine Name, Printer, and User). **Caution:** Tricerat does not support a format without a Session ID. A user could log in to multiple sessions, which can result in a naming conflict. 3. Optionally, do one or both of the following for modifications: • Turn on "Limit name component lengths," and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Turn on the options in the printer name that you are replacing, and then leave a default replacement value as-is, or modify it as needed. For example, if you turn on "Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

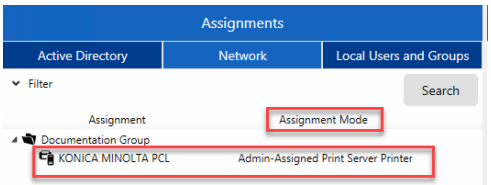
To set a default printer for an owner

You can set either a single Admin Assigned print server printer *or* a single User Assigned print server printer to be the default printer for an owner. (Because an owner always has the option of whether to build a User Allowed print server printer, you cannot specify any User Allowed print server printer to be the default printer.) After you set the default printer for an owner, the owner can always use the ScrewDrivers Printers application to override this assignment and set a different printer as the default. To set a default printer for an owner, do the following:

1. In the Assignments pane, expand the entry for the owner (user or group) for which you are setting the default printer.

   All the printers that are currently assigned to the selected owner are displayed beneath the owner entry and the assignment mode is displayed for each printer.

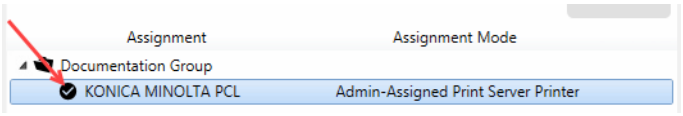
Figure 6-14: Assigned printer list for a selected owner



2. Right-click any single Admin Assigned or User Assigned print server printer, and on the context menu that opens, click Set as Default.

   A checkmark is displayed in front of the printer to indicate that is the default printer for the owner.

Figure 6-15: Default print server printer set for an owner



3. Optionally, after you set the default printer for user, you can specify the session settings for the printer. See “Managing ScrewDrivers Print Server Printers Session Settings” on page 106.

To enable/disable access to the advanced features for a print server printer

ScrewDrivers Print Server supports advanced features that are uniquely defined by each printer manufacturer such as secure printing, stapling, and so on. This function is made possible by providing access for the user to the manufacturer’s Print dialog box during the user’s session while still using the ScrewDrivers Print Server virtual print driver on the Terminal Server, Virtual Desktop, or workstation. You can enable access to the advanced features at the global level, (the same level of access is applied to all printers on the print server), which is the default value, or you can enable access on a per printer basis.

To enable/disable access to the advanced features at the global level

1. In the Objects pane, select the appropriate *Print Server object*.

   The object form for the Print Server object is displayed in the Information pane. The General tab is the open tab.

2. Under Tricerat Advanced Print Features, select the appropriate option:

Option	Description
Default to Not Use Advanced Print Features	Selected by default. Disables access to the advanced features for *all* the printers that are assigned to the ScrewDrivers Print Server object. For access to the advanced features for all the printers to the ScrewDrivers Print Server Server object, the following option must be selected: “Default to Use Advanced Print Features.”
Default to Use Advanced Print Features	Select this option to enable access to the advanced features for *all* the printers that are assigned to the ScrewDrivers Print Server object, When this option is selected, after a user clicks Preferences in the Print dialog box, the Printing Preferences dialog box is bypassed and instead, the Advanced Print Features dialog box for the selected printer opens immediately. The dialog box displays the advanced features that the manufacturer supports for the printer.

3. Click Save.

To enable/disable access to the advanced printer features on a per printer basis

1. In the Objects pane, select the appropriate *print server printer*.

   The object form for the print server printer is displayed in the Information pane. The General tab is the open tab.

2. Under Tricerat Advanced Print Features, select the appropriate option:

Option	Description
Use Print Server Default	Access is determined by the APF setting that has been specified for the ScrewDrivers Gateway object to which the printer is assigned.
Do Not Use Advanced Print Features	Select this option to disable access to the advanced features for the selected printer. For access to the advanced features for the printer, the following option must be selected: "Use Advanced Features."
Use Advanced Features	Select this option to enable access to the advanced features for the selected printer. When this option is selected, after a user clicks Preferences in the Print dialog box, the Printing Preferences dialog box is bypassed and instead, the Manufacturer's Print dialog box for the selected printer opens immediately. The dialog box displays the advanced features that the manufacturer supports for the printer.

3. Click Save.

Updating and Refreshing Print Server Printers

After you add print server printers to the ScrewDrivers database, you have the option of updating the printer data for a selected print server, or refreshing the data for the printers on a print server. You can update print server printers if there are printers that were found on the print server but their data has not been added to the ScrewDrivers database, or conversely, you can remove printers that were found in the ScrewDrivers database but not on the print server. You can also refresh all printers or individual printers if changes have been made, such as driver updates, and the print server must be re-queried for accurate printing.

To update print server printers

1. Confirm that the Objects pane is set to Printer objects. (You might need to click the Printers icon on the ScrewDrivers Administration Icon bar.)

Before continuing, you can click the Expand/Collapse icon that is displayed next to the Print Servers folder to expand the folder and view all the print server objects that have already been added, or you can search for specific print server objects. See "To search for an object and view its information" on page 22.

2. In the Objects pane, select the Print Server object for which you are updating the printers.

   The Print Server object form is displayed in the Information pane. The General tab is the open tab.

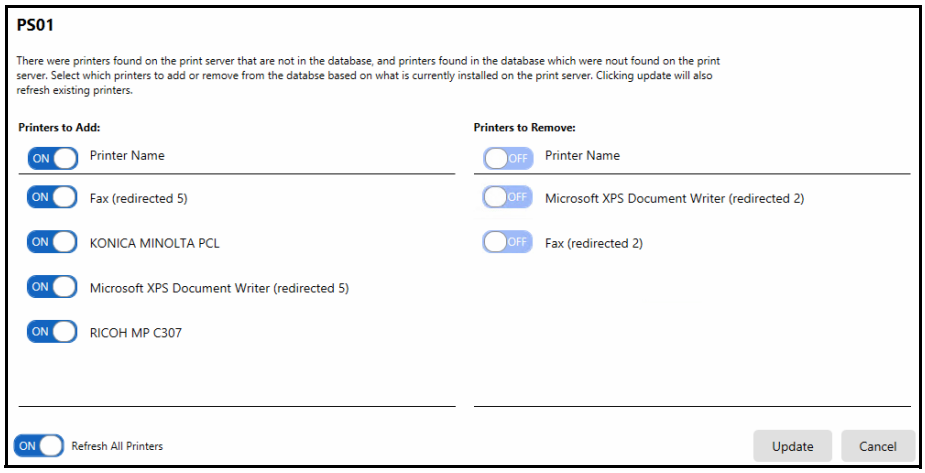
3. On the General tab, click Update Printers.

   An Update Printers dialog box opens. The dialog box displays up to two lists of printers:

   - The Printers to Add list displays all the printers that were found on the print server but not in the ScrewDrivers database. The list includes printers that were added to the print server since the last update. By default, all the printers in the list are turned on for adding to the database.
   - The Printers to Remove list displays all printers that were found in the ScrewDrivers database but not on the print server. By default, all the printers in the list are turned off for removing from the print server.

   By default, the Refresh All Printers option is turned on. See Figure 6-16 on page 103.

Figure 6-16: Update Printers dialog box

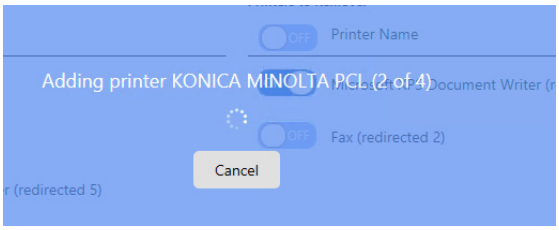


4. Turn on and/or turn off the printers that you are adding or removing from the ScrewDrivers database based on the printers that are currently installed on the print server, and, optionally, leave Refresh All Printers turned on, and then click Update.

If you do not want to refresh the printers during the update, then you can turn off Refresh All Printers, and refresh them at a later time. See "To refresh a print server printer" on page 104.

A series of printer data messages opens, with a separate message being displayed for each printer that is being added to the ScrewDrivers database, and if applicable, for each printer that is refreshed/updated. No messages are displayed for any printer that is being removed from the ScrewDrivers database.

Figure 6-17: Adding printer data message



Be patient during the update process as it can take a while depending on the number of printers that are being added to the ScrewDrivers database and/or refreshed on the print server. ScrewDrivers Administration is unavailable during this time. You must wait for the update process to complete for the print server.

After all the data for all the printers is gathered and added to the database, or refreshed, and the last Adding/Updating printer data message closes, the Objects pane remains open. An entry for each newly added printer is displayed in the Print Server object folder.

To refresh a print server printer

You can refresh all printers on a print server in a single step, or you can refresh individual printers if changes have been made, such as driver updates, and the print server must be re-queried for accurate printing.

1. Confirm that the Objects pane is set to Printer objects. (You might need to click the Printers icon on the ScrewDrivers Administration Icon bar.)

Before continuing, you can click the Expand/Collapse icon that is displayed next to the Print Servers folder to expand the folder and view all the Print Server objects that have already been added, or you can expand the folder for a selected Print Server object to view all its printers. You can also search for specific Print Server objects and/printers. See "To search for an object and view its information" on page 22.

2. Do one of the following:
   - To refresh *all printers* for a Print Server object in a single step, select the Print Server object.

     The Print Server object form is displayed in the Information pane. The General tab is the open tab.
   - To refresh *an individual* printer for a Print Server object, select the printer.

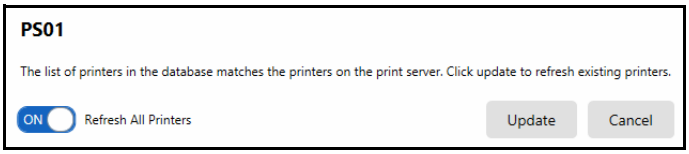
     The printer object form is displayed in the Information pane. The General tab is the open tab.
3. Continue to one of the following:
   - "To refresh all printers on a Print Server" below.
   - "To refresh an individual print server printer" on page 105.

To refresh all printers on a Print Server

1. For the Print Server object, on the General tab of the object form, click Update Printers.

   An Update Printers dialog box opens. By default, the Refresh All Printers option is turned on.

Figure 6-18: Update Printers dialog box

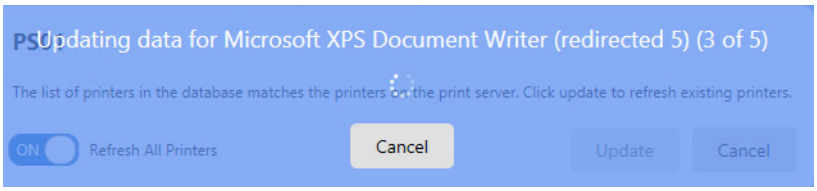


If the Update Printers dialog box also displays a Printers to Add list, and you do not want to update the Print Server object with new printers, then before continuing, make sure to turn off the appropriate printer selections.

2. Click Update Printers.

   A series of printer data messages opens, with a message being displayed for each printer that is refreshed/updated. After all the data for all the printers is gathered and added to the ScrewDrivers database, and the last Updating printer data message closes, the Objects pane remains open. The Print Server object remains selected in the Objects pane.

Figure 6-19: Refreshing printer data message (all printers)



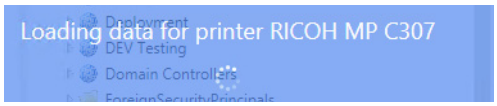
Be patient during the refresh process as it can take a while depending on the amount of data that is being added to the ScrewDrivers database. ScrewDrivers Administration is unavailable during this time. You must wait for the refresh process to complete for the printer.

To refresh an individual print server printer

On the General tab of the object form, click Refresh Printer.

A message opens indicating that the data for the selected printer is being loaded. After all the data for the printer is gathered and added to the ScrewDrivers database, the Loading printer data message closes, and the printer remains selected in the Objects pane.

Figure 6-20: Refreshing printer data message (individual printer)



Be patient during the refresh process as it can take a while depending on the amount of data that is being added to the ScrewDrivers database. ScrewDrivers Administration is unavailable during this time. You must wait for the refresh process to complete for the printer.

Managing ScrewDrivers Print Server Printers Session Settings

Print Server Session Settings include printer creation options that determine default printer behavior, printer connection behavior, and virtual printer behavior - whether users get their own virtual printers or whether a single virtual printer is built and the printer permissions are modified accordingly. Because internally programmed default values typically provide sufficient printing results, Tricerat does not supply a default set of session settings for managing print server printers. You can still create your own unique Print Server Session Settings, and then assign these settings to an owner. When you assign Print Server Session Settings to an owner, the settings affect all the ScrewDrivers Gateway printers for the owner. You cannot assign the settings on a per printer basis.

To manage session-level settings for ScrewDrivers Print Server printers

1. Confirm that the Objects pane is set to Session Printer Settings objects. (You might need to click the Session Settings icon on the ScrewDrivers Administration Icon bar.)

Before continuing, you can click the Expand/Collapse icon that is displayed next to the Print Server Session Settings folder to expand the folder and view all the session settings objects that have already been added, or you can search for specific session settings objects. See "To search for an object and view its information" on page 22.

2. Do one of the following in the Objects pane:

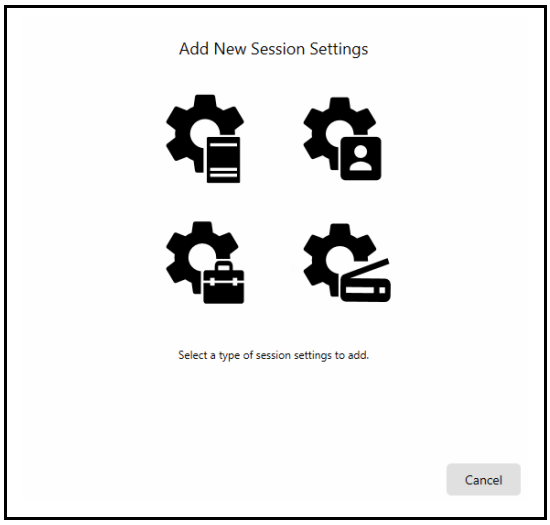
Action	Steps
To assign a set of currently available Print Server Session Settings to an owner as-is.	Select the settings, and then drag the selected settings to the owner in the Assignments pane. **Note:** If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.
To edit an existing set of Print Server Session Settings, and optionally, assign these settings to a new owner.	1. Select the settings. The Information pane displays the Print Server Session Settings object form. The form has three tabs, and the General tab is the open tab. All the values on all the tabs are set to their current values. 2. Continue to Step 7.
To assign new Print Server Session Settings to an owner.	Continue to Step 3.

3. In the Objects pane, click Add Session Settings.

   The Add New Session Settings dialog box opens. The dialog box displays icons for the types of session settings objects that you can add to the ScrewDrivers database.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

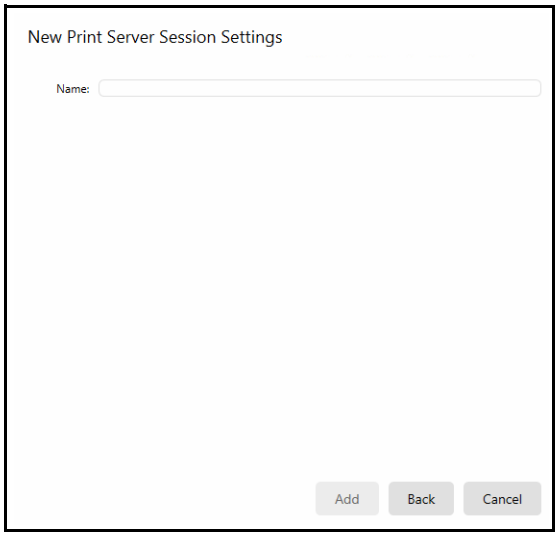
Figure 6-21: Add New Session Settings dialog box



4. Click the Print Server Session Settings icon.

   The New Print Server Session Settings dialog box opens.

Figure 6-22: New Print Server Session Settings dialog box



5. Enter the name for the new Print Server Session Settings, and then click Add.

   The dialog box closes, and the new session settings are displayed in the Print Server Session Settings folder in the Objects pane.

6. Select the newly added session settings.

   The Information pane displays the Session Settings object form.The General tab is the open tab. All values on the tab are set to their default values.

The Assignment tab and the Audit tab are not discussed here. For information about the Assignment tab, see "To review owner assignments" on page 29. For information about the Audit tab, see Appendix C, "Data Review in the ScrewDrivers Administration," on page 197.

7. Specify the values for the newly added session settings, or edit the values for the selected session settings.

Setting	Description
Session Settings	
Recapture the default printer/Recapture delay (seconds)	Turned on by default, and the default value is 30 seconds. The default printer for the ScrewDrivers Gateway client is set again on the Print Server after the specified time period. This prevents the traditional "server printers" from being set as the user's default printers during a remote session. You can change the default value of 30 seconds as needed.
Delete printers on session disconnect; add on reconnect.	Turned on by default. When a remote session is disconnected, or a user logs off, all the client printers are removed from the Print Server. When the remote session is reconnected, or a user logs back in, all the client printers are then built again on the Session Agent.
Shared Virtual Printers - Typically, all users receive their own virtual printers that are redirected to print server printers. If you elect to use a single virtual shared printer, then the printer is shared among all the users who are logged in on the Session Agent.	
Use one shared virtual printer for each print server printer.	If selected, then you must specify how the virtual printer is named on the Session Agent. You can do the following: • Select from one of two default naming schemes. • Select Custom, and then specify the custom naming scheme. **Note:** If you select Custom, then all special characters other than an exclamation point (!), backslash (\), or a period (.) are allowed in the free text fields. *Figure 6-23: Example of a custom printer naming scheme for a virtual printer* 

8. Select the session settings again, and then drag the settings to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See "To configure the assigned print server printers" on page 97.

9. Click Save.

Chapter 7
Managing ScrewDrivers Direct Printers

After you have installed all the necessary features and tools for ScrewDrivers Direct, you can use the ScrewDrivers Printer Discovery application to import selected print drivers and printers in to your ScrewDrivers database, and then assign then drivers to printers. After assigning the drivers to printers, you can then use the functions that are available in ScrewDrivers Administration to assign these printers to workstations, users, and/or groups. This chapter details how to open ScrewDrivers Printer Discovery and how to use this application to import printer drivers in to the ScrewDrivers database, import printers in to the ScrewDrivers database to create the necessary Printer objects, and then assign drivers to printers. The chapter also details how to use the functions that are in ScrewDrivers Administration to assign these managed printers to your organization's workstations, users, and/or groups.

ScrewDrivers Direct printers are referred to as managed printers.

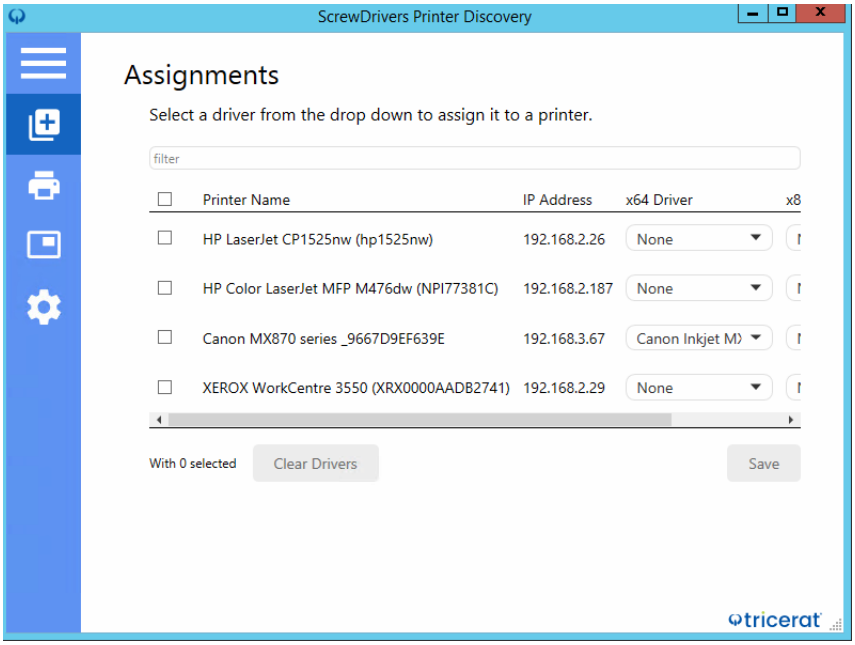
This chapter covers the following topics:

Chapter 7
Managing ScrewDrivers Direct Printers

The ScrewDrivers Printer Discovery Main Window

You use ScrewDrivers Printer Discovery use in combination with ScrewDrivers Administration to create managed printers and assign these managed printers to your organization's workstations, users, and/or groups. Figure 7-1 below shows the main window for ScrewDrivers Printer Discovery.

Figure 7-1: ScrewDrivers Printer Discovery main window



The ScrewDrivers Printer Discovery main window has four tabs for managing your printer discovery functions. Each tab is represented by an icon on a Tab bar that is displayed on the left side of the main window. Click an icon to view the corresponding tab.

Tab	Description
Tip: When ScrewDrivers Printer Discovery first opens, the Tab bar is collapsed. You can hold your cursor over an icon on the Tab bar to display a tooltip that shows the name of the corresponding tab, or you can click the Hamburger icon to expand the Tab bar and view the complete name of each tab.	
	Assignments tab - Displays all the printers that have been imported in to the ScrewDrivers database and if applicable, the driver that is currently assigned to the printer. If a driver has not been assigned to a printer, then you can assign a driver from this tab. See "To assign a driver to a printer" on page 120.
	Printers tab - Displays all the printers that have been imported in to the ScrewDrivers database. An option to Import printers is also displayed. See "To import network printers in to the ScrewDrivers database" on page 118.

Tab	Description
	Drivers tab - Displays all the print drivers that have been imported in to the ScrewDrivers database. An option to Import drivers is also displayed. See “To import local print drivers in to the ScrewDrivers database” on page 115.
	Settings tab - Displays the version of the ScrewDrivers Printer Discovery application that is currently installed on the workstation. Also contains options for specifying what information to display on the Drivers tab (which drivers to show/hide, which printers to show/hide) and for specifying what type of printers are to be queried for management. See “ScrewDrivers Printer Discovery Settings Tab” on page 128.

A filter field is displayed at the top of every tab except the About tab. A filter field is also displayed at the top of some of the dialog boxes that open as you carry out the necessary steps to manage your users’ printers. You can enter a filter string to limit the items that are displayed on a tab or dialog box, for example, the list of imported drivers on the Drivers tab. Note the following about any filter string that you enter:

- The filter string might or might not be sensitive to all the information that is displayed on the tab or dialog box. For example, on the Printers tab, you can search across the Printer Name or IP Address; however, on the Assignments tab, the search is carried out across the Printer Name and IP Address, but not the assigned drivers.
- As you enter a filter string, the list of results that meet the filter criteria is dynamically updated.
- The filter is limited to the exact order of the characters in the string, but the filter is not case-sensitive and the string can be found anywhere in the results. For example, a filter string of **JET** on the Drivers tab would return drivers with names such as HP Office**jet**, Color LASER**JET**, and so on.

Routing Print Traffic with ScrewDrivers Direct

Using ScrewDrivers Direct to route printing traffic for your organization's workstations consists of the following steps:

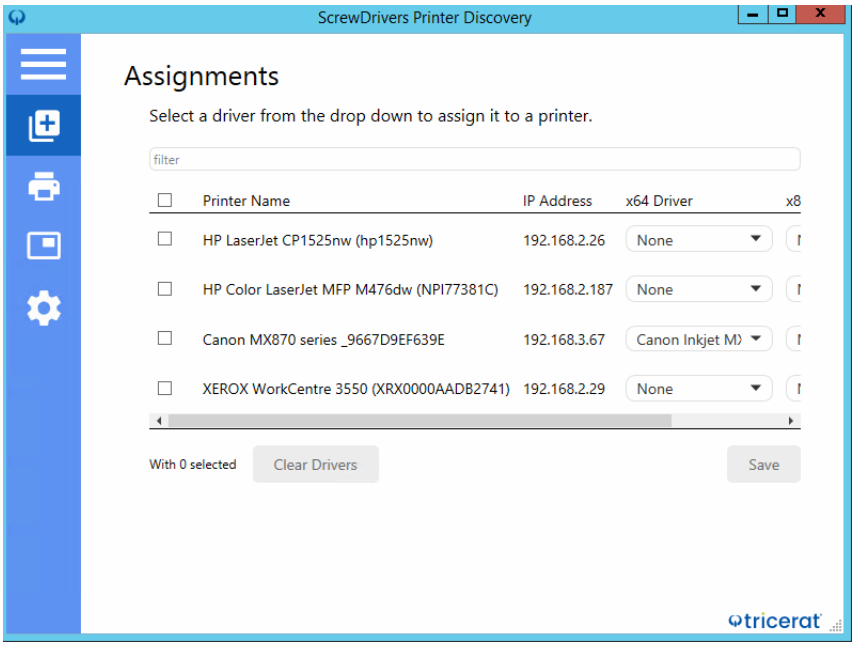
1. Importing local print drivers in to the ScrewDrivers database. See "To import local print drivers in to the ScrewDrivers database" below.
2. Importing network printers in to the ScrewDrivers database. See "To import network printers in to the ScrewDrivers database" on page 118.
3. Assigning drivers to the printers. See "To assign a driver to a printer" on page 120.
4. Assigning the printers to owners. See "Assigning Managed Printers To Owners" on page 122.

To import local print drivers in to the ScrewDrivers database

You must repeat the following procedure for each workstation (client or server) that has unique drivers that are to be imported in to the ScrewDrivers database.

1. Log in to an appropriate workstation, and then open ScrewDrivers Printer Discovery.

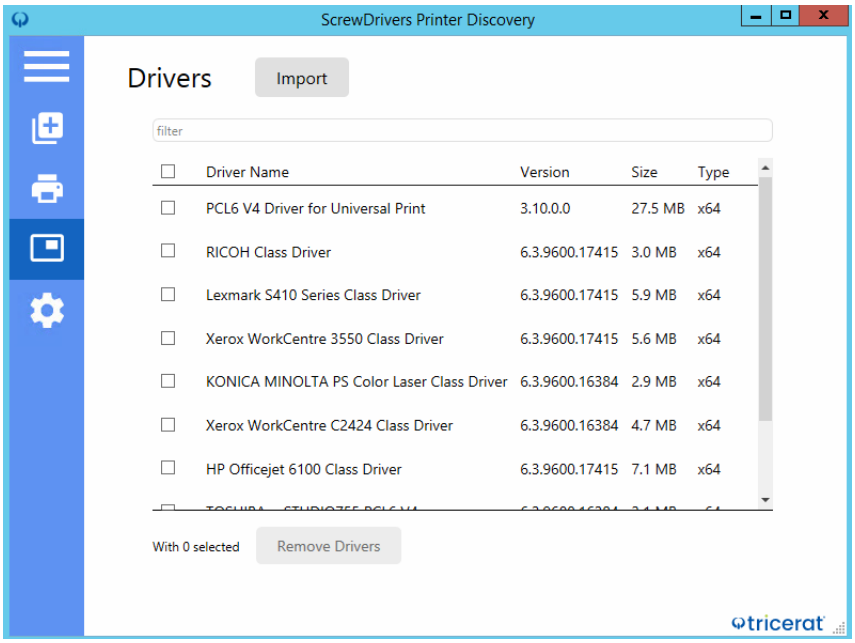
Figure 7-2: ScrewDrivers Printer Discovery main window



2. Open the Drivers tab.

   The first time that you open the tab it is blank. Afterwards, the tab lists all the drivers that are local to the workstation (client or server) and that have been imported in to the ScrewDrivers database. See Figure 7-3 on page 116.

Figure 7-3: ScrewDrivers Printer Discovery Drivers tab

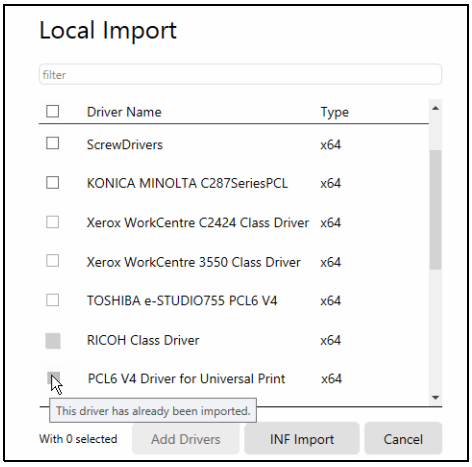


3. Click Import.

   A Local Import dialog box opens. The dialog box lists all the drivers that are local to the workstation. If a driver has not yet been imported in to the ScrewDrivers database, then the check box that is displayed next to the driver has a white background; otherwise, if the driver has been imported, then the checkbox has a gray background. If you hold your cursor over the checkbox, a message opens stating that the driver has been imported.

Be patient as it might take a minute or two for the Local Import dialog box to be populated with all the locally discovered drivers.

Figure 7-4: Local Import dialog box



4. Continue to one of the following:
   - To search for and import local drivers in to the ScrewDrivers database, continue to "To search for and import local drivers in to the ScrewDrivers database" below.
   - To to import local drivers in to the ScrewDrivers database with an INF file, continue to "To import local drivers in to the ScrewDrivers database with an INF file" on page 117.

To search for and import local drivers in to the ScrewDrivers database

1. Select one or more drivers to import, or click the check box that is displayed next to Driver Name to select all available drivers in a single step, and then click Add Drivers.

   An Importing Drivers message opens and displays the progress of importing the selected drivers. After the selected drivers are imported in to the ScrewDrivers database, the message closes, and you return to the Drivers tab. The newly imported drivers are displayed in the list of drivers on the tab.

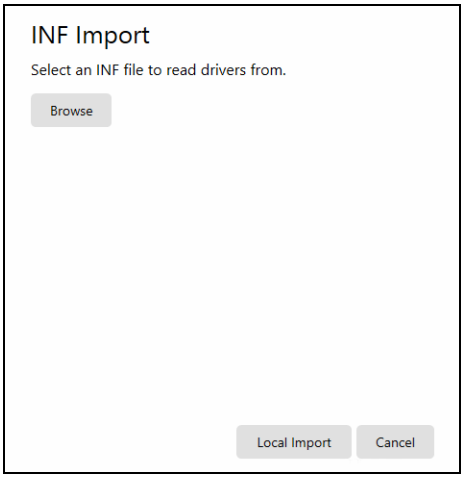
2. Continue to "To import network printers in to the ScrewDrivers database" on page 118.

To import local drivers in to the ScrewDrivers database with an INF file

1. On the Local Import dialog box, click INF Import.

   The INF Import dialog box opens.

Figure 7-5: INF Import dialog box

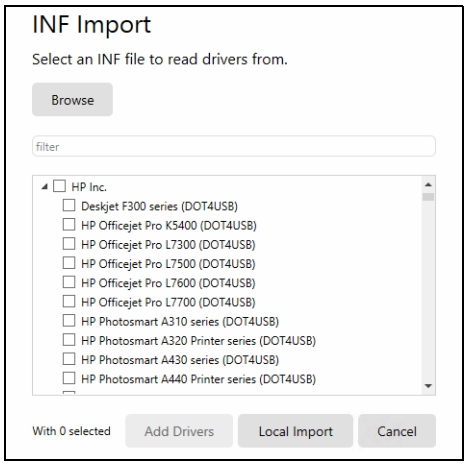


If you decide not to use an INF file to import local drivers, then at this point, you can click Local Import to return to the Local Import dialog box and use search and import (Add Drivers) function instead.

2. Click Browse to open the INF Import dialog box, and then browse to and select the appropriate INF file.

   The INF Import dialog box is populated with a list of valid drivers for the selected file.

Figure 7-6: INF Import dialog box



3. Select the driver or drivers that you are importing in to the ScrewDrivers database, or click the check box that is displayed next to the driver manufacturer (at the very top of the driver list) to select all drivers in a single step, and then click Add Drivers.

   An Importing Drivers message opens and displays the progress of importing the selected drivers. After the selected drivers are imported in to the ScrewDrivers database, the message closes, and you return to the Drivers tab. The newly imported drivers are displayed in the list of drivers on the tab.

4. Continue to "To import network printers in to the ScrewDrivers database" below.

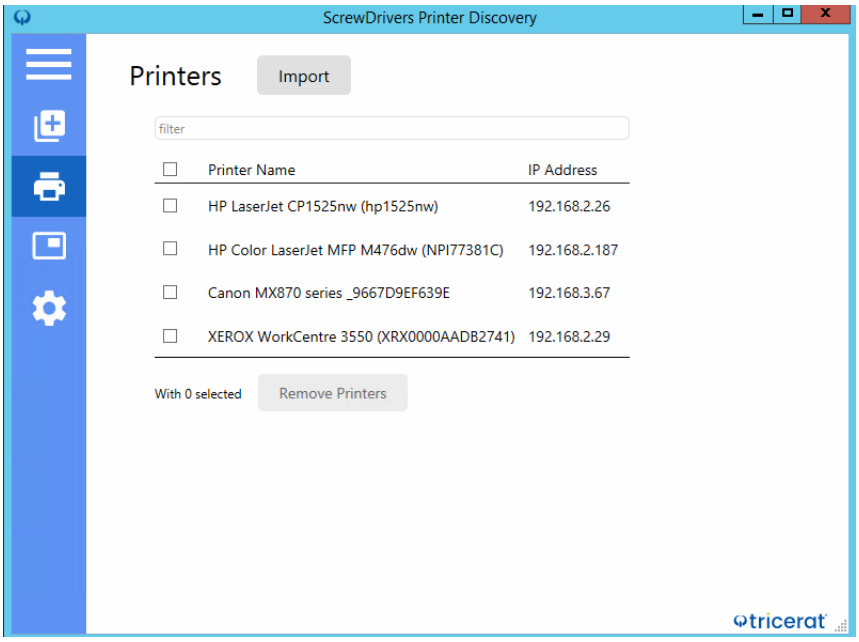
To import network printers in to the ScrewDrivers database

By default, ScrewDrivers Printer Discovery is set to discover both Bonjour-compatible and IPP-compatible printers that are found on the same subnet. To edit the printer discovery options, including an option to specify a custom search for printers that are on other subnets, see "ScrewDrivers Printer Discovery Settings Tab" on page 128.

When you import a network printer in to the ScrewDrivers database, a corresponding Printer object is created in the database. The Printer object has a Printer Name and an IP Address. After the Printer object is created in the database, you can then assign the appropriate driver to the printer.

1. Log in to an appropriate workstation, and then open ScrewDrivers Printer Discovery.
2. Open the Printers tab. See Figure 7-7 on page 119.

Figure 7-7: ScrewDrivers Direct Printers tab

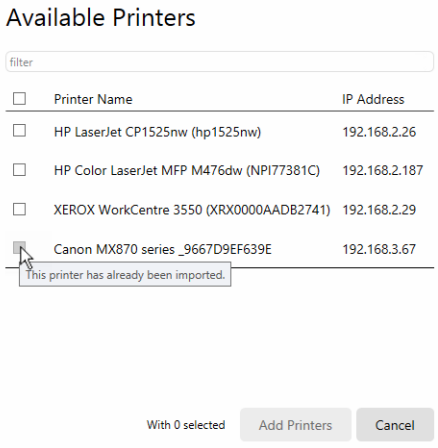


3. On the Printer Actions menu, click Import Printers.

   The Import Printers window opens. The dialog box lists all the network printers that have been discovered based on the options specified on the About tab. If a printer has not yet been imported in to the ScrewDrivers database, then the check box that is displayed next to the printer has a white background; otherwise, if a printer has been imported, then the checkbox has a gray background. If you hold your mouse pointer over the checkbox, a message opens stating that the printer has already been imported.

Be patient as it might take a minute or two for the Available Printers dialog box to be populated with all the network-discovered printers.

Figure 7-8: ScrewDrivers Direct, Available Printers dialog box



4. Select one or more printers to import, or click the check box that is displayed next to Printer Name to select all available printers in a single step, and then click Add Printers.

   An Importing Printers message opens and displays the progress of importing the selected printers. After the selected printers are imported in to the ScrewDrivers database, the message closes, and you return to the Printers tab. The newly imported network printers are displayed in the list of printers on the tab.

5. Continue to "To assign a driver to a printer" below.

To assign a driver to a printer

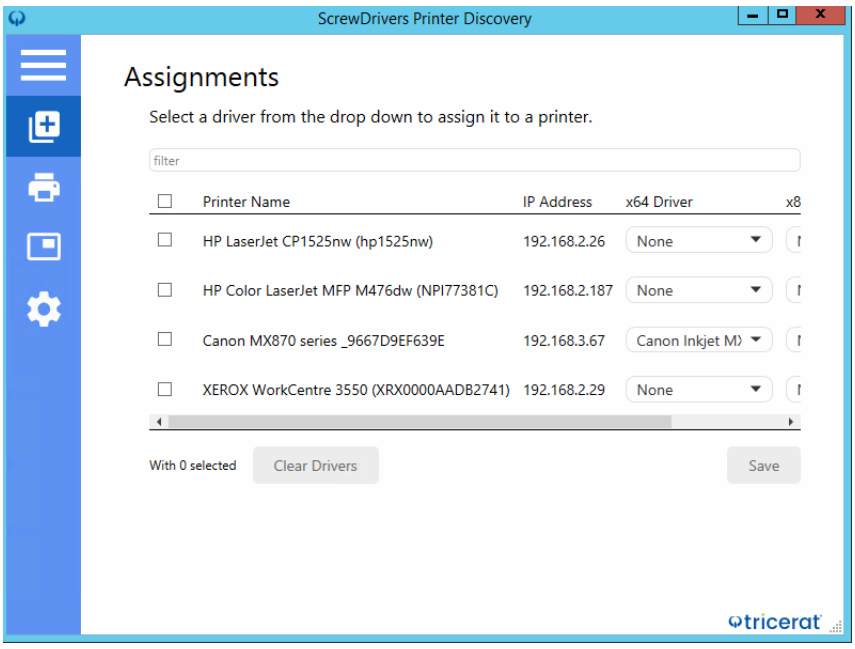
You can save each driver assignment individually, or you can make multiple driver assignments, and then Save all the assignments in a single step.

1. Log in to an appropriate, and then open ScrewDrivers Printer Discovery.
2. Open the Assignments tab.

   By default, all network-discovered printers, whether assigned a driver or not, are displayed on the tab. Also by default, only 64-bit drivers are available for assignment.

To change the display of the Assignments tab, including making 32-bit print drivers available for assignment, see "ScrewDrivers Printer Discovery Settings Tab" on page 128.

Figure 7-9: ScrewDrivers Direct Assignments tab



3. To assign a driver to a printer, select the driver from the dropdown list of available drivers, and then click Save.

You can make an assignment for a single printer, or you can make assignments for multiple printers, and then click Save.

A Saving Assignments message opens and displays the progress of saving the assigned drivers. After all the assignments are saved, the message closes, and the Assignments tab remains open.

4. Continue to “Assigning Managed Printers To Owners” on page 122.

Assigning Managed Printers To Owners

The third step in setting up ScrewDrivers Direct is to assign the managed printers to owners. Assigning printers to owners allows owners to select the printers that are to be used during a ScrewDrivers Direct session. An owner can be a workstation, an individual user, or a group. You can assign the managed printers in one of two ways:

- You can directly assign the printer. See "To directly assign a managed printer to an owner" below.
- You can dynamically assign the printer. See "To manage Network owners" on page 30.

To directly assign a managed printer to an owner

When you directly assign a managed printer to an owner, you must specify one of the following three statuses for the printer:

- Always show this printer – Referred to as "Admin Assigned." Any managed printer that you assign to an owner as Admin Assigned is always built for the owner. The owner does not have the option of whether to build the printer, nor does the owner have the option of removing the printer from a ScrewDrivers Direct session. You should add managed printers to the Admin Assigned location to prevent an owner from being able to affect the building of specific printers. An owner always has the option of setting any Admin Assigned printer as the default printer for a session through the ScrewDrivers Printers application.
- Show this printer by default, but allow users to remove it – Referred to as "User Assigned." If you assign a managed printer to an owner as User Assigned, then the owner must use the ScrewDrivers Printers application to add this printer to the list of printers that are to be built for the current ScrewDrivers Direct session. The owner can always delete and re-add the printer as needed.

To assist your users in locating available printers for self-assignment, see Chapter 9, "ScrewDrivers Maps," on page 145.

- Don't show this printer by default, but allow users to add it – Referred to as "User Allowed." If you assign a managed printer to an owner as User Allowed, then this printer is automatically built for every ScrewDrivers Direct session for the owner. If the owner does not want the printer to be built for a ScrewDrivers Direct session, then the owner can use the ScrewDrivers Printers application to delete the assignment. The printer is no longer built for the owner's ScrewDrivers Direct session and the owner *cannot* add this printer back to the list of printers that are to be built for any session.

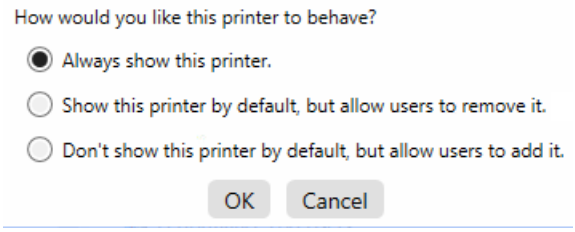
You must repeat the following procedure in its entirety for each owner to which you are assigning printers.

1. In the Objects pane, select the managed printer that you are assigning to an owner, and then drag the selected printer to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.

A message opens, asking you how the printer is to behave. By default, "Always show this printer" is selected.

Figure 7-10: ScrewDrivers Direct printer assignment options message



2. Leave "Always show this printer" selected, or select the appropriate option, and then click OK.

   The message closes and the printer is assigned to the selected owner. The assigned printer is displayed beneath the Owner entry in the Assignments pane and the Assignment Mode is displayed for the printer.

Figure 7-11: Direct assignment of a managed printer to an owner

Managing Drivers and Printers in ScrewDrivers Direct

Managing drivers and printers in ScrewDrivers Direct consists of the following:

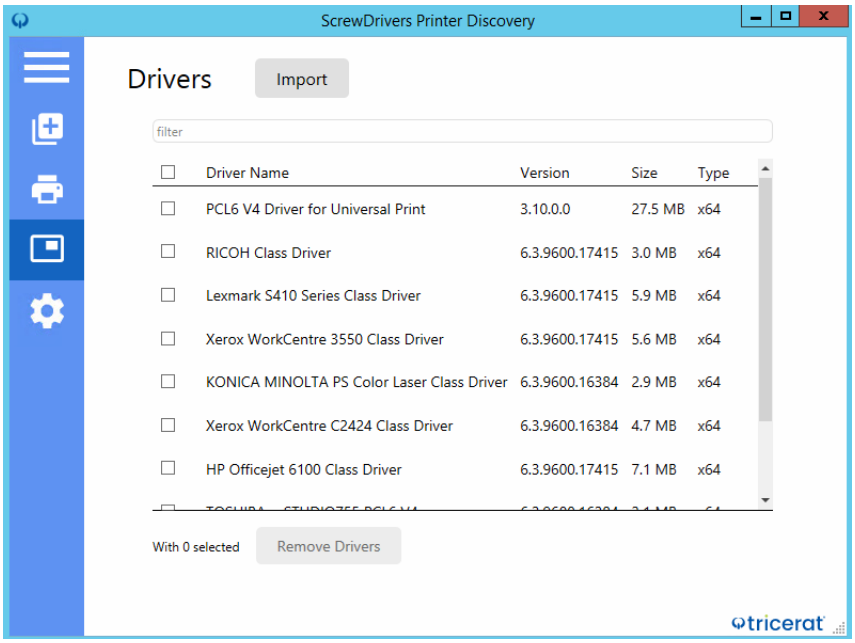
- Deleting print drivers from the ScrewDrivers database. See “To remove printer drivers from the ScrewDrivers database” below.
- Clearing drivers from network printers. See “To clear a driver from a printer” on page 125.
- Deleting printers from the ScrewDrivers database. See “To delete a printer from the ScrewDrivers database” on page 126.

When you delete a print driver, clear a driver assignment, or delete a printer, any queues that were created with the driver are not deleted; however, the printer is no longer available after an affected user starts another session by logging off and then logging back on to the workstation.

To remove printer drivers from the ScrewDrivers database

1. Log in to an appropriate, and then open ScrewDrivers Printer Discovery.
2. Open the Drivers tab.

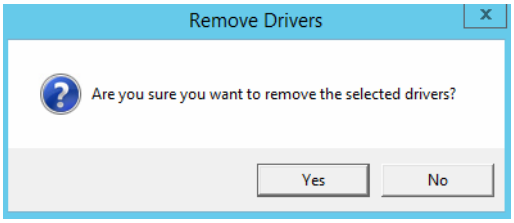
Figure 7-12: ScrewDrivers Direct Drivers tab



3. In the Drivers pane, select the print driver or drivers that you are removing, or select the check box that is displayed next to Driver Name to select all drivers in a single step, and then click Remove Drivers.

   A Remove Drivers message opens, asking you if you are sure that you want to remove the selected drivers.

Figure 7-13: Confirm Driver Deletion message



4. Click Yes.

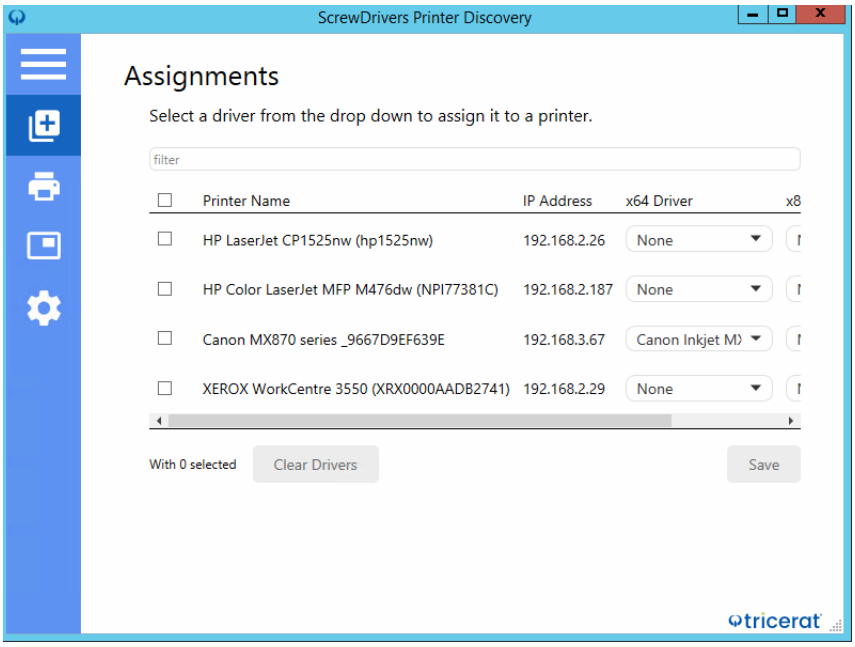
   The Remove Drivers message closes. A Removing Drivers message is displayed briefly, and then closes after the print drivers are removed from the ScrewDrivers database. The Drivers tab remains open. The removed drivers are not longer displayed on the tab.

To clear a driver from a printer

When you clear a print driver from a printer, the Printer object is edited in the ScrewDrivers database. The driver is *not* deleted from the database.

1. Log in to an appropriate workstation and then open ScrewDrivers Direct.
2. Open the Assignments tab.

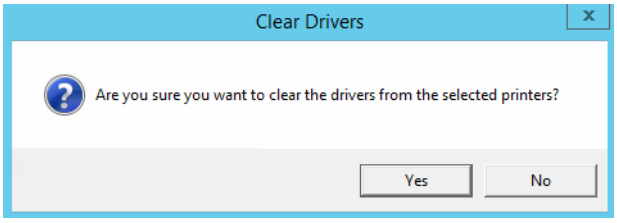
Figure 7-14: ScrewDrivers Direct Assignments tab



3. In the Printers pane, select the printer or printers for which you are clearing the driver assignments, or select the check box that is displayed next to Printer Name to select all printers in a single step.
4. Click Clear Drivers.

   A Clear Drivers message opens, asking you if you are sure that you want to clear the drivers from the selected printers.

Figure 7-15: Clear Drivers message



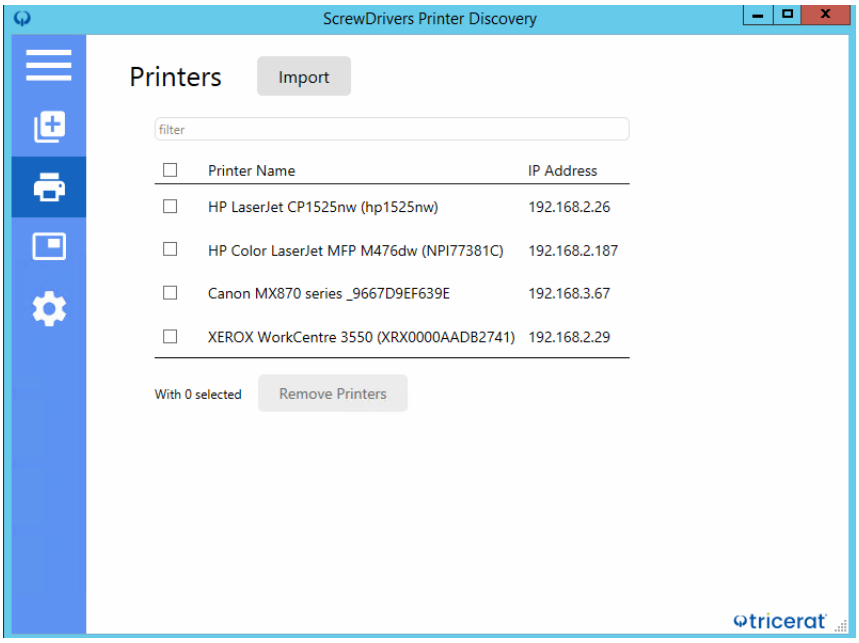
5. Click Yes.

   A Clearing Drivers message is displayed briefly, and then closes after the selected assignments are removed from the ScrewDrivers database. The Assignments tab remains open. “None” is displayed on the Drivers dropdown list for each assignment that was cleared.

To delete a printer from the ScrewDrivers database

1. Log in to the appropriate client, and then open ScrewDrivers Direct.
2. Open the Printers tab.

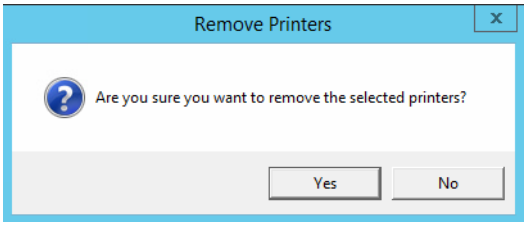
Figure 7-16: ScrewDrivers Direct Printers tab



3. In the Printers pane, select the printer or printers that you are deleting from the ScrewDrivers database or select the check box that is displayed next to Printer Name to select all printers in a single step.
4. On the Printer Actions menu, click Remove Printers.

   A Remove Printers message opens, asking you if you are sure that you want to remove the selected printers.

Figure 7-17: Remove Printers message



5. Click Yes.

   A Removing Printers message is displayed briefly, and then closes after the selected printers are removed from the ScrewDrivers database. The Printers tab remains open. The removed printers are no longer displayed on the tab.

ScrewDrivers Printer Discovery Settings Tab

The Settings tab displays the version of the ScrewDrivers Printer Discovery application that is currently installed on the workstation. The tab also contains options for specifying what information to display on the Drivers tab (which drivers to show/hide, which printers to show/hide) and for specifying what type of printers are to be queried for management.

Any selections that you make on the Settings tab are "sticky" - they remain in effect after you log out and then log back in to ScrewDrivers Printer Discovery.

Option	Description
List View	These options determine what information is displayed on the Assignments tab. By default, Hide Win32 drivers is selected and Hide printers with drivers is not selected. • If you clear Hide Win32 drivers, then all 32-bit drivers that are contained in the ScrewDrivers database are shown in an x86 dropdown list that is displayed for each printer on the Assignments tab. • If you select Hide printers with drivers, then any printer to which a driver has been assigned (32-bit or 64-bit) is not displayed on the Assignments tab. **Tip:** To help you focus on printers that require driver assignments, you should select Hide printers with drivers.
Printer Query Type	By default, ScrewDrivers Printer Discovery is set to discover both Bonjour- and IPP-compatible network printers that are on the same subnet. You can clear one or both options if you do not want the application to discover any network printers.
IPP IP Addresses & Masks	By default, ScrewDrivers Printer Discovery is set to discover both Bonjour-compatible and IPP-compatible printers that are found on the *same subnet*. To edit the search so that it includes IPP printers that are on other subnets, you can use masks. • To specify an IPP mask, click Add an Option. A blank entry is displayed for specifying the IP address and its mask. • To delete an IPP mask or masks, select the check box next to each option that you are deleting (select the check box that is displayed next to IP Address to select all masks in a single step), and then click Delete.

Managing ScrewDrivers Direct Printers Session Settings

Because internally programmed default values typically provide sufficient printing results, Tricerat does not supply a default set of session settings for managing ScrewDrivers Direct printers. You can still create your own unique Managed Printer Session Settings, and then assign these settings to an owner. When you assign Managed Printer Server Session Settings to an owner, the settings affect all the ScrewDrivers Direct printers for the owner. You cannot assign the settings on a per printer basis.

To manage session-level settings for ScrewDrivers Direct printers

1. Confirm that the Objects pane is set to Managed Printer Session Settings objects. (You might need to click the Session Printer Settings icon on the ScrewDrivers Administration Icon bar.)

Before continuing, you can click the Expand/Collapse icon that is displayed next to the Managed Printer Session Settings folder to expand the folder and view all the session settings objects that have already been added, or you can search for specific session settings objects. See "To search for an object and view its information" on page 22.

2. Do one of the following in the Objects pane:

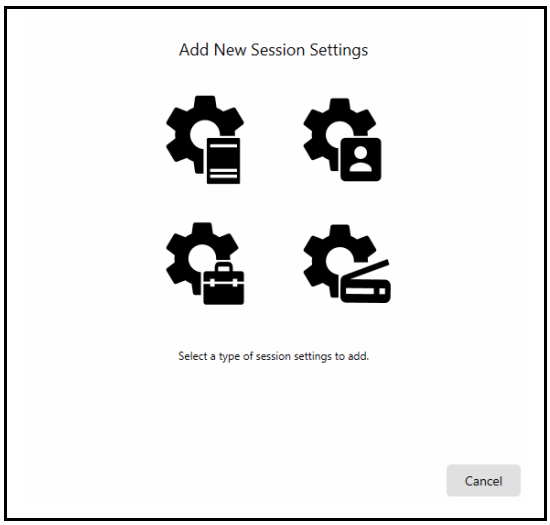
Action	Steps
To assign a set of currently available Managed Printer Session Settings to an owner as-is.	Select the settings, and then drag the selected settings to the owner in the Assignments pane. **Note:** If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.
To edit an existing set of Managed Printer Session Settings, and optionally, assign these settings to a new owner.	1. Select the settings. The Information pane displays the Managed Printer Session Settings object form. The form has four tabs, and the General tab is the open tab. All the values on all the tabs are set to their current values. 2. Continue to Step 7.
To assign new Managed Printer Session Settings to an owner.	Continue to Step 3.

3. In the Objects pane, click Add Session Settings.

   The Add New Session Settings dialog box opens. The dialog box displays icons for the types of session settings objects that you can add to the ScrewDrivers database. See Figure 7-18 on page 130.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

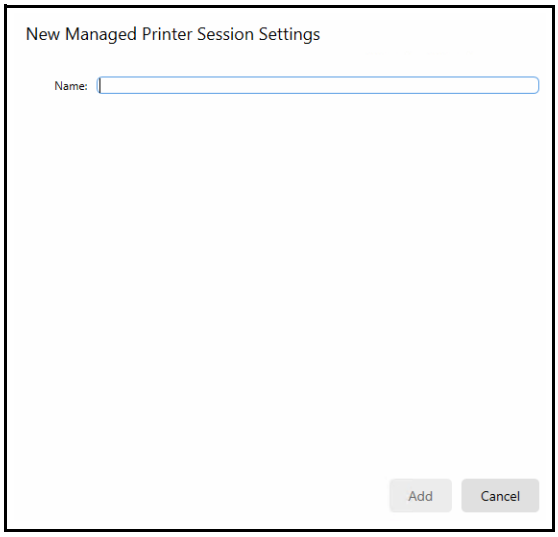
Figure 7-18: Add New Session Settings dialog box



4. Click the Managed Printer Session Settings icon.

   The New Managed Printer Session Settings dialog box opens.

Figure 7-19: New Print Server Session Settings dialog box



5. Enter the name for the new Managed Printer Session Settings, and then click Add.

   The dialog box closes, and the new session settings are displayed in the Managed Printer Session Settings folder in the Objects pane.

6. Select the newly added session settings.

   The Information pane displays the Session Settings object form. The form has four tabs. The General tab is the open tab. All values on the tab are set to their default values.

The Assignment tab and the Audit tab are not discussed here. For information about the Assignment tab, see "To review owner assignments" on page 29. For information about the Audit tab, see Appendix C, "Data Review in the ScrewDrivers Administration," on page 197.

7. Specify the values for the newly added session settings, or edit the values for the selected session settings.

Setting	Description
General tab	
Driver Version Scheme - Options for managing the driver versions. You can select only value.	
• Do not allow driver upgrades or downgrades	
• Allow driver upgrades but not downgrades	• Turned on by default.
• Allow driver upgrades and downgrades	
Printer Naming tab	
Naming Scheme	
Use a default naming scheme	Select one of the four default schemes. • Printer Name (MACHINE:SESSION) - Turned on by default. • MACHINE:SESSION (Printer Name) • Printer Name (USER:SESSION) • USER:SESSION (Printer Name)
Edit and use a default naming scheme	1. Select one of the four default schemes. (Printer Name is selected.) 2. Do one or both of the following: • Turn on "Limit name component lengths," and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Turn on the options in the printer name that you are replacing, and then leave a default replacement value as-is, or modify it as needed. For example, if you turn on "Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

Setting	Description
Use a custom naming scheme	**Note:** Special characters other than an exclamation point (!), backslash (\) or period (.) are allowed in any of the free text fields. 1. Select Custom. 2. Set the format of the scheme using Session ID and one or more of the following: Printer, Machine Name, and User. In addition to the Session ID, the name can have up to three components, but you can specify a single component (for example, Machine Name), two components (for example, Machine Name and Printer), or all three components (for example, Machine Name, Printer, and User). **Caution:** Tricerat does not support a format without a Session ID. A user could log in to multiple sessions, which can result in a naming conflict. 3. Optionally, do one or both of the following: • Turn on “Limit name component lengths,” and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Turn on the options in the printer name that you are replacing, and then leave a default replacement value as-is, or modify it as needed. For example, if you turn on “Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

8. Click Save.

Chapter 8
Managing ScrewDrivers Legacy Options

Two legacy options are still available in ScrewDrivers Administration – Local and Network printers and PDF printers. Local and Network printers is essentially is “lighter” version of ScrewDrivers Direct that addresses simple native queue management. Typically, you use Local and Network printers to reference a Windows-shared local or network printer. You also have the option of configuring basic PDF printers for your users in ScrewDrivers Administration.

This chapter covers the following topics:

Adding and Configuring Local and Network Printers

Local and Network printers is essentially a “lighter” version of ScrewDrivers Direct that addresses simple native queue management. Typically, you use Local and Network printers to reference a Windows-shared local or network printer. A *local* printer is a printer that is installed directly on the application server. A *network* printer is a printer that is shared over your network and is *not* managed on a print server. Managing Local and Network printers includes adding these local and network printers to the ScrewDrivers database and assigning the printers to owners.

To add and configure local printers

1. Confirm that the Objects pane is set to Printer objects. (You might need to click the Printers icon on the ScrewDrivers Administration Icon bar.)

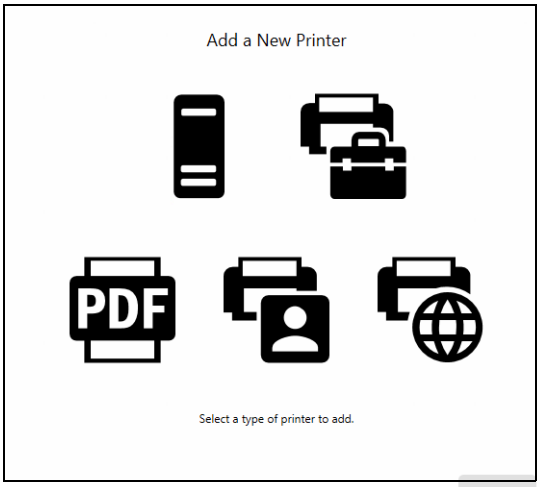
Before continuing, you can click the Expand/Collapse icon that is displayed next to the Local Printers folder to expand the folder and view all the local printer objects that have already been added, or you can search for specific local printer objects. See “To search for an object and view its information” on page 22.

2. In the Objects pane, click Add Printer.

   The Add a New Printer dialog box opens. The dialog box displays icons for the types of printer objects that you can add to the ScrewDrivers database.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

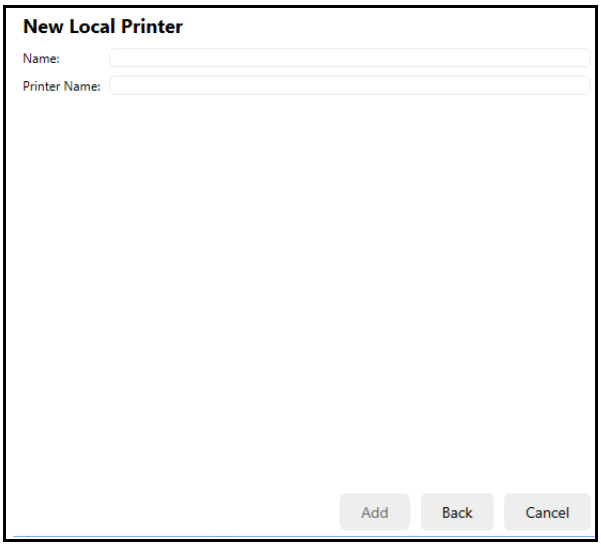
Figure 8-1: Add a New Printer dialog box



3. Click the Local Printer icon.

   The New Local Printer dialog box opens.

Figure 8-2: New Local Printer dialog box



You can also right-click the Local Printers folder in the Objects pane, and on the context menu that opens, click New Local Printer.

4. Enter the information for the new Local Printer object.

Option	Description
Name	The name of the printer as it will appear in the Objects pane in the ScrewDrivers Administration.
Printer Name	The name of the printer as it will appear to the users to which it has been assigned. The name should include the printer mapping to the server, for example, \\server1\HP2025.

5. Click Add.

   The New Local Printer dialog box closes. The newly added local printer is displayed in the Local Printers folder.

6. Select the newly added Local Printer object.

You might have to click the Expand/Collapse icon that is displayed next to the Local Printers folder to expand the folder and view the newly added Local Printer object.

The Information pane displays the Local Printer object form. The form groups together related configuration parameters for the selected Local Printer object. The General tab is the open tab.

7. Configure the information for the local printer.

Option	Description
General tab	
Printer Properties	
Printer Name	The name of the printer as it will appear to the users to which it has been assigned. You specified this value in Step 4, but you can edit it here.
Location	Optional. Free text field for specifying the physical location of the printer, for example, Corporate, 5th floor.
Comment	Optional. Free text field for adding any pertinent information about the printer.
Shared as	
Driver tab - The tab lists all the drivers that are available on the Terminal Server. Select the device driver for the printer. Click Refresh Drivers at any time to update the list with all the available drivers.	
Printer Port tab - The tab lists the communication port types that are available for the printer. The port must exist on the Terminal Server for the printer to be created. Select one of three communication port types,—Local Port, ICA Port, or RDP Port—and then select the port.	

8. On the Printer Naming tab, leave the printer naming scheme set to the default value of Printer Name (MACHINE:SESSION), or optionally, edit the printer naming scheme.

Step	Action
Use a default naming scheme	Select the naming scheme.
Edit and use a default naming scheme	1. Select the naming scheme. 2. Do one or both of the following: • Select “Limit name component lengths,” and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Select which options in the printer name are to be replaced, and then leave a default replacement value as-is, or modify it as needed. For example, if you select “Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

Step	Action
Create and use a custom naming scheme	**Note:** Special characters other than an exclamation point (!), backslash (\) or period (.) are allowed in any of the free text fields. 1. Select Custom. 2. Set the format of the scheme using Session ID and one or more of the following: Printer, Machine Name, and User. In addition to the Session ID, the name can have up to three components, but you can specify a single component (for example, Machine Name), two components (for example, Machine Name and Printer), or all three components (for example, Machine Name, Printer, and User). **Caution:** Tricerat does not support a format without a Session ID. A user could log in to multiple sessions, which can result in a naming conflict. 3. Optionally, do one or both of the following: • Select "Limit name component lengths," and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Select which options in the printer name are to be replaced, and then leave a default replacement value as-is, or modify it as needed. For example, if you select "Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

9. Click Save.
10. In the Objects pane, select the newly added local printer, and then drag the selected printer to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.

To add and configure network printers

1. Confirm that the Objects pane is set to Printer objects. (You might need to click the Printers icon on the ScrewDrivers Administration Icon bar.)

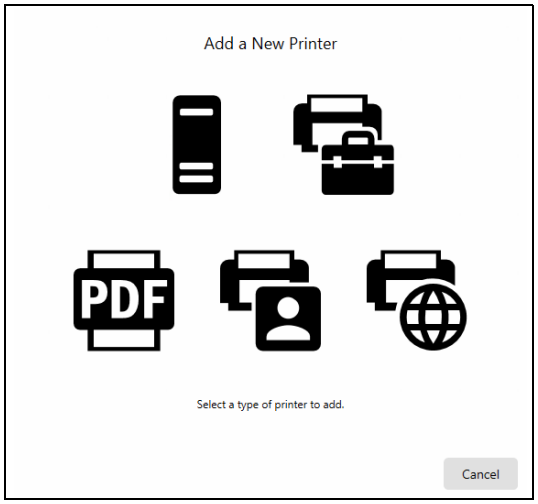
Before continuing, you can click the Expand/Collapse icon that is displayed next to the Network Printers folder to expand the folder and view all the network printer objects that have already been added, or you can search for specific network printer objects. See "To search for an object and view its information" on page 22.

2. In the Objects pane, click Add Printer.

   The Add a New Printer dialog box opens. The dialog box displays icons for the types of printer objects that you can add to the ScrewDrivers database. See Figure 8-3 on page 139.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

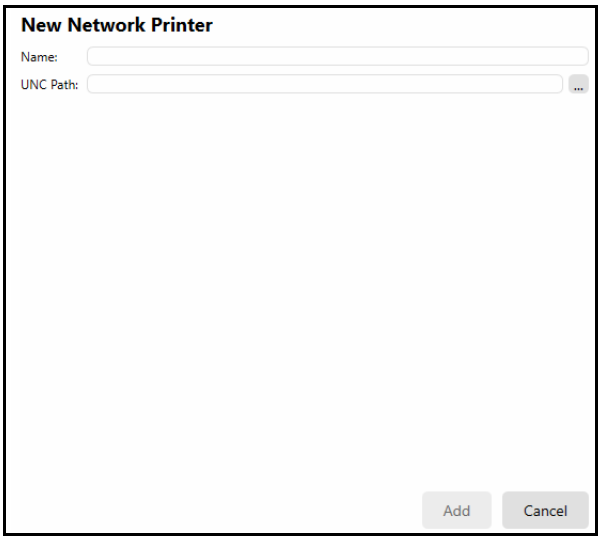
Figure 8-3: Add a New Printer dialog box



3. Click the Network Printer icon.

   The New Network Printer dialog box opens.

Figure 8-4: New Local Printer dialog box



You can also right-click the Network Printers folder in the Objects pane, and on the context menu that opens, click New Network Printer.

4. Enter the information for the new Network Printer object.

Option	Description
Name	The name of the printer as it will appear in the Objects pane.
UNC Path	Enter the UNC path to identify the printer in the network, for example, \\server2\HP1525.

5. Click Add.

   The New Network Printer dialog box closes. The newly added network printer is displayed in the Network Printers folder.

6. Select the newly added Network Printer object.

You might have to click the Expand/Collapse icon that is displayed next to the Network Printers folder to expand the folder and view the newly added Network Printer object.

The Information pane displays the Network Printer object form. The form groups together related configuration parameters for the selected Network Printer object. The General tab is the only tab.

7. Configure the information for the network printer.

Option	Description
UNC Printer Path	The UNC path to identify the printer in the network. You specified this value in Step 4, but you can edit it here.
Map Printer Name to LPT1 at login	To automatically map the network printer to the user's LPT1 printer port when the user logs in to the Terminal Server/machine, select this option.

8. Click Save.
9. In the Objects pane, select the newly added network printer, and then drag the selected printer to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See "To manage Network owners" on page 30.

Adding and Configuring PDF Printers

PDF (Portable Document Format) is a lightweight universal document exchange format. Almost all modern operating systems support PDF viewing and printing, including, but not limited to, Windows, Max, Linux, and UNIX. When you create a PDF printer, a printer that uses the ScrewDrivers PDF print driver is automatically generated. When you assign this PDF printer to an owner, the owner can then create and print PDFs from any application that supports PDF generation. Optionally, after you add a new PDF printer, you can configure the settings for exporting a PDF file from the printer to the ScrewDrivers Session Agent and/or the settings for how the PDF printer is to be named on the Session Agent.

To add and configure a PDF printer

1. Confirm that the Objects pane is set to Printer objects. (You might need to click the Printers icon on the ScrewDrivers Administration Icon bar.)

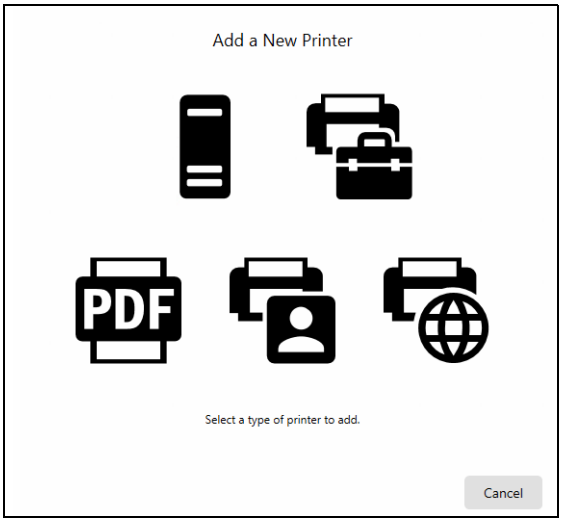
Before continuing, you can click the Expand/Collapse icon that is displayed next to the PDF Printers folder to expand the folder and view all the PDF printer objects that have already been added, or you can search for specific PDF printer objects. See "To search for an object and view its information" on page 22.

2. In the Objects pane, click Add Printer.

   The Add a New Printer dialog box opens. The dialog box displays icons for the types of printer objects that you can add to the ScrewDrivers database.

Hold your mouse pointer over an icon to open a tooltip that displays the name of the object that the icon represents.

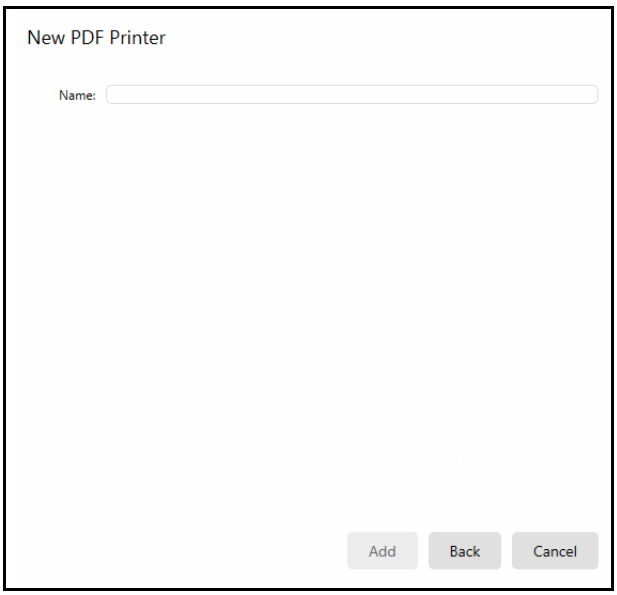
Figure 8-5: Add a New Printer dialog box



3. Click the PDF Printer icon.

   The New PDF Printer dialog box opens.

Figure 8-6: New PDF Printer dialog box



You can also right-click the PDF Printers folder in the Objects pane, and on the context menu that opens, click New PDF Printer.

4. Enter the name for the new PDF Printer object, and then click Add.

   The New PDF Printer dialog box closes. The newly added PDF printer is displayed in the PDF Printers folder.

5. Select the newly added PDF Printer object.

You might need to click the Expand/Collapse icon that is displayed next to the PDF Printers folder to expand the folder and view the newly added PDF Printer object.

   The Information pane displays the PDF Printer object form. The form groups together related configuration parameters for the selected PDF Printer object. The General tab is the open tab.

6. Do one of the following:

   - If the PDF file is to be physically printed from the selected PDF printer, then continue to Step 7.
   - If the file is to be saved on the on the ScrewDrivers Session Agent before printing, open the General tab of the PDF Printer object form, and then select and configure the export options for the PDF printer.

When you configure an export option, you must specify the Deny, Force, or Suggest setting for the option. If you specify a Force or Suggest setting, then you must also provide a default value for the option.

- Deny - Prevents the user from enabling the option and changing the setting or default value for the option.
- Force - Prevents the user from changing the setting or default value for the option. You determine if the option is enabled or not.
- Suggest - You can define a default setting and/or value for the option, but a user can always override the setting, the default value, or both at the time of printing.

Option	Description
Export PDF file to server	
Save Mode	Select one of two allowed values: • Display Save Dialog – If the owner is to save the PDF to an owner-specified location, then select this value. • Use Input Pathname – If the owner is to save the PDF to a pre-defined location, then select this value.
Destination	If Save Mode is set to Use Input Pathname, then you must specify the pre-defined location here. **Tip:** To open a dialog box that displays all the variables, including the Windows variables, that are supported in a path name, click Help.
If File Exists	If Save Mode is set to Use Input Pathname and the pre-defined location exists, then select one of four allowed values: • Overwrite: Automatically overwrite the existing file on the ScrewDrivers Session Agent with the new file. • Prompt: Prompt the user to overwrite the existing file on the ScrewDrivers Session Agent, or take other actions. • Cancel: Cancel the saving of the file. The existing file on the ScrewDrivers Session Agent Server remains unchanged and no new file is saved. • Append: Add the new file to the end of the existing file on the ScrewDrivers Session Agent. A single file is produced that contains both the existing (old) content and the new content.

7. On the Printer Naming tab, leave the printer naming scheme set to the default value of Printer Name (MACHINE:SESSION), or optionally, edit the printer naming scheme.

Step	Action
Use a default naming scheme	Select the naming scheme.

Step	Action
Edit and use a default naming scheme	1. Select the naming scheme. 2. Do one or both of the following: • Select “Limit name component lengths,” and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Select which options in the printer name are to be replaced, and then leave a default replacement value as-is, or modify it as needed. For example, if you select “Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).
Create and use a custom naming scheme	**Note:** Special characters other than an exclamation point (!), backslash (\) or period (.) are allowed in any of the free text fields. 1. Select Custom. 2. Set the format of the scheme using Session ID and one or more of the following: Printer, Machine Name, and User. In addition to the Session ID, the name can have up to three components, but you can specify a single component (for example, Machine Name), two components (for example, Machine Name and Printer), or all three components (for example, Machine Name, Printer, and User). **Caution:** Tricerat does not support a format without a Session ID. A user could log in to multiple sessions, which can result in a naming conflict. 3. Optionally, do one or both of the following: • Select “Limit name component lengths,” and then set the maximum value for any or all of the indicated components (Printer, Machine, and/or User.) The default value is ten. • Select which options in the printer name are to be replaced, and then leave a default replacement value as-is, or modify it as needed. For example, if you select “Replace backslashes (\) in the printer name with _, then, by default, an underscore replaces every backslash in the printer name. You can leave the underscore as-is, or you change it to another value such as an asterisk (*).

8. Click Save.
9. In the Objects pane, select the newly added PDF Printer object, and then drag the selected printer to the appropriate owner in the Assignments pane.

If the required owner is not available in your Active Directory, then you can always create the owner. See “To manage Network owners” on page 30.

Chapter 9
ScrewDrivers Maps

ScrewDrivers Maps is an application (tool) that is available through ScrewDrivers Administration. As the ScrewDrivers Administrator, if you assign any User Allowed printers to a ScrewDrivers Print Server user or to a ScrewDrivers Direct user, then the user must log in to and use ScrewDrivers Printers to select the printers that are to be built during a session. You use ScrewDrivers Maps to assist your users in locating the User Allowed printers that are available for self-assignment. With ScrewDrivers Maps, you can add maps to the ScrewDrivers database and place printers in their actual physical locations on these maps to give your end users a visual way of selecting appropriate and nearby printers for their locations. After you have added maps and printers to the database, your end users can then use ScrewDrivers Printers to access the printers and maps and to self-assign the appropriate printers.

This chapter covers the following topics:

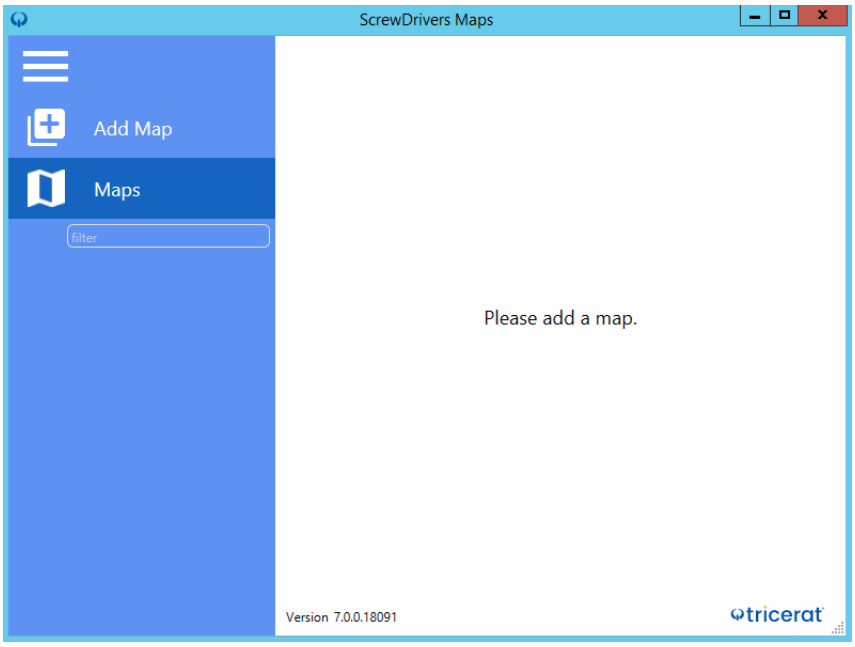
Chapter 9
ScrewDrivers Maps

Opening ScrewDrivers Maps

As the ScrewDrivers Administrator, if you assign any User Allowed printers to a ScrewDrivers Print Server user or a ScrewDrivers Direct user, then to build the printers for a session, the user must log in to ScrewDrivers Printers and build the printers. To prevent you from having to build these printers for the users, and instead let the users assign these printers themselves. You can use ScrewDrivers Maps to add maps to your ScrewDrivers database that show the locations of all the printers that can be assigned to your users. An icon that indicates the printer location is displayed for each printer. Users can view these maps in the ScrewDrivers Printers application, and then select and assign the available printers themselves as appropriate.

To open ScrewDrivers Maps, on the ScrewDrivers Administration main menu, click Tools > Maps.

Figure 9-1: ScrewDrivers Maps main window



The ScrewDrivers Maps main window has two tabs for managing your map functions. Each tab is represented by an icon on a Tab bar that is displayed on the left side of the main window. Click an icon to view the corresponding tab.

Tab	Description
Tip: When ScrewDrivers Maps first opens, the Tab bar is collapsed. You can hold your cursor over an icon on the Tab bar to display a tooltip that shows the name of the corresponding tab, or you can click the Hamburger icon to expand the Tab bar and view the complete name of each tab.	

Tab	Description
	Add Map - Opens the Add Map tab. The tab displays two options for adding a map to the ScrewDrivers database: a Drag and Drop option and a Browse option. See “Adding Maps to the ScrewDrivers Database” on page 152.
	Map icon - Opens the Maps tab. You carry out all your map management functions on the Maps tab. See the following: • “Viewing and Filtering Existing Printers Maps in the ScrewDrivers Database” on page 149. • “Editing a Saved Map in the ScrewDrivers Database” on page 155. • “Deleting a Saved Map from the ScrewDrivers Database” on page 158.

Viewing and Filtering Existing Printers Maps in the ScrewDrivers Database

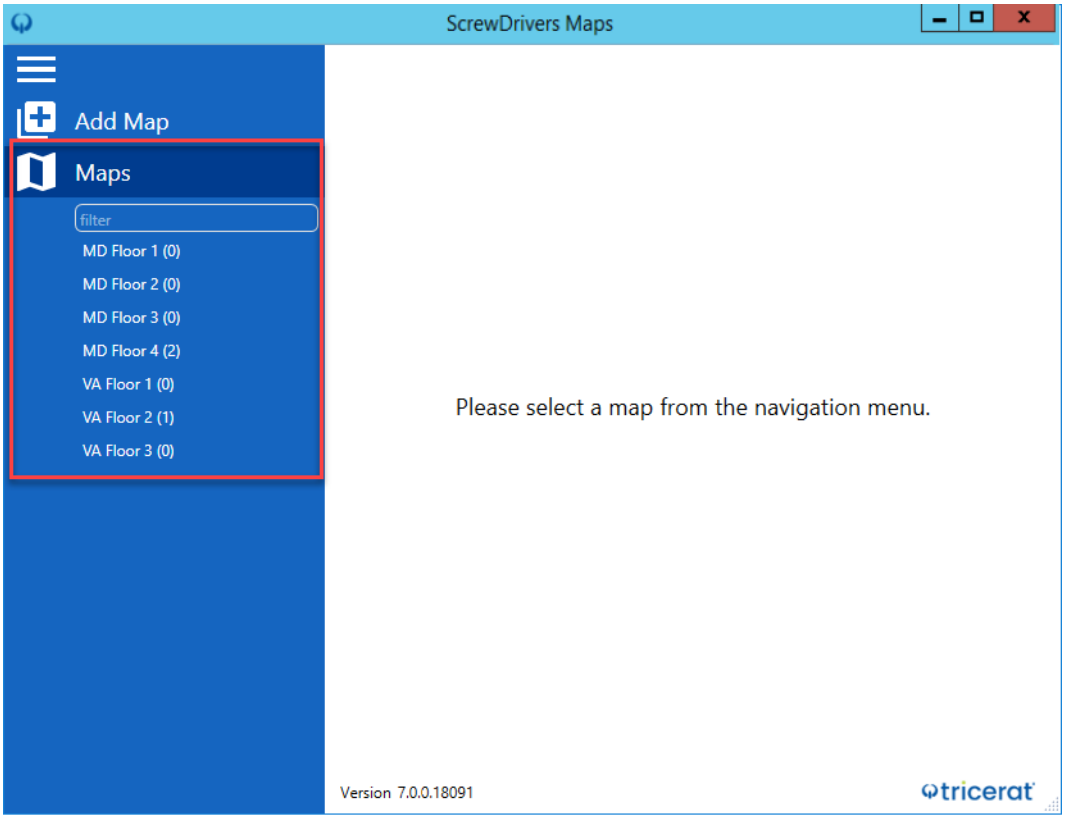
The main menu for ScrewDrivers Maps displays all the maps, alphabetically by name, that are currently stored in the ScrewDrivers database. The total number of printers that have been added for a map that users can self-assign is displayed in parenthesis after the map name. You can view a selected map and its printers on the Maps tab.

To view and filter existing maps in the ScrewDrivers database

1. Open ScrewDrivers Maps.

   The ScrewDrivers Maps main window opens. A list of all printer maps that are currently stored in the ScrewDrivers database is displayed under Maps. A blank filter field is displayed above the maps list.

Figure 9-2: ScrewDrivers Reports main window, Maps list



2. Optionally, to filter the Maps list, in the blank filter field above the list, enter a search string.

   Note the following about the search string:

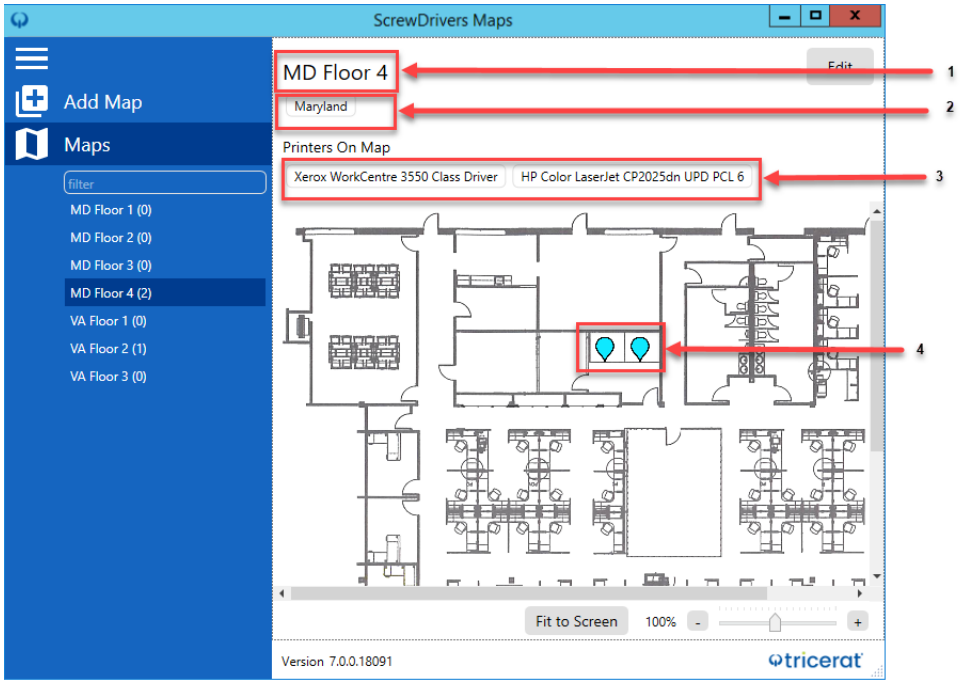
   - The search string is sensitive to both the name of the map and any tags that have

been specified for the map. As you enter the search string, the list of maps that meet the criteria is dynamically updated.

- The search string is limited to the exact order of the characters in the string, but the string is not case-sensitive and the string can be found anywhere in the results. For example, a search string of **PLAN** would return maps with names such as **PLA**NET INDUSTRIES, Floor **Pla**n #1, and so on.

3. Click the map name to open the map and display it on the Maps tab.

Figure 9-3: Viewing a map in ScrewDrivers Maps



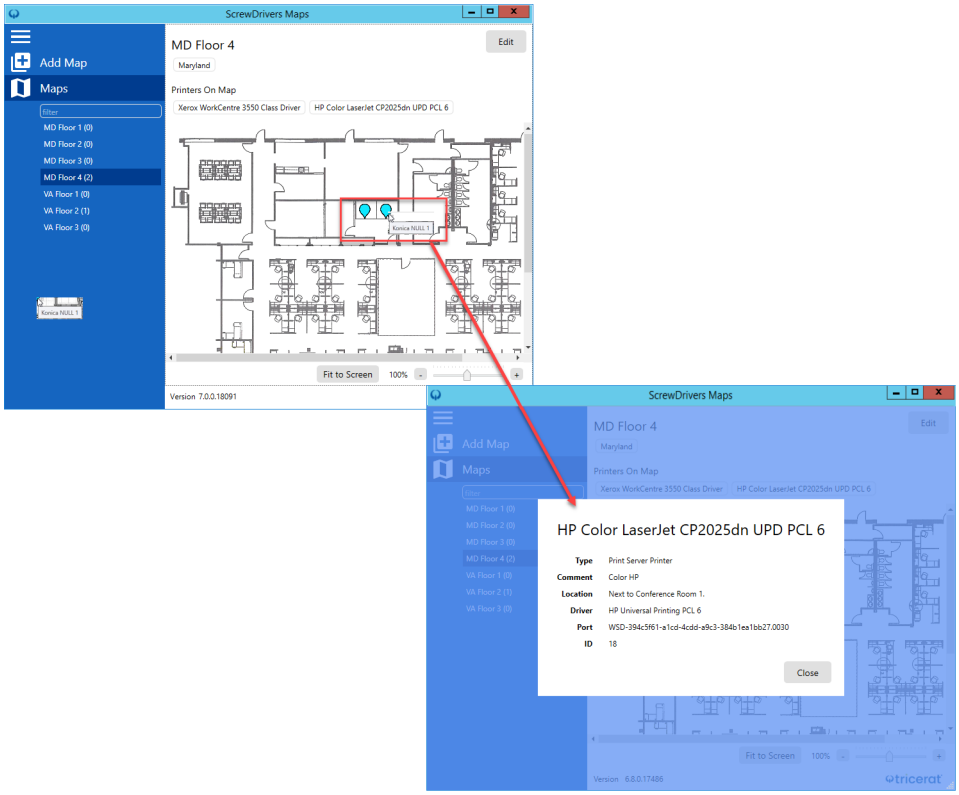
Standard Windows scroll and zoom features are available for viewing the displayed map.

The following information is always displayed for a map:

	Item	Description
1	Map name	The name of the map when the map was added to the ScrewDrivers database.
2	Tags	The tags that were specified for the map.
3	Printers	The printers that have been added to the map.

	Item	Description
4	Printer icons	Indicates the location of the printers that have been added to the map. • You can place your cursor over a printer icon to open a tooltip that shows the name of the printer. • You can click an icon to open a tooltip that provides more information about the printer such as its name, type, driver, and so on. See Figure 9-4 on page 151.

Figure 9-4: Viewing printer name and information



Adding Maps to the ScrewDrivers Database

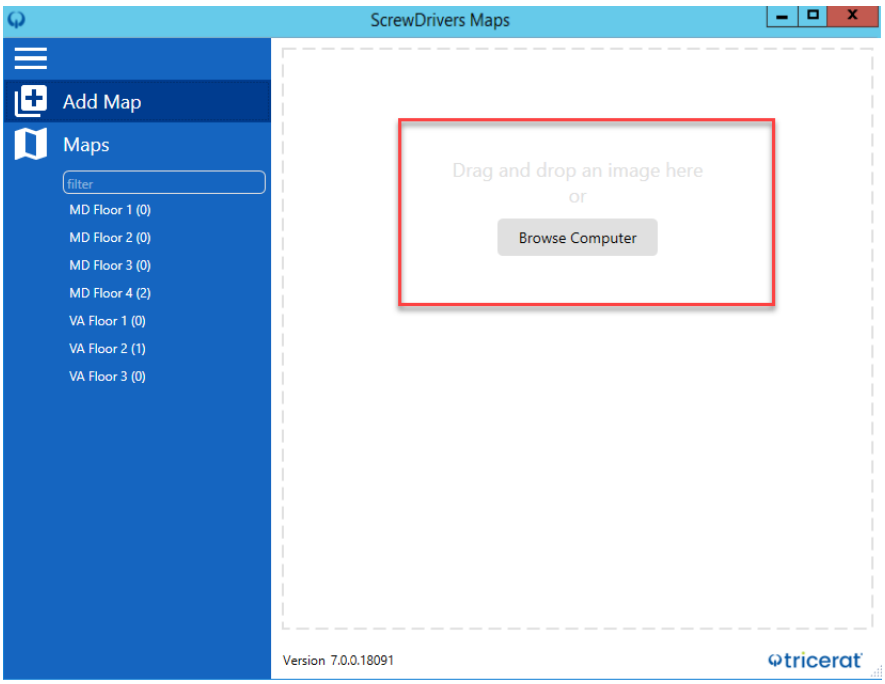
You use ScrewDrivers Maps to add maps to your ScrewDrivers database that show the locations of all the printers that can be assigned to your users. The source map can be in one of three formats:.jpeg/.jpg, .bmp, or .png, with .png being the preferred format. There are no limits to the map size when you add a map to the database. After you add the map to the database, you add printers to the map by editing the map. See “Editing a Saved Map in the ScrewDrivers Database” on page 155.

To add a map to the ScrewDrivers database

1. Open ScrewDrivers Maps.
2. Click Add Map.

   The Add Map tab opens. The tab displays two options for adding a map to the ScrewDrivers database: a Drag and Drop option and a Browse option.

Figure 9-5: Map Management Tool main window, Adding a map options



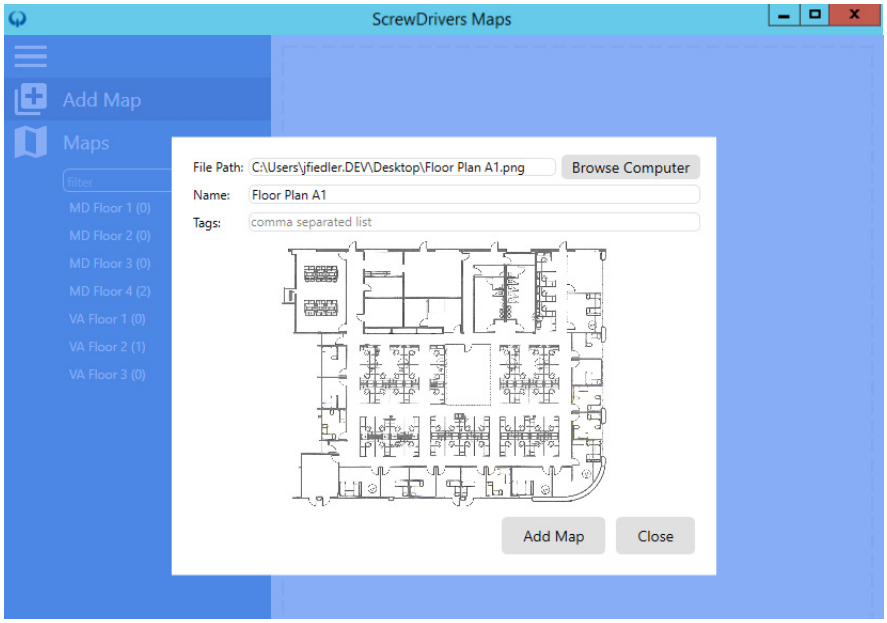
3. Do either of the following to add a map to the ScrewDrivers database:
   - From any location on the ScrewDrivers Administration client, drag a map where indicated on the Maps tab.
   - Click Browse Computer to open the Browse dialog box, and then browse and select a map.

The map is displayed in a Preview dialog box along with the following information and options:

- The full file path to the map that are you are adding.
- The current (file) name of the map.
- A tag field, in which you can enter any tags for the map in a comma-separated list.
- An Add Map option, which adds the currently displayed map to the ScrewDrivers database.

If you decide to add a different map to the ScrewDrivers database, you can click Browse Computer to open the Browse dialog box, and then browse and select a different map.

Figure 9-6: Previewing a map that you are adding to the ScrewDrivers database in ScrewDrivers Maps

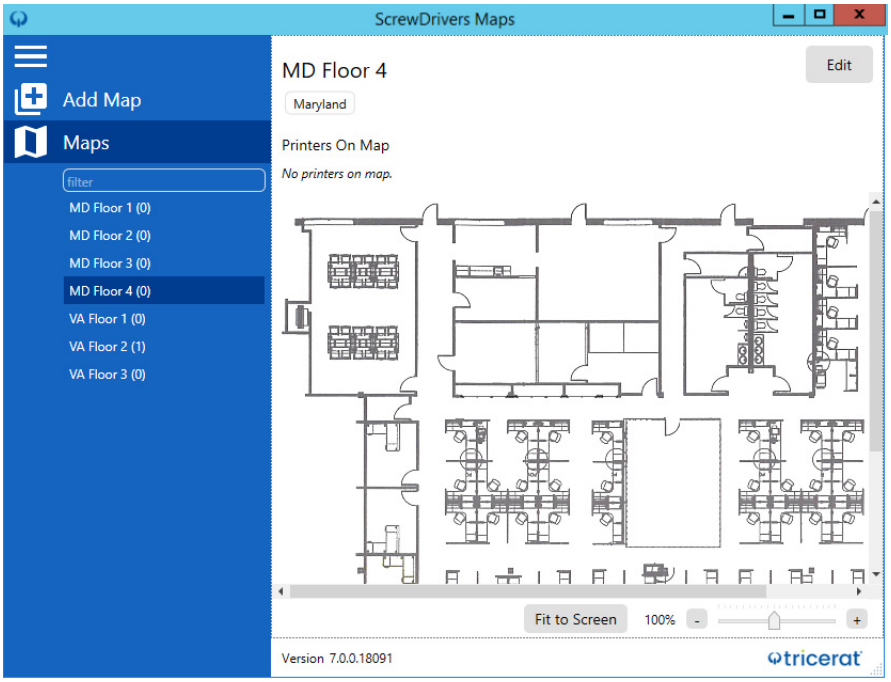


4. Do any or all of the following as appropriate before you save the displayed map to the ScrewDrivers database:
   - Edit the name of the map. (The map name must be unique.)
   - Enter tags for the map in a comma-separated list.
5. Click Add Map.

   The map preview dialog box closes. The map is added to the ScrewDrivers database. The added map is displayed on the Maps tab. The name of the added map and any tags for the map are displayed above the map preview. The map is displayed in the Maps list and is selected. See Figure 9-7 on page 154.

After you add a map to the ScrewDrivers database, "No printers on map" is displayed for the map. After you add printers to the map, then the total number of printers that you added to the map and their locations are displayed.

Figure 9-7: Map added to the ScrewDrivers database



Standard Windows scroll and zoom features are available for viewing the displayed map.

6. Continue to "Editing a Saved Map in the ScrewDrivers Database" on page 155.

Editing a Saved Map in the ScrewDrivers Database

To add printers to a map that has been saved to the ScrewDrivers database, you must edit the map. When editing a map, you can also carry out classic editing functions such as editing the map name, adding or deleting the map tags, and deleting printers from the map.

To add printers to a saved map in the ScrewDrivers database

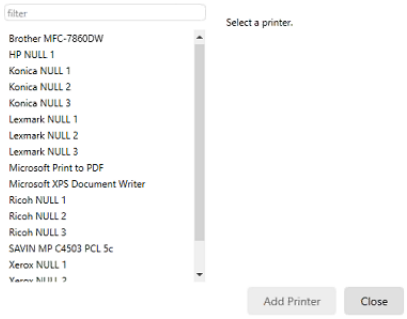
1. Open ScrewDrivers Maps.
2. In the Maps list, scroll to and select the map to which are adding printers.

Optionally, to more easily locate the correct map, you can filter the Maps list.

3. Click Edit.
4. Right-click the displayed map where you are adding the printer.

   A Printers dialog box opens. The dialog box lists all the printers (print server printers and managed printers) that are currently available in the ScrewDrivers database.

Figure 9-8: Printers dialog box



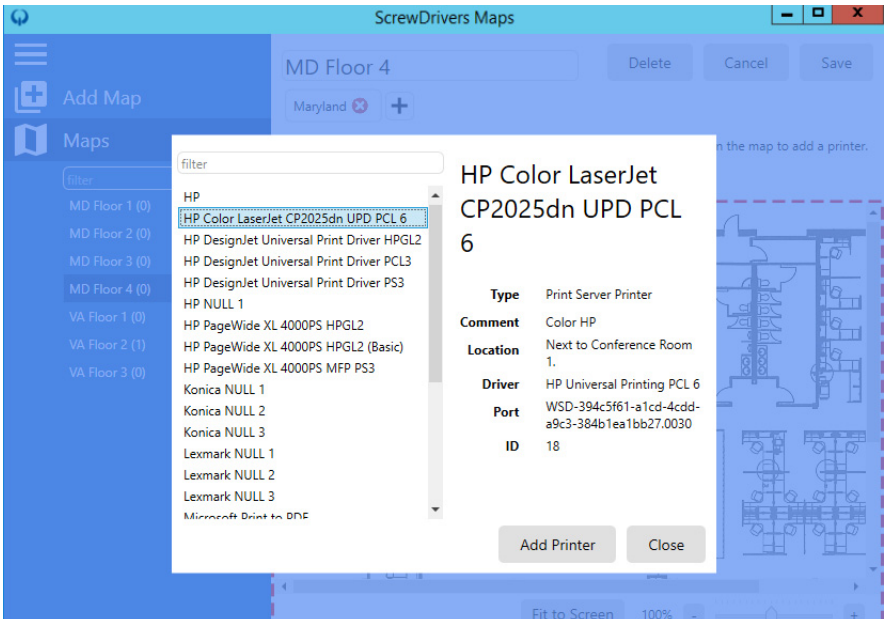
5. Scroll to and select the printer that you are adding to the map.

Optionally, to more easily locate the correct printer, you can filter the Printers list.

Information about the printer is displayed on the right side of the Printers dialog box. See Figure 9-9 on page 156.

Before you add the map to the ScrewDrivers database, it is helpful to review this information to confirm that you have selected the correct printer for the map.

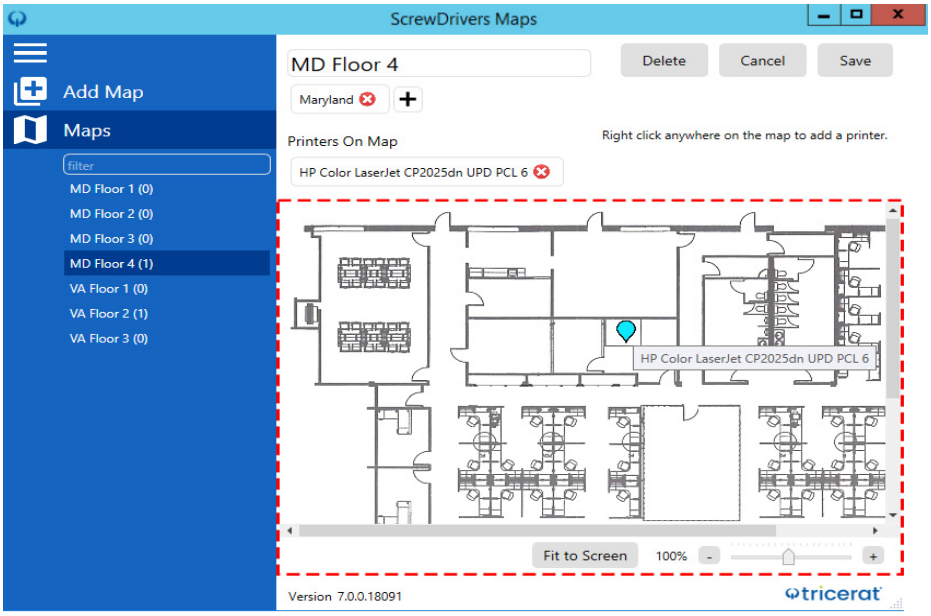
Figure 9-9: Printer information displayed for a selected printer



6. Click Add Printer.

   The Printers dialog box closes. You return to the map display. An icon is displayed for the added printer. If you place your cursor over the icon, a tooltip opens that displays the name of the printer.

Figure 9-10: Added printer on a map stored in the ScrewDrivers database



7. Click Save.

   The edited map is saved to the ScrewDrivers database.

To edit a saved map in the ScrewDrivers database

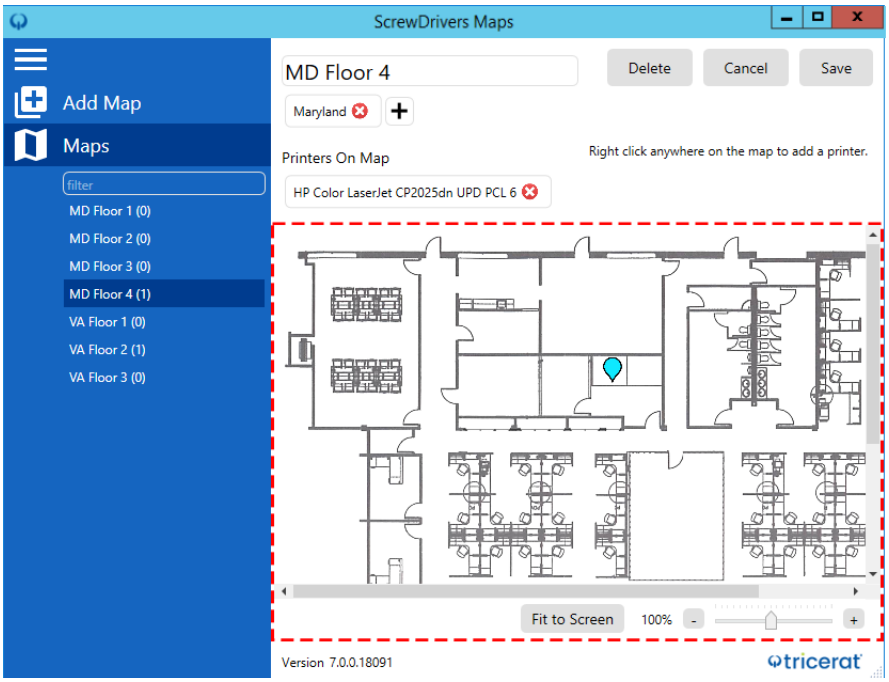
1. Open ScrewDrivers Maps.
2. In the Maps list, scroll to and select the map that you are editing.

Optionally, to more easily locate the correct map, you can filter the Maps list.

3. Click Edit.

   The map is enabled for editing.

Figure 9-11: Map enabled for editing



4. Do any or all of the following as required:
   - Edit the map name. (The map name must be unique.)
   - To add another tag to the map, click the Add icon that is displayed at the far right of the tag list.
   - To delete a tag for the map, click the Delete icon that is displayed for the tag.
   - To delete a printer from the map, click the Delete icon that is displayed for the printer.

Deleting a printer from the map does not delete the printer from the ScrewDrivers database. If the printer has been assigned to any users, then these assignments remain in place.

5. Click Save.

Deleting a Saved Map from the ScrewDrivers Database

You can always delete a saved map from the ScrewDrivers database. When you delete a map, only the map is deleted from the ScrewDrivers database. Any printers that have been assigned to the map are not deleted and if owners have self-assigned these printers, then these assignments remain in place. Just as with adding a map, you must enable a map for editing to delete it.

To delete a saved map from the ScrewDrivers database

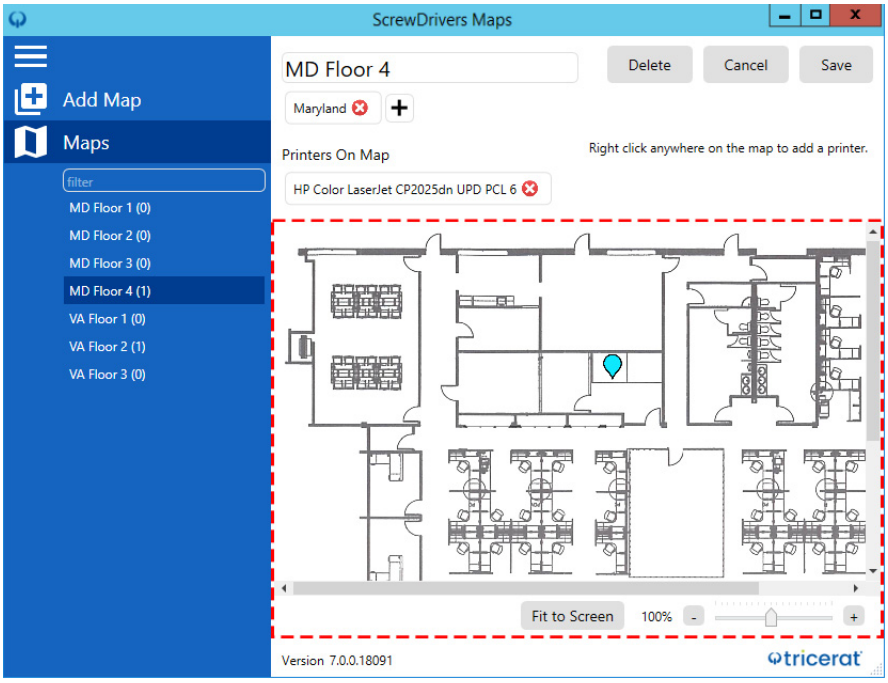
1. Open ScrewDrivers Maps
2. In the Maps list, scroll to and select the map that you are deleting.

Optionally, to more easily locate the correct map, you can filter the Maps list.

3. Click Edit.

   The map is enabled for editing.

Figure 9-12: Map enabled for editing



4. Click Delete.

Chapter 10
ScrewDrivers Reports

ScrewDrivers Reports is an optional feature that you can install for ScrewDrivers Enterprise. A ScrewDrivers report is a usage report that details your users' print job information, such as the name of the printers that your users are using to print documents, the name of the documents that your users printed, the number of pages in each user's print job, and so on. The feature has two distinct parts: the ScrewDrivers Reports service, which is the service that gathers the necessary data for creating and generating printer usage reports and adds this data to the ScrewDrivers database, and the ScrewDrivers Reports app, which is the user interface for reviewing the data and generating the printer usage reports. This chapter details the ScrewDrivers Reports app, including the app layout and using the app to generate printer usage reports.

This chapter covers the following topics:

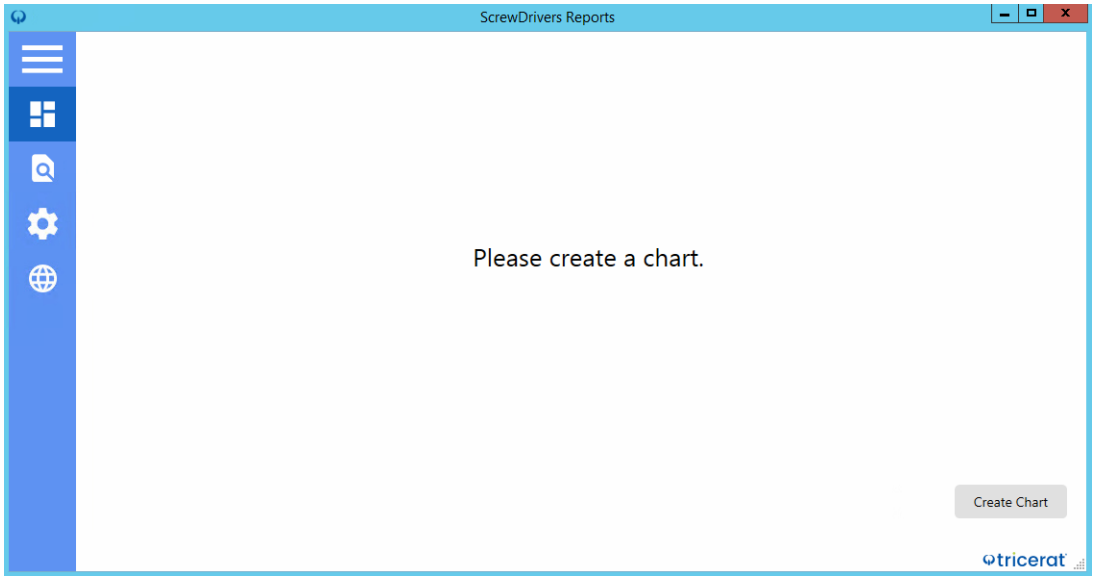
Chapter 10
ScrewDrivers Reports

Opening ScrewDrivers Reports

To open ScrewDrivers Reports, do one of the following on your desktop:

- Open the Start menu, and under Programs, click ScrewDrivers Reports
- Click the ScrewDrivers Reports shortcut.

Figure 10-1: ScrewDrivers Reports main window



The ScrewDrivers Reports Client has four tabs for managing your report functions. Each tab is represented by an icon on a Tab bar that is displayed on the left side of the main window. Click an icon to view the corresponding tab.

Tab	Description
Tip: When ScrewDrivers Reports first opens, the Tab bar is collapsed. You can hold your cursor over an icon on the Tab bar to display a tooltip that shows the name of the corresponding tab, or you can click the Hamburger icon to expand the Tab bar and view the complete name of each tab.	
	Dashboard tab - Opens the Dashboard tab, which provides all the options for creating and generating a printer usage report as a chart/graph. See “Generating a ScrewDrivers Report” on page 163.
	Table tab - Opens the Table tab, which displays all the printer usage data that is stored in the ScrewDrivers database and available for reporting. See “ScrewDrivers Reports Table Tab” on page 171.
	Settings tab - Opens the Settings tab, which displays a variety of settings for customizing your ScrewDrivers Reports app, such as the Dashboard tab refresh time, default chart (report) colors, and so on. See “ScrewDrivers Reports Settings Tab” on page 173.

Tab	Description
	About tab - Provides version information about the ScrewDrivers Reports app The tab also displays a Help link for documentation and support.

Generating a ScrewDrivers Report

A ScrewDrivers report is a usage report that details your users' print job information, such as the name of the printers that your users are using to print documents, the name of the documents that your users printed, the number of pages in each user's print job, and so on. Every ScrewDrivers report is generated as a data chart (Column, Bar, Pie, and so on) and the data is grouped by a selected variable (Printer Name, Driver Name, and so on). Before you can generate a ScrewDrivers report, you must add at least one *data series* for the report. and optionally, you can add one or more filters for the report. You generate a ScrewDrivers report on the Dashboard tab of the ScrewDrivers Reports application.

ScrewDrivers Reports data series

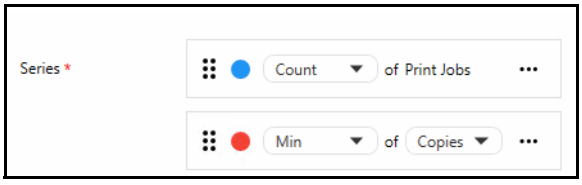
A *data series* in ScrewDrivers Reports is a row or column of numbers that are plotted in your print job report chart such as the count of print jobs grouped by printer name. Every ScrewDrivers report requires at least one data series for the report to be generated. For some chart types, such as a Pie chart, only a single data series can be plotted, while for others, such as a Line or Column chart, multiple data series can be plotted.

When you add a data series to a report chart, you must specify the data *value* that you are plotting (Count, Sum, Average, Min, Max) and with the exception of Count, the corresponding data *category*, for example, Copies or Pages Printed.

Value		Data Category		
Count	(of)	• Print Jobs		
Sum	(of)	• Copies	• Pages Printed	• Bytes Printed
Average	(of)	• Copies	• Pages Printed	• Bytes Printed
Min	(of)	• Copies	• Pages Printed	• Bytes Printed
Max	(of)	• Copies	• Pages Printed	• Bytes Printed

By default, the first data series for a report chart is always set to Count of Print Jobs, but you can always edit this value.

Figure 10-2: Data Series examples

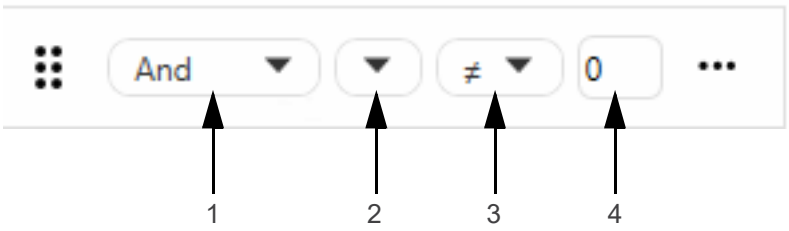


A default color is automatically assigned to each data series based on the order that you add the series to the report. Initially, these colors are based on the standard configuration settings for ScrewDrivers Reports, where blue is assigned to the first data series added, red is assigned to the second data series added, and so on. You can always configure custom default chart colors and the order in which these colors are applied to the chart and the data series on the Settings tab. See "ScrewDrivers Reports Settings Tab" on page 173.

Report filters

When a ScrewDrivers report is generated, by default, it is generated for all the applicable data in the ScrewDrivers database. For example, if you generate a report for Count of Print Jobs grouped by Printer Name, then the report is generated for every job that was ever printed from every printer currently loaded in the ScrewDrivers database, regardless of printer name, driver name, machine name, and so on. Optionally, if you need to limit the information in a ScrewDrivers report, for example, the count of print jobs printed for every user from a specific printer, then you can add a filter that specifies the printer name.

Figure 10-3: Report filter



A report filter has four components to it:

Filter Component		Description	
1	Boolean Operator	Two options: • AND - Narrows your search results to include only the relevant results that contain your defined keywords. • OR - Expands your search results so that all your results must contain at least one, if not more, of your defined keywords or phrases.	
2	Data Category	The data category by which the data is being filtered (Printer Name, Driver Name, and so on).	
3	Filter Operator	The operators that are available on the Operator dropdown list are specific to the data category that is selected such as Printer Name, Driver Name, and so on and not all operators are available for all data categories.	
		=	Equals. Must be an exact match to return data.
		≠	Does not equal. Only data that does not match the value specified is returned.
		IN	Is a subset of. (Similar to CONTAINS).
		NOT IN	Is not a subset of. (Similar to DOES NOT CONTAIN).
		>	Greater than. Only data that exceeds the value specified is returned.
		>=	Greater than or equal to. Only data that is an exact match for or exceeds the value specified is returned.
		<	Less than. Only data that is less than the value specified is returned.
		<=	Less than or equals to. Only data that is an exact match for or is less than the value specified is returned.

Filter Component		Description
4	Report keyword	The filter value. For example, if you select Date Printed as the data category for the filter, then you must specify the applicable date for the filter. For some data categories, the keyword is automatically populated with a default value, for example, Copies is always set to a default value of 0, but you can edit this default value.

To generate a ScrewDrivers Reports

The data that is displayed in a ScrewDrivers report is based on the data that is loaded in the ScrewDrivers database at the time you create the report. By default, this data is set to be automatically refreshed every 10 minutes based on an option on the Settings tab. If needed, you can edit this refresh value. See “ScrewDrivers Reports Settings Tab” on page 173.

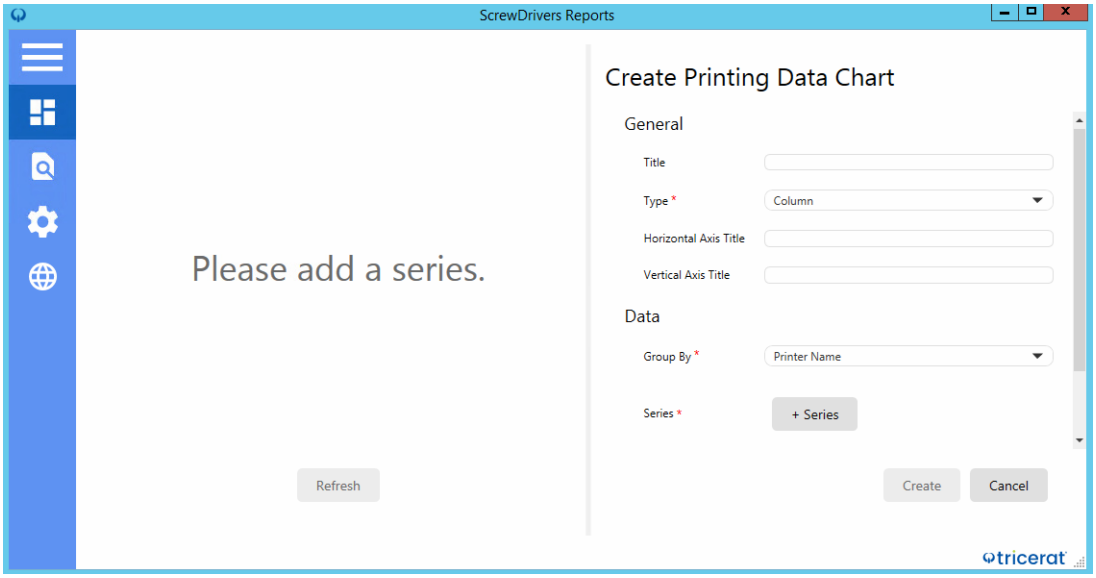
1. Open ScrewDrivers Reports.

   The Dashboard tab is the open tab. The tab is blank and the prompt “Please create a chart” is displayed. See Figure 10-1 on page 161.

2. Click Create Chart.

   The Dashboard tab is populated with the options for generating a report in the right pane and a prompt to add a data series in the left pane.

Figure 10-4: ScrewDrivers Reports Dashboard tab with report options



3. Specify the General report options and Data report options.

Option	Description
General - Options for specifying the report layout/format, such as report title, report type, and so on.	
Title	Optional. The title is displayed above the report. As you enter the title, it is dynamically displayed at the top of the left pane on the tab.

Option	Description		
Type	Required. Select the chart type for the report. Six types are available:		
	• Column (Default)	• Pie	• Line
	• Bar	• Doughnut	• Textual
Horizontal Axis Title	Optional. X-axis title.		
Vertical Axis Title	Optional. Y-axis title.		
Data - Options for grouping the report data, adding a data series, and filtering the report data.			
Group By	Required. Indicate the data category by which the data is being grouped.		
	• Printer Name (Default)	• Document Name	• Tricerat Printer
	• Driver Name	• Port Name	• Paper Size
	• Machine Name	• Date Submitted	• Orientation
	• User Name		

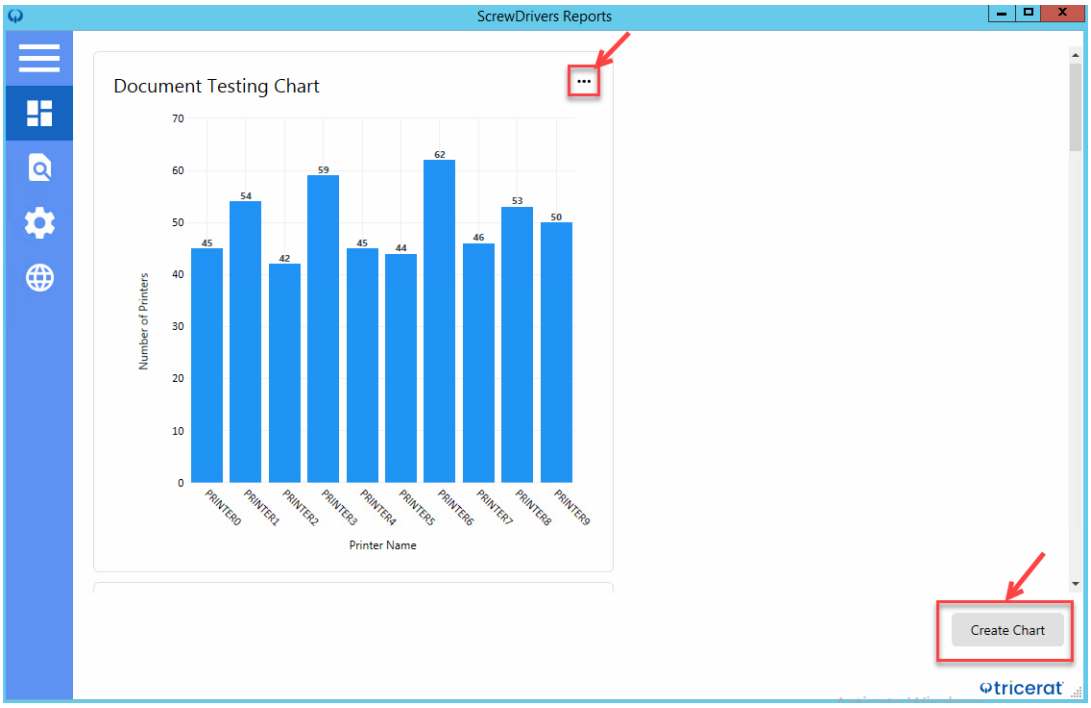
As you continue to develop and edit your report, including adding series data and/ or filters, you can click Refresh after one or more edits to immediately refresh the onscreen report preview. You can also move your mouse pointer and/ or hold your mouse pointer over the report to open various tooltips for the report.

4. For each data series that you are adding to the report, click +Series, and then specify the data value, and if applicable, the data category. Note the following about the data series:
   - After you add your first data series, an onscreen report preview is immediately displayed in the left pane of the Dashboard tab.
   - You can override the default color that is assigned to a data series. See “To set an override chart color for a report data series” on page 168.
   - You can delete a data series from a report. To delete a data series, click the Ellipses icon that is displayed to the right of the series, and on the dropdown menu that opens, click Delete.

     The data series is deleted immediately, and the colors that are assigned the data series are adjusted accordingly based on the configuration settings that are in use, standard or custom.
5. Optionally, add one or more filters to the chart.
6. Continue to develop the chart as appropriate such as changing the chart type, editing axes labels, and so on. After you are satisfied with the results, click Create.

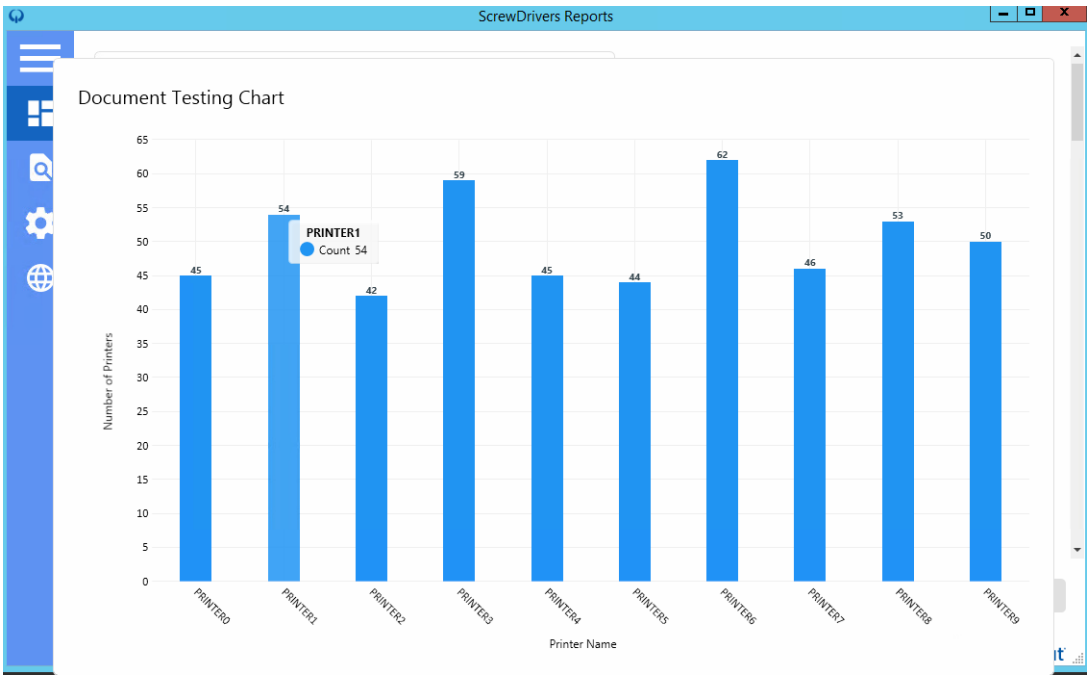
   The right pane of the Dashboard tab closes and the completed ScrewDrivers report remains displayed in the left pane of the Dashboard tab (the Preview display). A Create Chart option is displayed in the lower right corner and an Ellipsis icon is displayed in the upper right corner. See Figure 10-5 on page 167. Options are now available for working with the completed report. See “Working with a ScrewDrivers Report” on page 169.

Figure 10-5: Completed ScrewDrivers report example, Dashboard tab



Hold your mouse pointer over the completed report to display an enlarged preview of the report. After you move your pointer off the report, the report returns to its original preview size on the Dashboard tab. See Figure 10-6 below.

Figure 10-6: Completed ScrewDrivers report example, enlarged preview



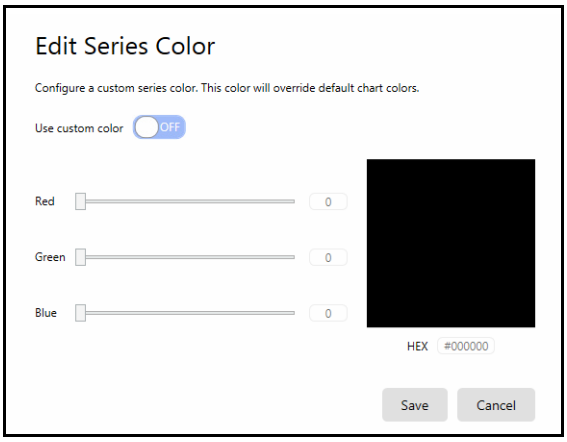
To set an override chart color for a report data series

A default color is automatically assigned to a data series based on the order that you add the series to the report. Initially, these colors are based on the standard configuration settings for ScrewDrivers Reports, where blue is assigned to the first data series added, red is assigned to the second data series added, and so on. You can also configure custom default chart colors and the order in which these colors are added to data series on the Settings tab. Finally, you also have the option of setting an override color for a data series as you are creating a ScrewDrivers report. This override color supersedes any default color that has been assigned to the data series, regardless of the configuration settings that are in use, standard or custom.

1. Click the Ellipsis icon that is displayed to the right of the data series.

   The Edit Series Color dialog box opens.

Figure 10-7: Edit Color Series dialog box



2. Turn on Use custom color, and then use the slider bars to set the override color, or in the blank field that is displayed next to each slider bar, enter the appropriate RGB value.

   As you adjust a slider bar, or enter an RGB value, a preview of the override color and its hex code are displayed to the right of the slider bars.

3. Click Save.

   The Edit Color Series dialog box closes. You return to the Dashboard tab. The override color is now displayed for the selected data series. The colors for all the data series that fall *after* the series with the override color are automatically reset based on the configuration settings that are in use, standard or custom.

Working with a ScrewDrivers Report

After you have generated a ScrewDrivers report, a Create Chart option is displayed in the lower right corner of the Preview display and an Ellipsis icon is displayed in the upper right corner.

- To generate multiple ScrewDrivers reports during the same session, (for example, you want to compare the number of print jobs based on printer name and driver name), then you can click Create Chart and repeat Step 3 through Step 6 of “To generate a ScrewDrivers Reports” on page 165. After you have generated multiple reports, the reports are shown vertically in the Preview display of the Dashboard tab. You can use the scroll bar that is on the right side of the Dashboard tab to scroll through these multiple completed reports.
- You can click the Ellipsis icon to open a dropdown menu that displays a variety of options for working with the completed report.

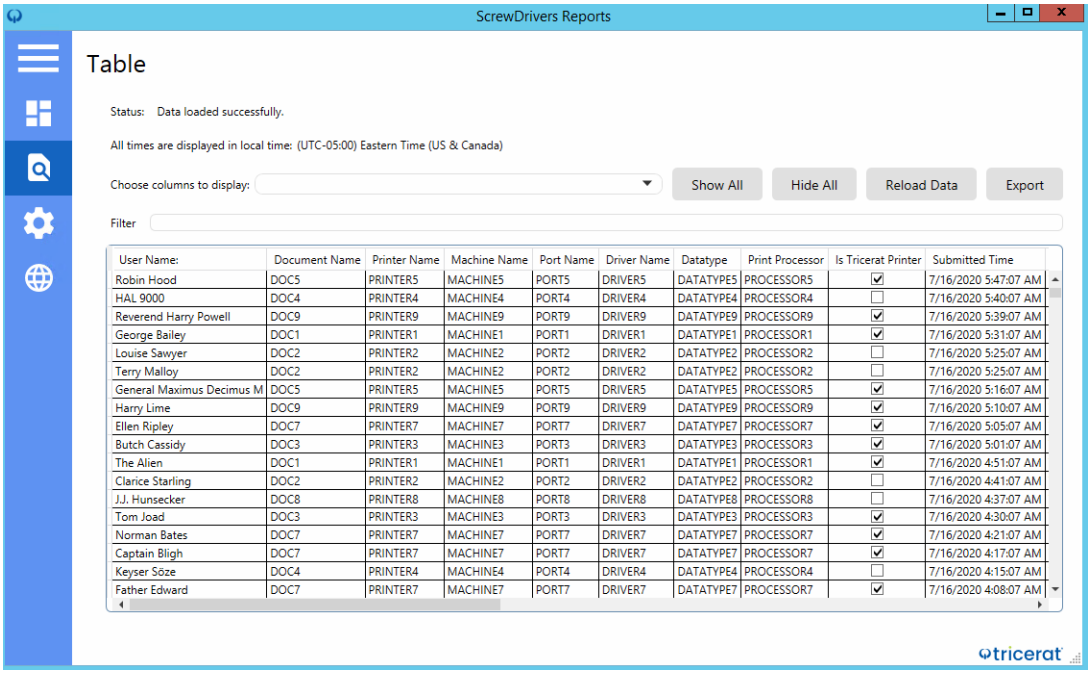
Option	Description
Export	Opens the Export Chart view for the Display tab, from which you can export the report as an image (PNG format) to a location of your choosing. You must specify the file path to export the report image. Optionally, you can export the report with or without its title, data legend, and/or labels. (By default, the data labels are selected for export.) See Figure 10-8 on page 170. **Tip:** To return to the Preview display for the report, click the Dashboard tab icon.
Edit	Opens the Dashboard tab and displays the report with its current settings. You can edit any or all of the report settings, and then click Save to save the edited report. See Step 3 through Step 6 of “To generate a ScrewDrivers Reports” on page 165. **Note:** If you decide not to edit the report, then to return to the Preview display, click Cancel.
Delete	Deletes the generated report from the Preview display of the Dashboard tab. 1. Click Delete. A message opens asking you if you are sure that you want to delete the report. 2. Click Yes. The message closes. If other ScrewDrivers reports are shown in the Preview display, then the Preview display remains open; otherwise, you return to a blank Dashboard tab with the prompt to “Please create a chart” displayed.
• Legend • Show Data Labels	Turn on or off as required. **Note:** These are for preview purposes only and their values (On or Off) do not affect what is exported for the report. You must set these values specifically in the Export Chart view of the Display tab.

Figure 10-8: Export Chart view

ScrewDrivers Reports Table Tab

The ScrewDrivers Reports Table tab displays all your users' print job information that is stored in the ScrewDrivers database. The data is loaded when you open the tab. A variety of options are available on the tab for working with this data, including showing or hiding selected data columns, reloading (refreshing) the database data that is displayed, and also, generating a ScrewDrivers report. Like the ScrewDrivers report that you generate from the Dashboard tab, the ScrewDrivers report that you generate from the Table tab is a usage report that details your users' print job information, such as the name of the printers that your users are using to print documents, the name of the documents that your users printed, the number of pages in each user's print job, and so on; however, unlike the ScrewDrivers report that you generate from the Dashboard tab, the ScrewDrivers report that you generate from the Table tab is not a graph (visual) report. Instead, the report is generated and saved as a comma-separated values (.csv) file, which stores the file as tabular data instead of graphical data. You can save and print this report file as needed without having to specify the report parameters again.

Figure 10-9: ScrewDrivers Reports Table tab



User Name:	Document Name	Printer Name	Machine Name	Port Name	Driver Name	Datatype	Print Processor	Is Tricerat Printer	Submitted Time
Robin Hood	DOC5	PRINTER5	MACHINE5	PORT5	DRIVER5	DATATYPE5	PROCESSOR5	☑	7/16/2020 5:47:07 AM
HAL 9000	DOC4	PRINTER4	MACHINE4	PORT4	DRIVER4	DATATYPE4	PROCESSOR4	☐	7/16/2020 5:40:07 AM
Reverend Harry Powell	DOC9	PRINTER9	MACHINE9	PORT9	DRIVER9	DATATYPE9	PROCESSOR9	☑	7/16/2020 5:39:07 AM
George Bailey	DOC1	PRINTER1	MACHINE1	PORT1	DRIVER1	DATATYPE1	PROCESSOR1	☑	7/16/2020 5:31:07 AM
Louise Sawyer	DOC2	PRINTER2	MACHINE2	PORT2	DRIVER2	DATATYPE2	PROCESSOR2	☐	7/16/2020 5:25:07 AM
Terry Malloy	DOC2	PRINTER2	MACHINE2	PORT2	DRIVER2	DATATYPE2	PROCESSOR2	☐	7/16/2020 5:25:07 AM
General Maximus Decimus M	DOC5	PRINTER5	MACHINE5	PORT5	DRIVER5	DATATYPE5	PROCESSOR5	☑	7/16/2020 5:16:07 AM
Harry Lime	DOC9	PRINTER9	MACHINE9	PORT9	DRIVER9	DATATYPE9	PROCESSOR9	☑	7/16/2020 5:10:07 AM
Ellen Ripley	DOC7	PRINTER7	MACHINE7	PORT7	DRIVER7	DATATYPE7	PROCESSOR7	☑	7/16/2020 5:05:07 AM
Butch Cassidy	DOC3	PRINTER3	MACHINE3	PORT3	DRIVER3	DATATYPE3	PROCESSOR3	☑	7/16/2020 5:01:07 AM
The Alien	DOC1	PRINTER1	MACHINE1	PORT1	DRIVER1	DATATYPE1	PROCESSOR1	☑	7/16/2020 4:51:07 AM
Clarice Starling	DOC2	PRINTER2	MACHINE2	PORT2	DRIVER2	DATATYPE2	PROCESSOR2	☐	7/16/2020 4:41:07 AM
J.J. Hunsecker	DOC8	PRINTER8	MACHINE8	PORT8	DRIVER8	DATATYPE8	PROCESSOR8	☐	7/16/2020 4:37:07 AM
Tom Joad	DOC3	PRINTER3	MACHINE3	PORT3	DRIVER3	DATATYPE3	PROCESSOR3	☑	7/16/2020 4:30:07 AM
Norman Bates	DOC7	PRINTER7	MACHINE7	PORT7	DRIVER7	DATATYPE7	PROCESSOR7	☑	7/16/2020 4:21:07 AM
Captain Bligh	DOC7	PRINTER7	MACHINE7	PORT7	DRIVER7	DATATYPE7	PROCESSOR7	☑	7/16/2020 4:17:07 AM
Keyser Söze	DOC4	PRINTER4	MACHINE4	PORT4	DRIVER4	DATATYPE4	PROCESSOR4	☐	7/16/2020 4:15:07 AM
Father Edward	DOC7	PRINTER7	MACHINE7	PORT7	DRIVER7	DATATYPE7	PROCESSOR7	☑	7/16/2020 4:08:07 AM

The following options are available on the Table tab:

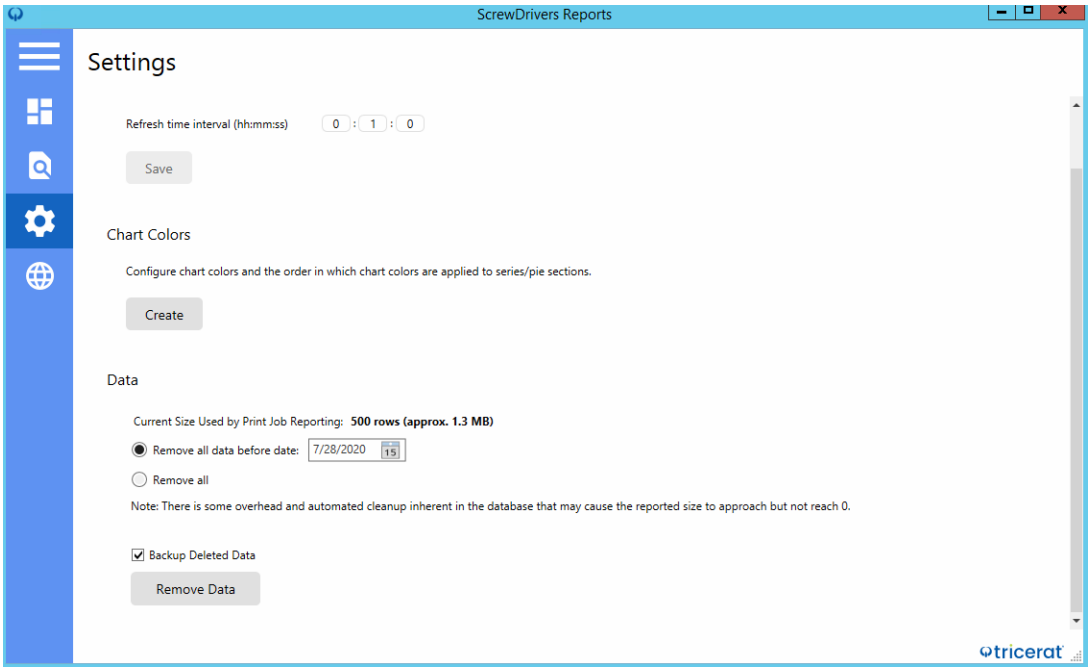
Option	Description
Status	Read-only option that displays the status of loading the print job data that is stored in the ScrewDrivers database when you open the tab.

Option	Description
Choose columns to display	By default, all print job information that is stored in the ScrewDrivers database is displayed on the Table tab. To show only selected data, leave the data (columns) that you want to show selected and clear the selections for the data (columns) that you do not want to show.
Show All	Shows all the print job data (columns) that is stored in the ScrewDrivers database. **Note:** This option overrides any column selections that you cleared on the Choose columns to display list.
Hide All	Hide all the print job data (columns) that is stored in the ScrewDrivers database.
Reload Data	Manually reload/refresh the print job data from the ScrewDrivers database.
Export	Export all the data columns that are currently displayed on the Table tab to a .csv file. • The default file name is Print Job Report but you can change this value. • The default location in which to save the file is Users\<user>\Documents but you can select a different location. • The file type is .csv and you cannot change this value.

ScrewDrivers Reports Settings Tab

The ScrewDrivers Reports Settings tab contains settings for maintaining and administering your ScrewDrivers Reports application, including settings for refreshing the data that is displayed on the Dashboard tab, configuring chart colors and removing and backing up database data.

Figure 10-10: ScrewDrivers Reports Settings tab



Option	Description
Dashboard	• Automatically refresh printing data - Turned on by default. Refreshes the print job data that is displayed on the Dashboard tab according to the indicated time interval. • Refresh time interval (hh:mm:ss) - The default value is 10 minutes. Edit the value as needed, and then click Save.
Chart Colors	Use this option to configure custom chart colors and the order in which the colors are applied to a chart and data series. See
Data	Both options are used to minimize the size of the Print Job data table in the ScrewDrivers database. • Remove all data before date - Must specify a date for removal. • Remove all - Removal all data immediately.
	Backup deleted data - Selected by default.

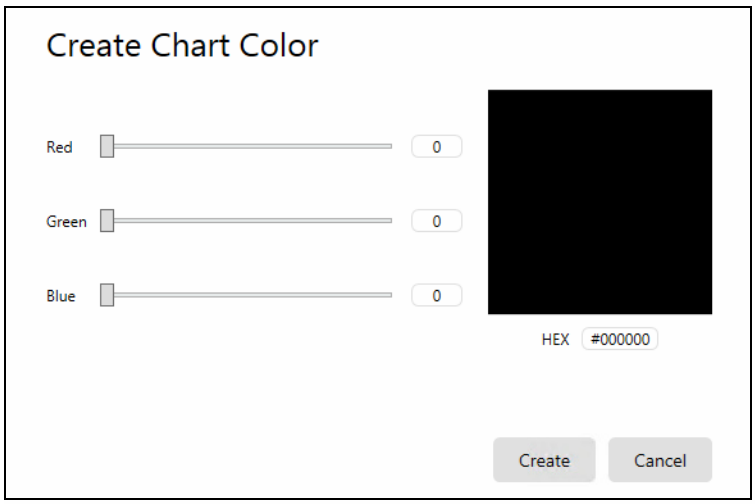
To configure custom chart colors

You must repeat the following procedure for every custom color that you are creating. The order of custom colors is based on the order in which you created them.

1. Under Chart Colors, click Create.

   The Create Chart Color dialog box opens. The initial custom color is set to black.

Figure 10-11: Create Chart Color dialog box



2. Use the slider bars to set the custom color, or in the blank field that displayed next to each slider bar, enter the appropriate RGB value.

   As you adjust a slider bar, or enter an RGB value, a preview of the override color and its hex code are displayed to the right of the slider bars.

3. Click Save.

   The Edit Color Series dialog box closes. You return to the Settings tab. An entry for the custom color is displayed on the tab and the Order for the color is also indicated - 1 for the first custom color that you created, 2 for the second custom color, and so on.

4. Optionally, you can do any or all of the following for a custom color pallet:

   - To edit the color for a custom color, click the Ellipse icon that is displayed to the right of the custom color entry, and on the dropdown menu that opens, click Edit.

     Repeat Step 2 and Step 3 to edit and save the custom color.

You can edit only the color of a custom color. You cannot edit its order. To reorder a list of custom colors, you must delete all the custom colors and then create them again in a new order.

- To delete an individual custom color, click the Ellipse icon that is displayed to the right of the custom color entry, and on the dropdown menu that opens, click Delete, and then click Yes in the message that asks you to confirm the deletion of the custom color. You can also click the blank checkbox that is displayed for each custom color, and then at the bottom of the custom colors list, click Delete.

  The message closes and the Settings tab remains open. The custom color is no longer displayed under Chart Colors.

- To delete multiple custom colors, click the blank checkbox that is displayed for each custom color that you are deleting, and then at the bottom of the custom colors list, click Delete.

As you delete one or more custom colors, if any ScrewDrivers reports currently use these colors, then the colors of the data series are automatically adjusted. Depending on the number of custom colors that you delete, this might result in some data series using custom colors and some data series using standard colors.

- To delete all custom colors in a single step, click the blank checkbox that is displayed at the top of the custom colors list, and then at the bottom of the custom colors list, click Delete.

If you delete all custom colors, if any ScrewDrivers reports use these colors, then the colors of the data series are automatically reset to the standard color settings (red for the first series, blue for the second series, and so on).

Chapter 10
ScrewDrivers Reports

Appendix A
ScrewDrivers Endpoint Troubleshooting

This appendix provides some general considerations when troubleshooting ScrewDrivers Endpoint. It also provides information about solving some of the most common problems you might encounter when using ScrewDrivers Endpoint.

This appendix covers the following topics:

Appendix A
ScrewDrivers Endpoint Troubleshooting

General Troubleshooting Considerations

The most common issues that you encounter with ScrewDrivers Endpoint are the following:

- Printers are not building for any user.
- Printers are not deleted after a user logs off a session.
- Output issues with fonts and/or graphics.
- Missing features.
- Slow server spooling.
- Users are seeing duplicate printers.
- Users are seeing other users' printers.
- The default printer is not being assigned correctly, or assigned at all.

When you are troubleshooting ScrewDrivers Endpoint, keep in mind the three key functional areas that are involved:

- The application from which the job is being printed.
- The ScrewDrivers Endpoint Session Agent and client.
- The client spooler and native print driver.

As is typical with any product, the recommended way to troubleshoot ScrewDrivers Endpoint is to eliminate possible causes first, and then focus on the root cause. Generally, when troubleshooting ScrewDrivers Endpoint, you should first determine whether the problem resides with the ScrewDrivers Endpoint Session Agent or the client. To do this, you can test the ScrewDrivers Endpoint Session Agent with multiple clients. If the same negative results are associated with multiple clients, then more than likely, the problem resides on the server. After you have isolated the problem to the server or the client, your next step is to review the troubleshooting recommendations in this appendix. If you cannot resolve the issue using the recommendations in this appendix, then you must contact support@tricerat.com for additional assistance.

ScrewDrivers Endpoint Session Agent Troubleshooting

The following are high-level instructions for troubleshooting the ScrewDrivers Endpoint Session Agent. If you cannot resolve the issue with the Session Agent based on these instructions, then contact support@tricerat.com for additional assistance. See:

Printers are not building for any user

The following procedure should be carried out only if no users are logged in to the ScrewDrivers Endpoint Session Agent.

Typically, printers do not build for any user because of one of two issues:

- Incorrectly configured licensing, which should be indicated by a licensing error message opening during the session.
- The "ScrewDrivers Notification Service" has not started. If this service has not started, then simply start/restart the service and verify that the printers become available upon the next remote connection by a user.

If neither of these issues is the cause of printers not building, then continue to "To verify the ScrewDrivers driver" below.

To verify the ScrewDrivers driver

1. Open the Devices and Printers control panel.
2. Select a printer

   The Print Server Properties option becomes available at the top of the control panel.
3. Select Print Server Properties

   The Print Server Properties dialog box opens.
4. Open the Drivers tab land verify that the ScrewDrivers driver is listed on the tab.
   - If the ScrewDrivers driver is listed on the Drivers tab, then contact support@tricerat.com for additional assistance
   - If the ScrewDrivers driver is *not* listed on the tab, then continue to "To troubleshoot printers not building for any user" on page 77..

To troubleshoot printers not building for any user

The following procedure is dependent on the existence of the following files: ScrewDriversDrv.dll and ScrewDriversUI.dll.

1. Navigate to the following directory:C:\Windows\System32\spool\drivers\x64\3.
   - If the files ScrewDriversDrv.dll and ScrewDriversUI.dll exist, then go to Step 2.
   - If the files ScrewDriversDrv.dll and ScrewDriversUI.dll do not exist, then go to Step 5.
2. Rename the following files with an extension of .old: ScrewDriversDrv.dll and ScrewDriversUI.dll.
3. Restart the Windows Print Spooler service.
4. Delete the two “old” files that you renamed in Step 2.
5. Navigate to the following directory: C:\Tricerat\ScrewDrivers Endpoint Session Agent.
6. Run the following executables in the order indicated:
   - install_driver.exe (installs the print driver)
   - install_port.exe (installs the printer port)

An error message that indicates that the ports have already been installed might open. You can ignore this message, and click OK to continue.

Your users should now be able to log in to new sessions and have their printers built.

Some printers are not deleted when the user logs off

You can clear the spool directory.

The following procedure should be carried out only if no users are logged in to the ScrewDrivers Endpoint Session Agent.

1. Open the Services dialog box: Control Panel > Administrative Tools > Services.
2. Stop the Windows Print Spooler service.
3. In Windows\System32\Spool\Printers, delete all files.
4. Start the Windows Print Spooler service.
5. Under Printers and Faxes on the server, delete any printers that are not installed directly on the server.

Output issues with fonts and/or graphics

If fonts are not being formatted correctly and/or fonts and graphics are nor properly scaling, then two options are available:

- Upgrade the print driver on the ScrewDrivers Endpoint client. See “To upgrade the print driver” below.
- Enable Print-As-Image. See “To enable Print-As-Image” below.

To upgrade the print driver

You should first to attempt to resolve the issue by upgrading the print driver.

1. Upgrade the local print driver to the latest version on the ScrewDrivers Endpoint client, where PCL > PS.
2. Carry out a query on the ScrewDrivers Endpoint client. See “Query Printers” in the “General Settings Tab” on page 40.
3. Carry out a test print.

   If the issue is still not resolved, then your next option is to enable Print-As-Image on the server. See “To enable Print-As-Image” below.

To enable Print-As-Image

You enable Print-As-Image either mid-session, or you can set Print-As-Image as the default for a client printer. See “To enable Print-As-Image mid-session” below or “To set Print-As-Image as the default for a client printer” below.

For details about Print-As-Image, including recommended DPI settings for the server, see “Print-As-Image” in “Printer UI tab” on page 56. For the client, see“Print-As-Image” in “Printers Tab” on page 37.

To enable Print-As-Image mid-session

1. In any application on the ScrewDrivers Endpoint Session Agent, click Print to open a Print dialog box.
2. In the list of available printers on the Print dialog box, select the correct ScrewDrivers Endpoint printer, and then click Preference to open the Printing Preferences dialog box.
3. On the Printing Preferences dialog box, open the Extended Options tab.
4. On the Extended Options tab, select Sent print job as an image, and then set the DPI.
5. Click OK.

To set Print-As-Image as the default for a client printer

1. Open the ScrewDrivers Endpoint Client application.
2. Open the Printers tab.

3. In the list of Available Printers, select the appropriate printer.
4. In the Extended Options - Print Job Rendering Options panel, enable Print-As-Image, and then set the DPI.
5. Click Apply.

Users are seeing duplicate printers

By default, auto-creation is turned on for Citrix (ICA protocol) or Terminal Services (RDP protocol). If auto-creation is turned on through Citrix or Terminal Services, then it is possible for users to see duplicate printers after the ScrewDrivers Endpoint Session Agent and client are installed. As a result, Tricerat recommends that you turn off auto-creation in your ScrewDrivers Endpoint environment. This not only eliminates the appearance of duplicate printers, but it also mitigates the known issues that are associated with auto-creation such as print driver problems, output (font and graphics) problems, and so on.

Users are seeing not only their own printers but also other users' printers

This problem is not associated with ScrewDrivers Endpoint. Instead, it is a known third-party issue. Contact support@tricerat.com for assistance.

ScrewDrivers Endpoint Client Troubleshooting

The following are high-level instructions for troubleshooting the ScrewDrivers Endpoint client. If you cannot resolve the issue with your client based on these instructions, then contact support@tricerat.comfor additional assistance. See:

- "ScrewDrivers Endpoint not building during a session" below.
- "Output issues with fonts and/or graphics" on page 81.
- "Default printer not being set correctly for one or more users" on page 82.

ScrewDrivers Endpoint not building during a session

Generally, the two most common reasons for ScrewDrivers Endpoint not building during a session are:

- Client updates. See "Client updates" below.
- Incompatible ScrewDrivers Endpoint client version. See "Incompatible ScrewDrivers Endpoint client version" below.

Client updates

Re-register the Citrix Plugin for the client. See "About Tab" on page 43.

Incompatible ScrewDrivers Endpoint client version

The version of ScrewDrivers Endpoint client that is currently installed on a workstation is displayed on the About tab of the ScrewDrivers Endpoint Client application. (See "About Tab" on page 43.)

- If the ScrewDrivers Endpoint client that is installed on a workstation is not the most current version, then you can download the most recent version from the Tricerat website at http://www.tricerat.com/support-center/downloads/printing-clients, and manually update the client version.
- If this option does not work, then the final troubleshooting step is to reinstall the ScrewDrivers Endpoint client. To do so:

1. Uninstall the current ScrewDrivers Endpoint client through Add/Remove Programs.
2. Restart the client workstation.
3. Install the latest version of the ScrewDrivers Endpoint client.

Output issues with fonts and/or graphics

If fonts are not being formatted correctly and/or fonts and graphics are nor properly scaling, then two options are available:

- Upgrade the print driver on the ScrewDrivers Endpoint client. See “Upgrade the print driver” below.
- *If allowed by the Session Agent,* (Suggest) enable Print-As-Image. See “Enable Print-As-Image” below.

Upgrade the print driver

You should first to attempt to resolve the issue by upgrading the print driver.

1. Upgrade the local print driver to the latest version on the ScrewDrivers Endpoint client, where PCL > PS.
2. Carry out a query on the ScrewDrivers Endpoint client. See “Query Printers” in the “General Settings Tab” on page 40.
3. Carry out a test print.

   If the issue is still not resolved, then your next option is to enable Print-As-Image on the server.

Enable Print-As-Image

You enable Print-As-Image either mid-session, or you can set Print-As-Image as the default for a client printer. See “To enable Print-As-Image mid-session” below or “To set Print-As-Image as the default for a client printer” on page 82.

If needed, you can also set Print-As-Image is to Force on the ScrewDrivers Endpoint Session Agent and this option then is applied to all client printers in a single step. For details about Print-As-Image, including recommended DPI settings for the Session Agent, see “Print-As-Image” in “Printer UI tab” on page 56. For the client, see“Print-As-Image” in “Printers Tab” on page 37.

To enable Print-As-Image mid-session

1. In any application on the ScrewDrivers Endpoint client, click Print to open a Print dialog box.
2. In the list of available printers on the Print dialog box, select the correct ScrewDrivers Endpoint printer, and then click Preference to open the Printing Preferences dialog box.
3. On the Printing Preferences dialog box, open the Extended Options tab.
4. On the Extended Options tab, select Sent print job as an image, and then set the DPI.
5. Click OK.

To set Print-As-Image as the default for a client printer

1. Open the ScrewDrivers Endpoint Client application.
2. Open the Printers tab.
3. In the list of Available Printers, select the appropriate printer.
4. In the Extended Options - Print Job Rendering Options panel, enable Print-As-Image, and then set the DPI.
5. Click Apply.

Default printer not being set correctly for one or more users

Window printer information is stored in the HKEY_CURRENT_USER hive. If a user logs in to ScrewDrivers Endpoint with the same username from multiple different locations, then all these logins modify the HKEY_CURRENT_USER hive. Because there can be only one default printer, the printers do not get assigned correctly for any session other than the most recent session. To resolve this issue, you should first disable Window printer mapping. If the problem still persists, and multiple users are having this issue, then verify whether these multiple users are using the same username to log in to the same ScrewDrivers Endpoint environment. If they are not using the same username, then verify whether each user is logging in to different client computers with the same username while remaining logged in to the original session.

Appendix B
ScrewDrivers Scanning Troubleshooting

This appendix provides some general considerations when troubleshooting ScrewDrivers Scanning. It also provides information about solving some of the most common problems you might encounter when using ScrewDrivers Scanning.

This appendix covers the following topics:

Appendix B
ScrewDrivers Scanning Troubleshooting

General Troubleshooting Considerations

The two most common issues that you encounter with ScrewDrivers Scanning are the following:

- TWAIN-enabled app cannot see the ScrewDrivers Scanning data source (DS).
- Some scanners are running slower than others, to the point that some end users are receiving timeout messages.

When you are troubleshooting ScrewDrivers Scanning, keep in mind the three key functional areas that are involved:

- The application that is being used to acquire the scan.
- The ScrewDrivers Scanning Session Agent and client.
- The ScrewDrivers Scanning DS.

As is typical with any product, the recommended way to troubleshoot ScrewDrivers Scanning is to eliminate possible causes first, and then focus on the root cause. Generally, when troubleshooting ScrewDrivers Scanning, you should first determine whether the problem resides with the ScrewDrivers Scanning Session Agent or the client. To do this, you can test the ScrewDrivers Session Agent with multiple clients. If the same negative results are associated with multiple clients, then more than likely, the problem resides on the server. After you have isolated the problem to the server or the client, your next step is to review the troubleshooting recommendations in this appendix. If you cannot resolve the issue using the recommendations in this appendix, then you must contact support@tricerat.com for additional assistance.

ScrewDrivers Scanning Session Agent Troubleshooting

The following sections provide answers to frequently asked questions that you might have or problems that you might encounter about the ScrewDrivers Scanning Session Agent. See:

- “TWAIN Data Source (DS)” below.
- “TWAIN - Windows and User Profiles” on page 87.
- “ScrewDrivers Scanning miscellaneous” on page 87.

TWAIN Data Source (DS)

What TWAIN Data Sources (DS) should be loaded on the server for ScrewDrivers Scanning?

The only DS that is required is the ScrewDrivers Scanning DS that is loaded during the installation of ScrewDrivers Scanning. No software from the scanner manufacturer is required on the server. If you have been testing USB re-direction or other solutions, then you might want to consider removing any other scanner software that is already loaded on the server. By removing these extra DSs, your users have fewer choices when selecting a DS because the ScrewDrivers Session Agent DS will be the only one listed.

How do I determine what TWAIN Data Sources (DS) are loaded?

- 32bit TWAIN DSs are located in the folders under C:\Windows\twain_32.
- 64bit TWAIN DSs are located in the folders under C:\Windows\twain_64.

Each folder contains a file with an extension of “.ds” and this file is the DS which is actually a DLL. Other files might also be located in the folder. ScrewDrivers Scanning installs a 32bit DS and a 64bit DS as well.

Why can't my TWAIN-enabled app see the ScrewDrivers Scanning DS?

Make sure you that you have selected the DS from a valid ScrewDrivers Scanning user session, where a valid user has the ScrewDrivers Scanning client installed. You cannot open the ScrewDrivers Scanning DS from a ScrewDrivers Administration session or a non- valid ScrewDrivers Scanning user session.

Note that some apps do not recognize a newly installed DS until the app is initally run “As Administrator.” If a specific TWAIN-enabled app still cannot see the ScrewDrivers Scanning DS, then test a different TWAIN enabled app. (Remember, Tricerat supplies two sample applications from TWAIN.org—Twack_32.exe and Twack_64.exe—for testing your ScrewDrivers Scanning installation. See the *ScrewDrivers Pro/Enterprise Installation Guide*.) If the problem persists, then you must contact support@tricerat.com for additional assistance.

How do I delete a DS?

If the scanner manufacturer has an entry in the Control Panel under Programs and Features, then Tricerat recommends using this method to uninstall the DS. If the scanner manufacturer does not have an entry in the Control Panel, then you can delete the appropriate folder under C:\Windows\twain_32 or C:\Windows\twain_64 folders. Note that similar folders might exist under each User's profile at one of the following locations:

- %USERPROFILE%\Windows\twain_32
- %USERPROFILE%\Windows\twain_64.

TWAIN - Windows and User Profiles

Why is my scanner not shown under the Device Manager, Imaging devices?

ScrewDrivers Scanning installs a single TWAIN DS on the server. Only Microsoft's Windows Image Acquisition (WIA) drivers are shown under the Device Manager, Imaging Devices.

Why can't I use Microsoft Paint or Windows Fax and Scan with ScrewDrivers Scanning?

ScrewDrivers Scanning installs a single TWAIN DS on the server. The utilities from Microsoft support only Microsoft's Windows Image Acquisition (WIA) drivers.

How does TWAIN use the Windows folder under the user's profile?

Some apps use the C:\Windows folder and some use the %USERPROFILE%\Windows folder. Tricerat supplies a batch file that should run after each user login:

C:\Program Files\Tricerat\ScrewDrivers\Scanning\UserCopyScanectDS.bat

This batch file copies the ScrewDrivers Scanning DS to the user's profile folder.

Is ScrewDrivers Scanning compatible with mandatory profiles?

Yes, ScrewDrivers Scanning is compatible with mandatory profiles; however, you must make sure that the mandatory profile contains the files that the UserCopyScanectDS.bat script sets up. After being copied in to the user's mandatory profile, these files do not change from session to session. However, if you update the ScrewDrivers Scanning version, then you must remember to also update these files.

ScrewDrivers Scanning miscellaneous

Some scanners are slower than others and some users receive a timeout message dialog. Can I adjust the timing and eliminate this timeout issue?

Yes, you can edit this timeout value. To do so:

1. On the ScrewDrivers server, open regedit.
2. Navigate to the following key:

   HKEY_LOCAL_MACHINE\SOFTWARE\Tricerat\ScrewDrivers\Scanning
3. Add a DWORD value named ClientWait.

4. Set the value to milliseconds, making sure to select decimal as the input.

   The default is 30000 which is 30 seconds. To double the wait time, use a value of 60000.

5. Exit regedit

   The next time that a user starts his/her TWAIN- enabled app, this updated setting is used. The user does not have to logout.

ScrewDrivers Scanning Client Troubleshooting

The following sections provide answers to frequently asked questions that you might have or problems that you might encounter about the ScrewDrivers Scanning client. See:

- “Setting the default scanner” below.
- “ScrewDrivers Scanning client and Citrix” on page 90.
- “Scanner drivers” on page 91.

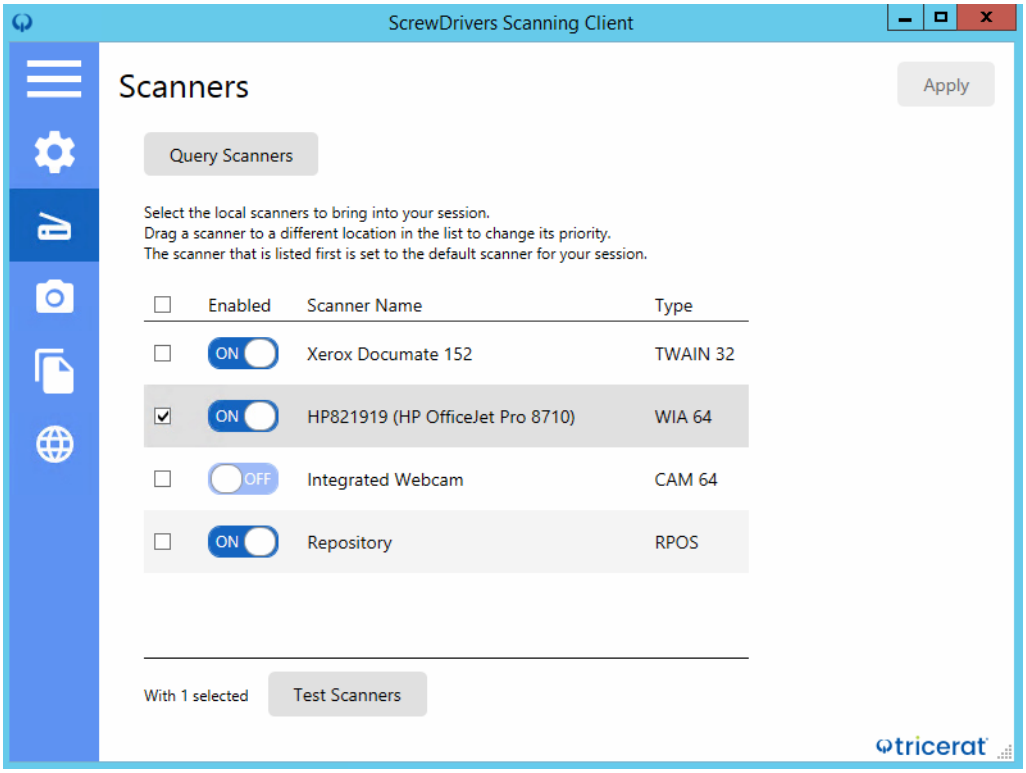
Setting the default scanner

How do I control which scanner is automatically set as the default scanner for a remote session?

1. Open the ScrewDrivers Scanning Client app, and then open the Scanners tab. (See “Scanners Tab” on page 67.)

   The displays all the scanner drivers, by name, that were detected on your client or client’s network that can be brought in to your session. The first scanner that is displayed in the list of available scanners is *always* set to the default scanner for your session.

Figure B-1: ScrewDrivers Scanning Client app, Scanners tab



2. To set another scanner as the default scanner, drag the selected scanner to the first position in the list.

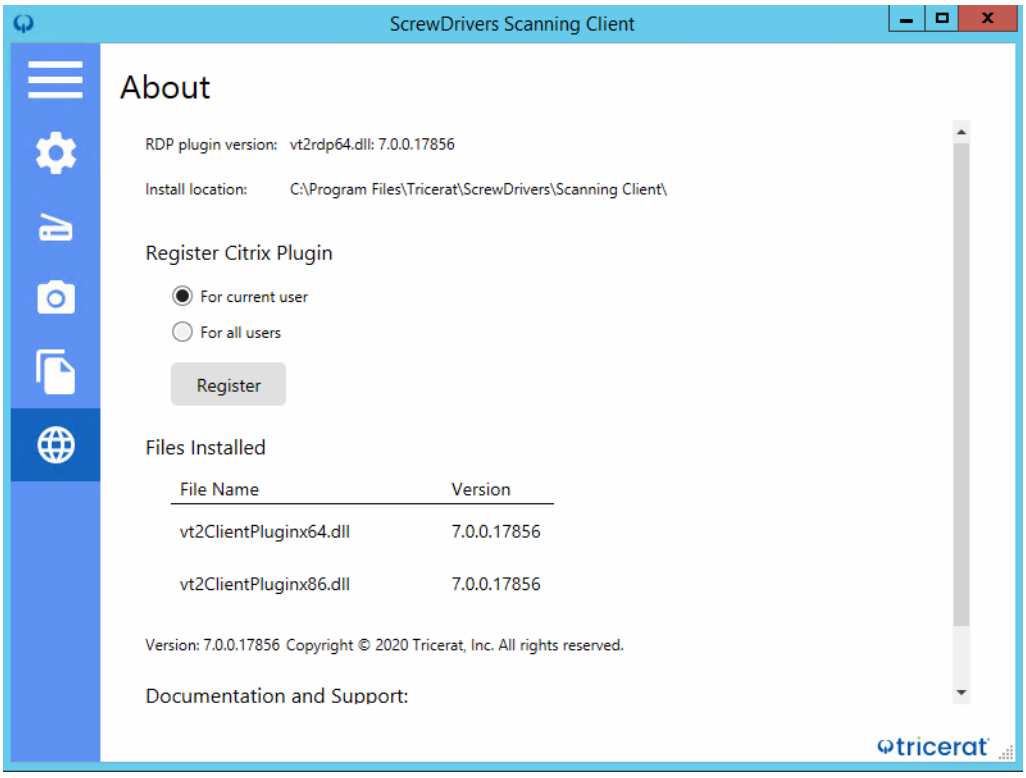
ScrewDrivers Scanning client and Citrix

Does it matter if I install ScrewDrivers Scanning before my Citrix receiver on my client?

If you are installing ScrewDrivers Scanning, then you must install the Citrix receiver on the client before you install the ScrewDrivers Scanning client. If you do not install the Citrix receiver first, then ScrewDrivers Scanning cannot detect the Citrix environment and properly install Tricerat's Citrix add-in dll. If you install the ScrewDrivers Scanning client first, you must re-register this add-in with Citrix.

1. Open the ScrewDrivers Scanning Client app As Administrator.
2. Open the About tab.

Figure B-2: ScrewDrivers Scanning Client app, About tab



3. Under Register Citrix Plugin, select For all users
4. Click Register.

I have been testing TWAIN re-direction in my Citrix environment. Is there anything I must do before testing ScrewDrivers Scanning?

Before ScrewDrivers Scanning can work, you must disable the TWAIN re-direction Windows policies. If you do not disable these polices, then you cannot see the ScrewDrivers Scanning DS on the server. You can see only the data sources that are loaded on your client.

Scanner drivers

What is the difference between a TWAIN driver and a WIA driver?

Both the TWAIN driver and the WIA driver “talk” to the same scanner hardware. The major difference is the Application Program Interface (API) that these drivers present to an application. TWAIN drivers use a standard developed by the TWAIN Working Group, a not for profit organization which represents the imaging industry. Windows Image Acquisition (WIA) drivers use a standard developed by Microsoft.

Does ScrewDrivers Scanning require any special software to be installed from the scanner manufacturer?

No. Only the TWAIN driver or the WIA driver must be installed. Use the Test Scanners function to validate that the driver is operating correctly.

My scanner manufacturer installed both a TWAIN driver and a WIA driver. Which one should I use?

In general, Tricerat suggests starting with the TWAIN driver and running some scanning tests. If the tests reveal any issues, try using the WIA driver to see if the issues persist. If the issues persist, then check the manufacturer's website for an updated driver. Sometimes, the installation CD that is provided with a scanner does not contain the latest driver, so Tricerat recommends that you check the manufacturer's website to confirm that you are using the latest driver. Tricerat recommends that you also check for any firmware updates that might be available for your scanner.

Appendix B
ScrewDrivers Scanning Troubleshooting

Appendix C
Data Review in the ScrewDrivers Administration

Two primary functions are available in ScrewDrivers Administration for reviewing and analyzing the data in your ScrewDrivers database: audits and reports. Audits track all the changes that have been made to an entity in the database in a specified time period such as the create and update for an application object. Other ScrewDrivers reports provide different information about your ScrewDrivers installation, such as all the objects that are currently assigned by owner.

This chapter covers the following topics:

Auditing the ScrewDrivers Database

Audit is a management tool in ScrewDrivers Administration that tracks all the changes made to the ScrewDrivers database. Three options are available for auditing these changes:

- Audit Object – This audit tracks the history of an object since its initial creation date.
- Audit Owner – This audit tracks the history of all the assignments ever made to an owner.
- Searching Audit Data – This option allows you to search for specific audit data based on user-specified search criteria such as Users, Actions, and so on.

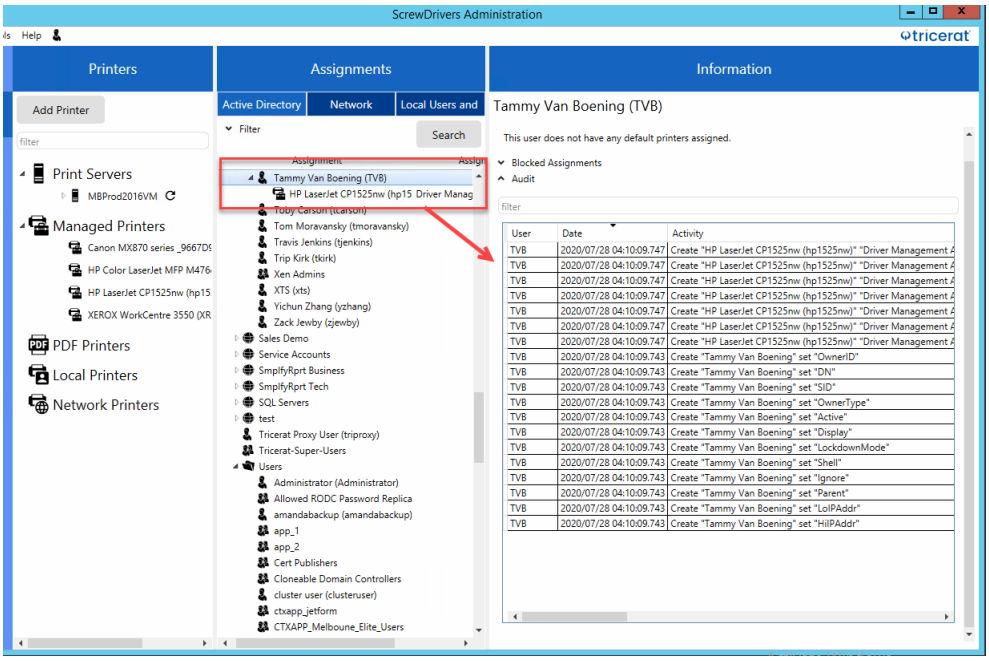
To audit an object or owner object in the database

Remember, you can always carry out a search for an object or an owner. See "To search for an object and view its information" on page 22 "To search for owners" on page 27.

1. Do one of the following:
   - To audit an object, select the object in the Objects pane, and in the Information pane, open the Audit tab.
   - To audit an owner, select the owner in the Assignments pane and in the Information pane, open the Audit tab.

   The Audit tab displays all the changes that have ever been made to the entity in the database.

Figure C-1: Audit tab for an owner



2. Optionally, to search for specific audit data, enter your search criteria in the filter field that is displayed at the top of the Audit tab.

   If you search for audit data, then note the following about the search:

   - The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results.
   - As you enter the search string, the list of matching search results is dynamically updated.

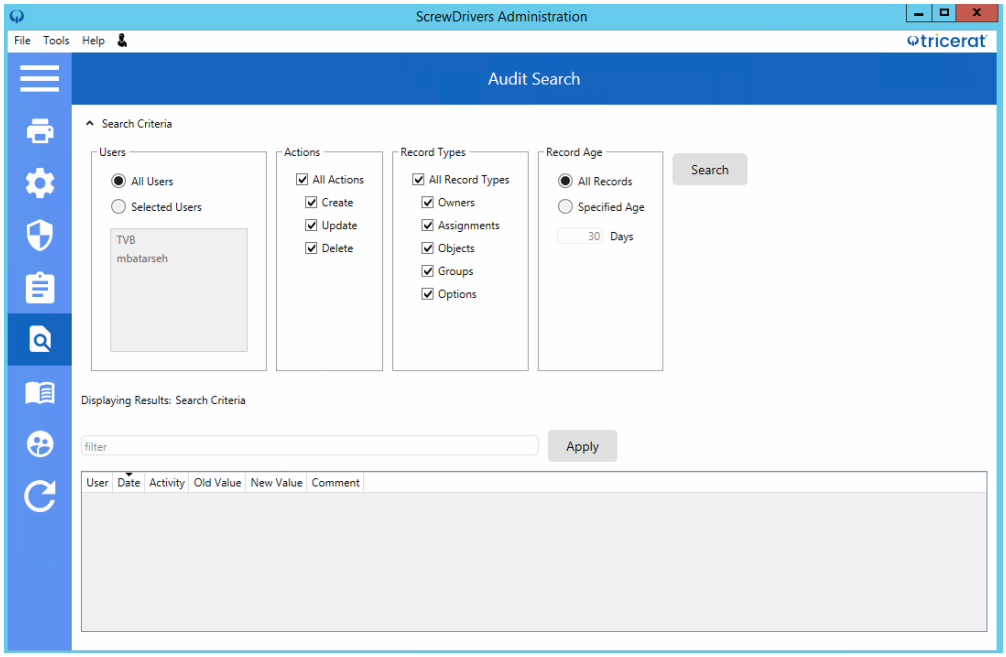
   For example, a search string of **ID** could return results of set Owner**ID** and set S**ID**.

To search for audit data

1. On the ScrewDrivers Administration Icon bar, click the Audit Search icon.

   The Audit Search view opens in the main window, which provides options for searching for specific data that has been audited.

Figure C-2: ScrewDrivers Administration Audit Search view



2. Specify your search criteria.

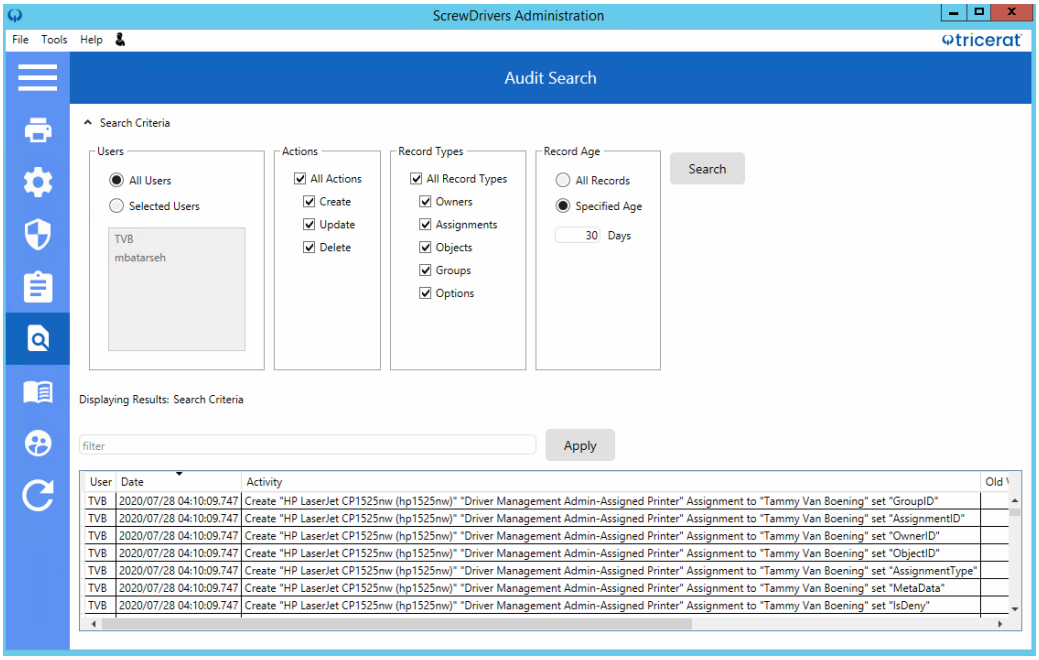
   You can leave all values set to their default values, or you can edit them as needed.

To view assignments that were made by different SQL accounts, search by User (and not by Owner). In larger environments, it might be suitable to create a separate SQL account (or granting db_owner to administrator accounts for ScrewDrivers Administration) for tracking purpose.

3. Click Search.

   All the database records that match the search results are displayed in the Search Results pane at the bottom of the Audit Search view.

Figure C-3: Audit search results



4. Optionally, to search for specific audit data, enter your search criteria in the filter field that is displayed above the search results, and then click Apply.

   If you search for audit data, then note the following about the search:

   - The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results.
   - As you enter the search string, the list of matching search results is dynamically updated.

   For example, a search string of **ID** could return results of set Owner**ID** and set S**ID**.

Generating ScrewDrivers Administration Reports

Different ScrewDrivers reports provide different information about your ScrewDrivers database, such as all the objects that are currently assigned by owner. Currently, you can generate two ScrewDrivers reports from ScrewDrivers Administration:

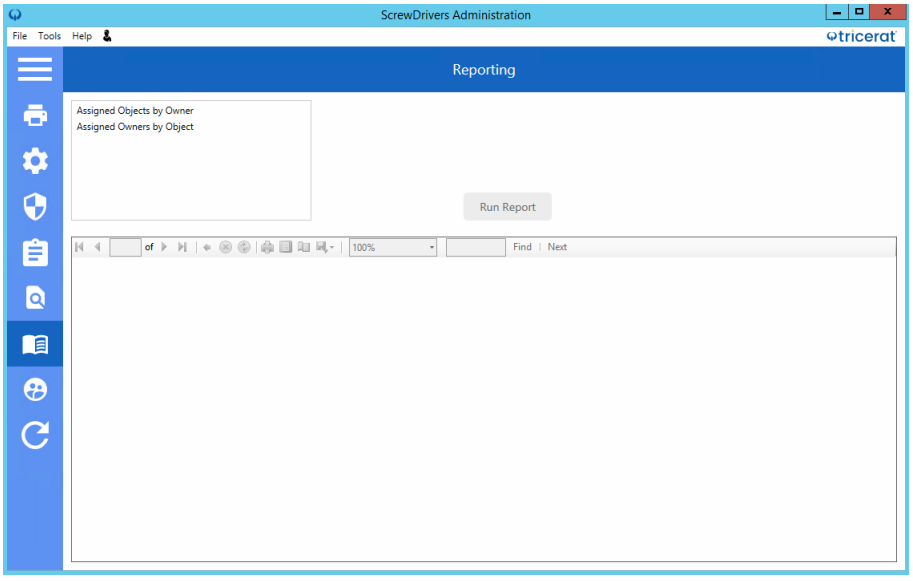
- Assigned Objects by Owner report - Lists all of the objects assigned to each owner in the ScrewDrivers database.
- Assigned Owners by Object report – Lists each object and all of the owners to whom each object is assigned in the ScrewDrivers database.

To generate a ScrewDrivers report

1. On the ScrewDrivers Administration Icon bar, click the Reporting icon.

   The Reporting view opens in the main window with two reporting options displayed - Assigned Objects by Owner and Assigned Owners by Object.

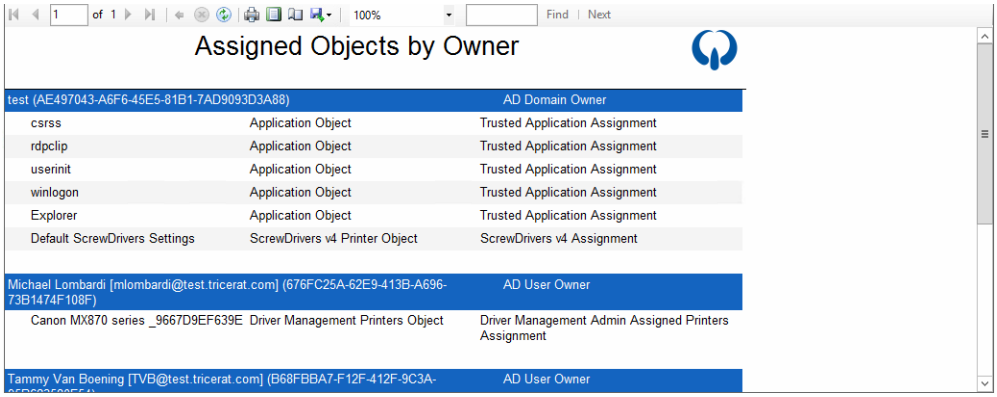
Figure C-4: ScrewDrivers Administration Reporting view



2. Select the appropriate report option, Assigned Objects by Owner or Assigned Owners by Object, and then click Run Report.

   The selected report opens in Reports pane that is displayed at the bottom of the Reporting view. The toolbar at the top of the pane contains options for working with the report such as searching for information in the report, printing the report, and so on. You can hold your mouse pointer over an icon on the toolbar to open a tooltip that explains the purpose of the icon. See Figure C-5 and Figure C-6 on page 203.

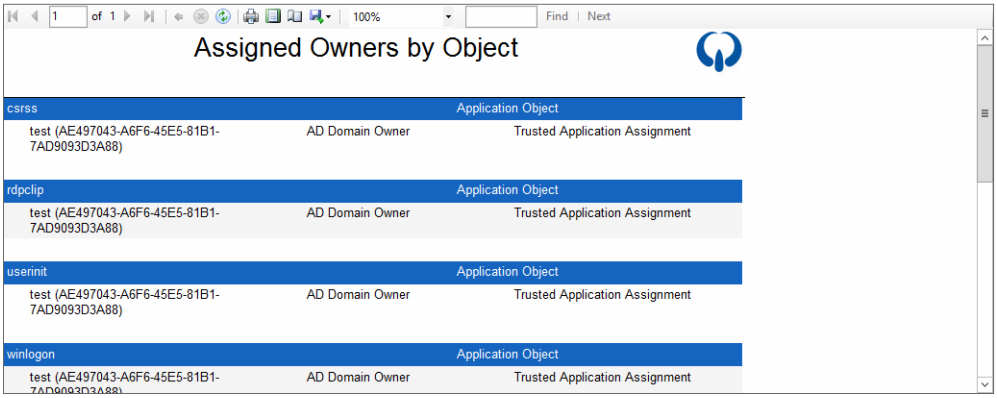
Figure C-5: Assigned Objects by Owners report



Assigned Objects by Owner

test (AE497043-A6F6-45E5-81B1-7AD9093D3A88)		AD Domain Owner
csrss	Application Object	Trusted Application Assignment
rdpclip	Application Object	Trusted Application Assignment
userinit	Application Object	Trusted Application Assignment
winlogon	Application Object	Trusted Application Assignment
Explorer	Application Object	Trusted Application Assignment
Default ScrewDrivers Settings	ScrewDrivers v4 Printer Object	ScrewDrivers v4 Assignment
Michael Lombardi [mlombardi@test.tricerat.com] (676FC25A-62E9-413B-A696-73B1474F108F)		AD User Owner
Canon MX870 series _9667D9EF639E	Driver Management Printers Object	Driver Management Admin Assigned Printers Assignment
Tammy Van Boening [TVB@test.tricerat.com] (B68FBBA7-F12F-412F-9C3A-		AD User Owner

Figure C-6: Assigned Owners by Object report



Assigned Owners by Object

csrss		Application Object
test (AE497043-A6F6-45E5-81B1-7AD9093D3A88)	AD Domain Owner	Trusted Application Assignment
rdpclip		Application Object
test (AE497043-A6F6-45E5-81B1-7AD9093D3A88)	AD Domain Owner	Trusted Application Assignment
userinit		Application Object
test (AE497043-A6F6-45E5-81B1-7AD9093D3A88)	AD Domain Owner	Trusted Application Assignment
winlogon		Application Object
test (AE497043-A6F6-45E5-81B1-7AD9093D3A88)	AD Domain Owner	Trusted Application Assignment

Appendix D
ScrewDrivers Supporting Applications

A variety of supporting applications are available to help you analyze, configure, optimize, and maintain your ScrewDrivers database and products. This appendix details these applications.

This appendix covers the following topics:

ScrewDrivers Printer Discovery is detailed in Chapter 7, "Managing ScrewDrivers Direct Printers," on page 111. ScrewDrivers Reports is detailed in Chapter 10, "ScrewDrivers Reports," on page 159.

ScrewDrivers Connector

Wherever you install the ScrewDrivers Cloud Connector, a ScrewDrivers settings application, ScrewDrivers Connector, is also automatically installed. You use the ScrewDrivers Connector application to maintain and administer the proxy settings after installation.

To use ScrewDrivers Connector to manage proxy settings

Do one of the following to open ScrewDrivers Connector:

- On the desktop, double-click the ScrewDrivers Database Connection icon.

Figure D-1: ScrewDrivers Connector desktop icon

- Open the Start menu, and then under Tricerat, double-click ScrewDrivers Connector.

The application consists of a single window for managing your ScrewDrivers database connections. The installation location of the ScrewDrivers Cloud Connector determines the mode in which ScrewDrivers Connector opens.

Location Installation	ScrewDrivers Connector Mode
Where your end users are creating printers such as your Terminal Servers, VDIs	Internal mode. See Figure D-2 below.
Where the ScrewDrivers Print Server is being hosted	Remote mode. See Figure D-3 on page 208.

Figure D-2: ScrewDrivers Connector, Internal mode

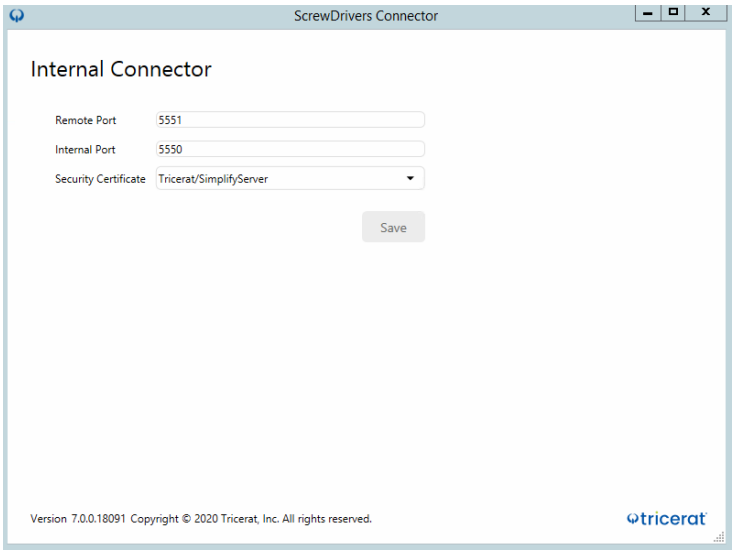


Figure D-3: ScrewDrivers Connector, Remote mode

ScrewDrivers Database Connection

All the features that you can install for ScrewDrivers Pro or ScrewDrivers Enterprise require a database. When you install the ScrewDrivers database, the ScrewDrivers Database Connection application is also installed. You use ScrewDrivers Database Connection to manage or change your ScrewDrivers database connections.

Generally, after the initial installation of a ScrewDrivers product and under normal operating conditions, you do not have to modify the values for the ScrewDrivers database.

To use ScrewDrivers Database Connection to manage database connections

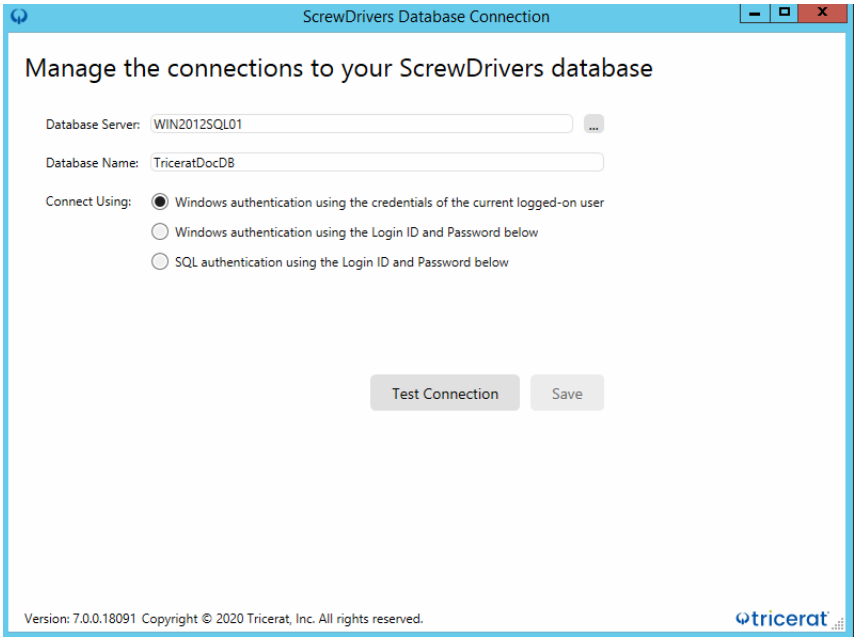
1. Do one of the following to open ScrewDrivers Database Connection:
   - On the desktop, double-click the ScrewDrivers Database Connection icon.

Figure D-4: ScrewDrivers Database Connection desktop icon

- Open the Start menu, and then under Tricerat, double-click ScrewDrivers Database Connection.

  The application consists of a single window for managing your ScrewDrivers database connections.

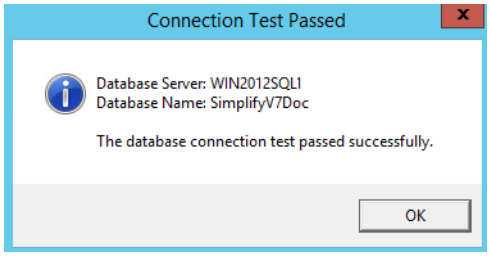
Figure D-5: ScrewDrivers Database Connection window



2. Enter or edit the connection information for your ScrewDrivers database.
3. After entering or editing the information, click Test Connection.

   If the information is correct, then a Connection Test Passed message opens, indicating that the connection test was successful; otherwise, an Error message opens, indicating the connection test failed and indicating the source of the error. You must correct the error, and retest the connection until a Connection Test Passed message opens.

Figure D-6: Connection Test Passed message



4. Click OK to close the Connection Test Passed message.
5. Click Save to save the database connection information.

ScrewDrivers Licenses

When you install a Tricerat product, if the product requires licensing, then the Tricerat License Server application (app) is silently installed as well. Because licensed ScrewDrivers products use the Tricerat LMX licensing technology, you can use Tricerat License Server to change either the licensing mode or licensing parameters for your installed products.

You can also use the options that are available on the Licensing Configuration tab of the ScrewDrivers Endpoint Session Agent app to change the licensing mode or licensing parameters for ScrewDrivers Endpointand ScrewDrivers Scanning.

Do one of the following to open Tricerat License Server:

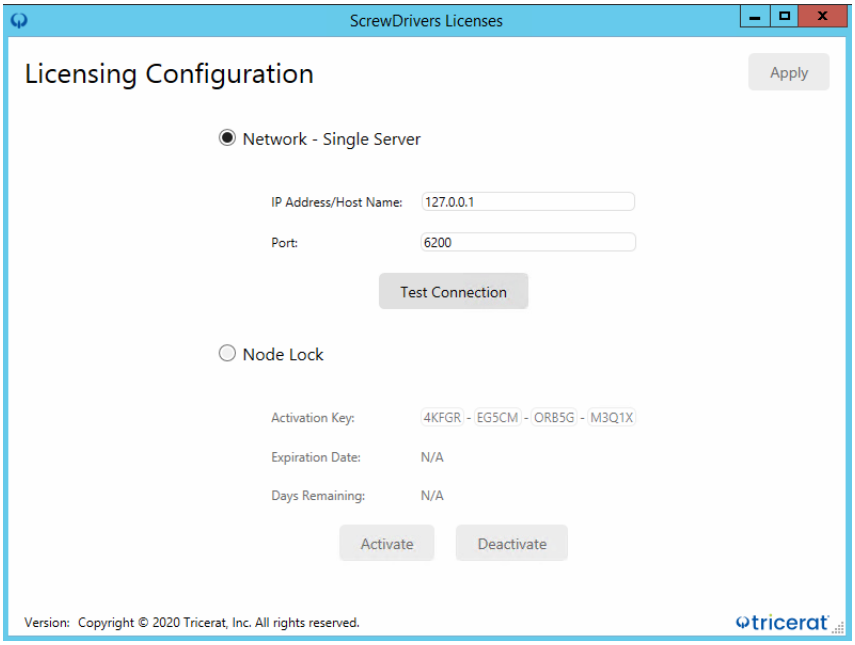
- On the desktop, double-click the Tricerat License Server icon.

Figure D-7: ScrewDrivers Database Connection desktop icon

- Open the Start menu, and then under Tricerat, double-click Tricerat License Server.

The application consists of a single window for managing your ScrewDrivers database connections.

Figure D-8: Tricerat License Server app



ScrewDrivers Logs

ScrewDrivers Logs is a standalone application that is installed wherever you install a ScrewDrivers product. The application assists you, *in conjunction with Tricerat support*, in determining the root cause of any application or software error. The application comes supplied with presets that you can select to automatically turn on established combinations of log files for the efficient investigation and resolution of specific problems. You can also manually turn on any combination of log files.

To use ScrewDrivers Logs

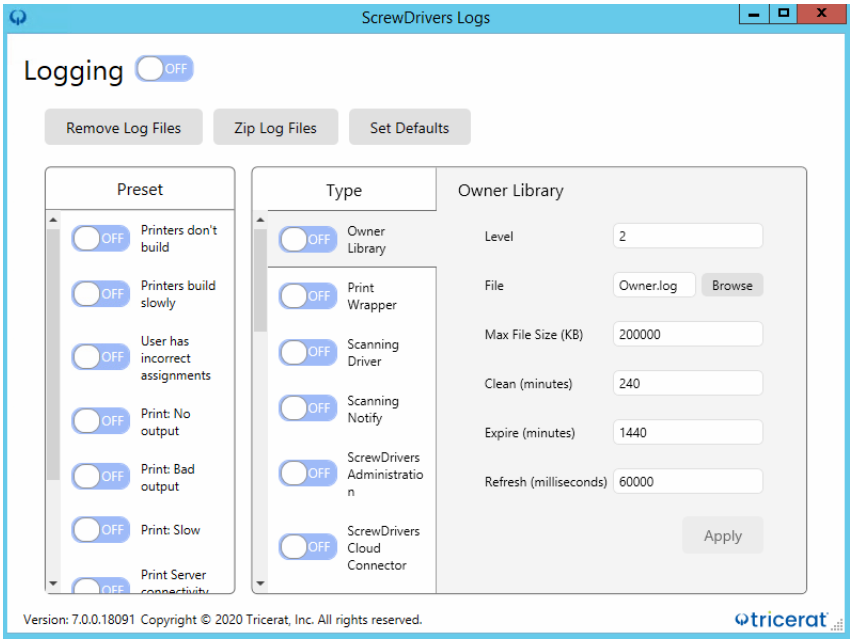
1. Do one of the following to open ScrewDrivers Logs:
   - On the desktop, double-click the ScrewDrivers Logs icon.

Figure D-9: ScrewDrivers Logs desktop icon

   - Open the Start menu, and then under Tricerat, double-click ScrewDrivers Logs.

     The application consists of a single window for managing your ScrewDrivers log files. With the exception of the default values for logging options, all other options on the window are toggles. When ScrewDrivers Logs first opens, by default, Logging, all presets, and all log file types are turned on, and the system-supplied default values for logging options are displayed.

Figure D-10: ScrewDrivers Logs window

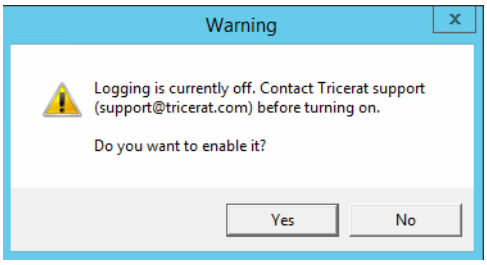


By default, logging is always turned off for all ScrewDrivers products. You should turn logging on only at the request of Tricerat support.

2. At the top of the ScrewDrivers Logs window, click Logging.

   A Warning message opens, indicating the Logging is currently turned off, and that you should contact Tricerat support before turning it on. It also asks you if want to enable logging.

Figure D-11: Logging Warning message



3. Click Yes

   The Warning message closes, and Logging is enabled.

4. Do one or both of the following to collect the necessary log files:

   - Turn on one or more presets.

     After you turn on a preset, the appropriate combination of log files for the preset are automatically turned on. For example, if you turn on the Printers build slowly, then the Owner library log files are automatically turned on. Although Tricerat does not recommend doing so, you can also manually turn on additional log files for the selected preset.

   - Manually turn on one or more log file types.

Tricerat has defined default values for all the logging options for every log file type. You should not edit these options unless Tricerat instructs you to do so.

5. Collect the log files for the duration that Tricerat specifies.

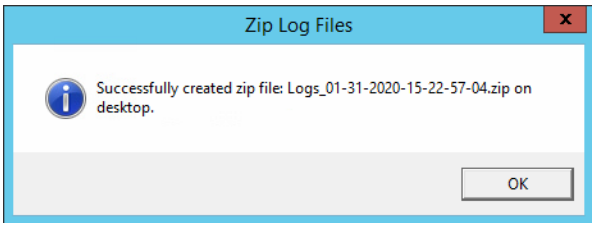
6. After the log files have been successfully collected, click Zip Log Files.

   A Zip Log Files message opens, indicating that the zip file has successfully been created and placed on your desktop. By default, the zip is named based on the date and time (24 hours) that it was created in the following format:

   Logs_<mm>-<dd>-<yyyy>-hour>-<minutes>-<seconds>-<n>.zip

   See Figure D-12 on page 214.

Figure D-12: Zip Log Files message



7. Send the zip file to support@Tricerat.com. Make sure to title the email and detail any appropriate information in the email as per Tricerat's instructions.

By default, all log files are stored in C:\ProgramData\Tricerat\Logs. After you collect, zip, and send the log files to Tricerat, you can click Delete Log Files to automatically delete all the files from this directory in a single step. You can manually delete one or more log files from the directory if necessary.

ScrewDrivers Print Server

ScrewDrivers Print Server is a standalone application that is installed on any server that has an application that is running as a service, but the service needs to be able to print on behalf of users. You use ScrewDrivers Print Server to determine which print server printers are to be reported to ScrewDrivers Administration and which are not. As a result, when you query a ScrewDrivers Print Server object, the query returns only a limited set of printers, instead of all printers, and these are the printers that you can make available to your end users.

To use ScrewDrivers Print Server to manage your print server printers

Do one of the following to open ScrewDrivers Print Server:

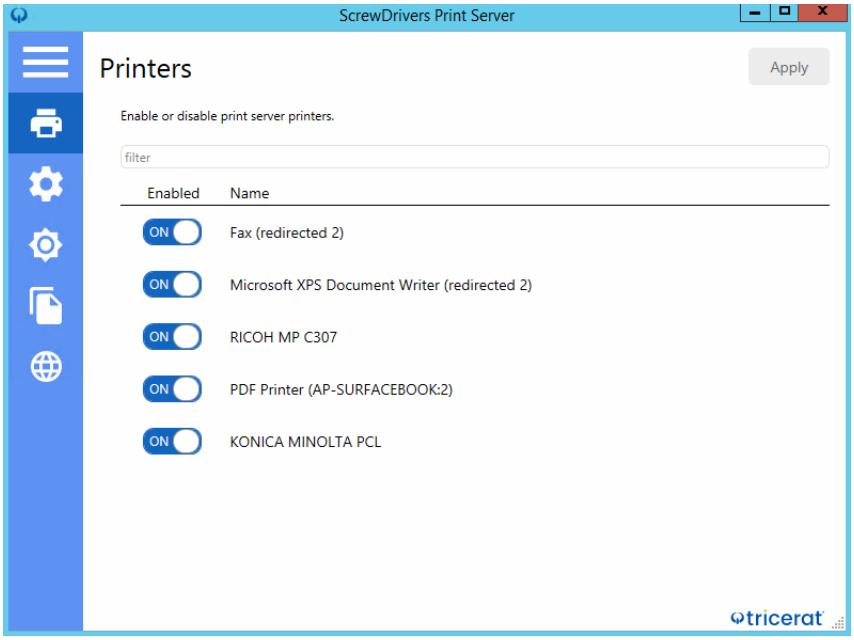
- On the desktop, double-click the ScrewDrivers Print Server icon.

Figure D-13: ScrewDrivers Print Server desktop icon

- Open the Start menu, and then under Tricerat, double-click ScrewDrivers Print Server.

  The Printers tab is the open tab for the window.

Figure D-14: ScrewDrivers Print Server main window



The ScrewDrivers Print Server main window has six tabs for managing your print server printers. Each tab is represented by an icon on a Tab bar that is displayed on the left side of the main window. Click an icon to view the corresponding tab.

Tab	Description
Tip: When ScrewDrivers Print Server first opens, the Tab bar is collapsed. You can hold your cursor over an icon on the Tab bar to display a tooltip that shows the name of the corresponding tab, or you can click the Hamburger icon to expand the Tab bar and view the complete name of each tab.	
	Printers tab - Displays all the printers that have been discovered on a print server. You use the options on this tab to enable or disable print server printers, and therefore, limit the number of print server printers that are report to ScrewDrivers Administration. See "Printers tab" below.
	Settings tab - Displays general information about the give print server, such as its connection port, authentication port, and so on. See "Settings tab" on page 217.
	ScrewDrivers Print Server tab - Displays the current status for the ScrewDrivers Print Server service, such as Running. Also provides options for starting, stopping, or restarting the service. See "Services tab" on page 218.
	Logging tab - Provides options for diagnostic logging from the ScrewDrivers Scanning client. See "Logging tab" on page 218.
	About tab - Provides version information about the ScrewDrivers Print Server application. The tab also displays a Help link for documentation and support. See "About tab" on page 219.

Printers tab

The ScrewDrivers Print Server Printers tab displays all the printers that have been discovered on a print server. You use the options on this tab to enable or disable print server printers, and therefore, limit the number of print server printers that are reported to ScrewDrivers Administration. (See Step 4 of "To create the Print Server object and add the associated printers to the ScrewDrivers database" on page 90.) See Figure D-14 on page 215.

- After you enable or disable a print server printer, you must click Apply to save the changes.
- To search for a specific printer or printers, enter a search string in the filter field that is displayed at the top of the tab. Note the following about the search string.
  - The search results are limited to the exact order of the characters in the string, but the string is not case-sensitive, and the search string can appear anywhere in the search results.
  - As you enter the search string, the list of matching search results is dynamically updated.

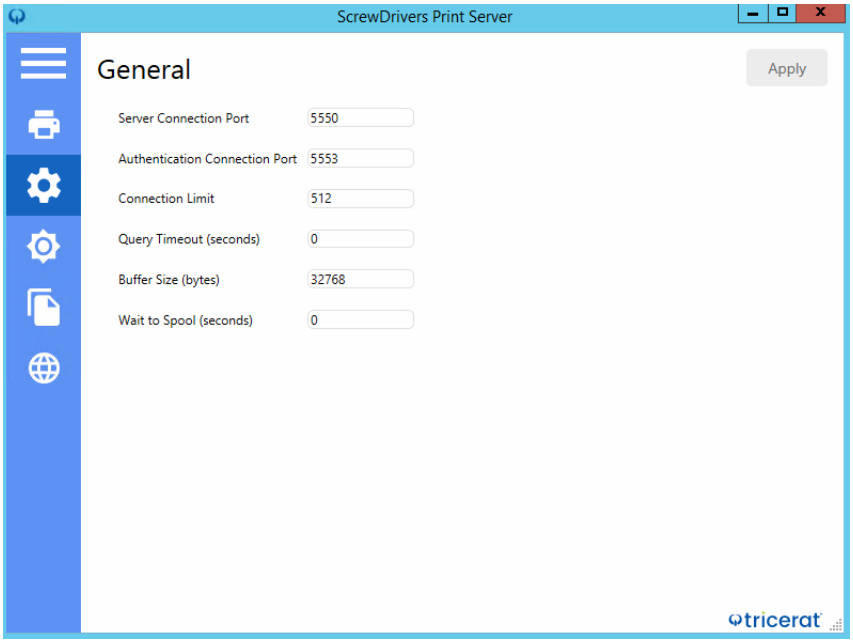
  For example, if you enter a search string of **PDF**, then search results could include the

Microsoft Print to **PDF** and all **PDF** printers.

Settings tab

The ScrewDrivers Print Server Settings tab general settings values for the service, including the server connection port, the authentication connection port, and the connection limit. Default values are supplied for all the settings on the tab, and Tricerat recommends that you do not change any of these values unless necessary, for example, a port conflict. If you do edit any of these values, you must click Apply to save the changes.

Figure D-15: ScrewDrivers Print Server Settings tab

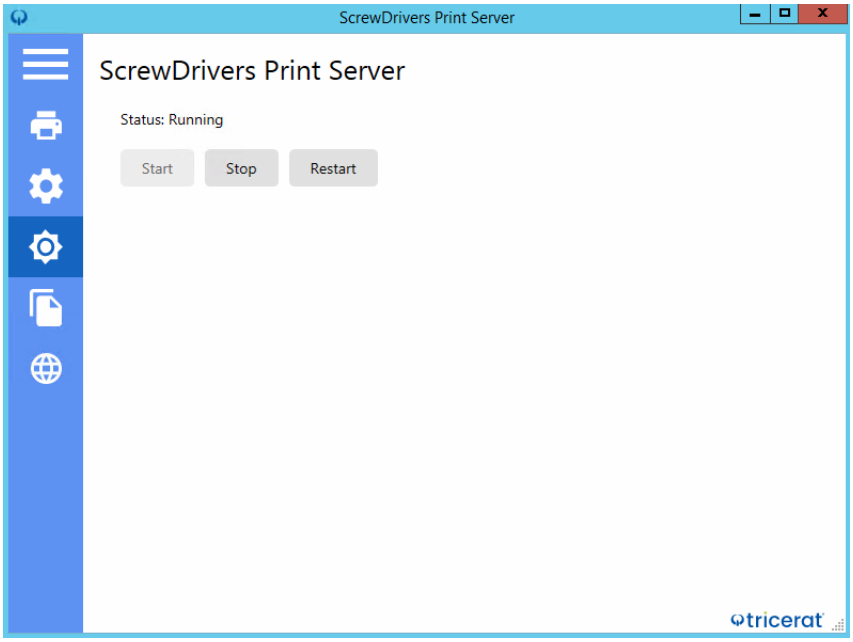


Option	Description
Server Connection Port	The port that is used for non-authenticated connections when querying printers.
Authentication Connection Port	The port that is used for user-authenticated connections when printing.
Connection Limit	The maximum number of simultaneous connections. that are allowed. If this number is exceeded, then the connection is denied.
Query Timeout (seconds)	The timeout, in seconds, for printer queries.
Buffer Size (bytes)	The buffer size that is allocated for each socket connection.
Wait to Spool (seconds)	A possible time delay, in seconds, before a document starts printing.

Services tab

The Services tab displays the current status for the ScrewDrivers Print Server service, such as Running. Also provides options for starting, stopping, or restarting the service.

Figure D-16: ScrewDrivers Print Server Services tab

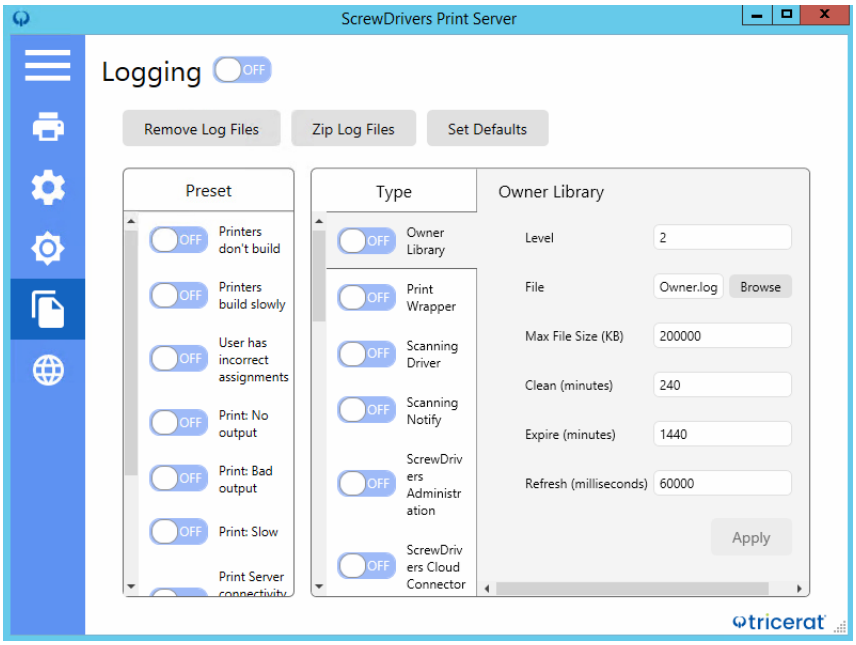


Logging tab

The ScrewDrivers Print Server Logging tab provides options for diagnostic logging from a print server. This logging information is used for debugging or problem tracking purposes. See Figure D-17 on page 219.

Because Tricerat support primarily uses this information, you should not change any of the default values or use any of the commands on this tab unless Tricerat Support instructs you to do so.

Figure D-17: ScrewDrivers Print Server Logging tab



About tab

The ScrewDrivers Print Server About tab displays version information about the ScrewDrivers Print Server application. The tab also displays a Help link for documentation and support.

Figure D-18: ScrewDrivers Print Server About tab