

Sharp Remote Device Manager (SRDM) Server Software Setup Guide

This guide explains how to setup Sharp Remote Device Manager (referred to as "SRDM" in this guide) Software.

SRDM is a web-based software application that runs on a web server. After installing SRDM, you can use your computer's web browser to operate and use the SRDM functions that are provided for the management of digital multifunction machines (MFPs) and printers.

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■ NOTE:

The following document describes about various features provided by SRDM and its operating procedure.

- Sharp Remote Device Manager Operation Guide (PDF file)
Log in to the SRDM and click the 'Help' button on the top-right corner of window to view the document.



It is recommended to have Adobe Reader® or Acrobat Reader® from Adobe Systems Inc., to view the Operation Guide as a PDF file. Adobe Reader® can be downloaded from the following URL.

<http://www.adobe.com/>

INTRODUCTION

■ Please note

- The explanations in this guide assume that the person who will install the product and the users of the product have a working knowledge of Microsoft Windows and internet.
- For information on the operating system, please refer to your operating system manual or the online Help function.
- The explanations of screens and procedures in this guide are for Windows Server® 2012 R2. The screens may vary in other versions of Windows.
- Screenshots in this guide are using the theme "Enterprise Blue".
- Screenshots and contents in this guide may be changed. (Information is current as of June 2017.)
- Digital multifunction machines and printers of Sharp and other manufacturers which can be managed using SRDM are referred to as "devices" in this guide.
- To obtain device data in certain intervals, set a scheduled action. For more information, refer to "Setting scheduled actions" available in the Operation Guide.

■ Warranty

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SYSTEM REQUIREMENTS

■ Supported operating systems

Supported Operating Systems			
Type ^{*1}	Service Pack (SP)	32-Bit Version	64-Bit Version (x64)
Windows Server 2008	SP2	○	×
Windows Server 2008 R2	SP1	—	○
Windows Server 2012	—	—	○
Windows Server 2012 R2	—	—	○

*1 SRDM does not support the FAT file system and Hyper-V function.


■ Supported browsers

Supported Browsers	Google Chrome 32 & 64 bit / Internet Explorer 9.0 ^{*1} / 10.0 ^{*1} / 11.0 ^{*1}
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*1 According to the Microsoft browser-support policy changes, please use the most current version of Internet Explorer available for each Windows OS.

■ Supported VMware products

Supported Combination between VMware Products and Operating Systems	
VMware Products	OS Type
VMware ESXi 5.5	Windows Server 2008
	Windows Server 2008 R2
	Windows Server 2012
	Windows Server 2012 R2



- The virtual machine, in which SRDM is being installed, should be connected to a network as a network bridge.
- In addition, please make sure that the virtual machine is connected via TCP/IP network from other computer.
- Sharp Corporation does not provide support for any issues in case they are only observed in the virtual environment and cannot be reproduced in the actual environment.

■ Other requirements

Supported Operating System Languages^{*1}	English / Japanese / French / German / Italian / Spanish / Dutch / Swedish / Norwegian / Danish
Recommended hardware requirements^{*2}	CPU: Core2 Duo 2.0 GHz or higher Memory: 4GB or more HDD: 80GB or more ^{*3 *4}

*1 SRDM user interface supports only English and Japanese languages.

*2 The recommended hardware requirements are provided with the assumption that the number of devices being managed is 500 or fewer. The server must have sufficient resources for SRDM to run in a stable behavior. The hardware requirements will depend on the usage conditions.

If managing more than 500 devices, more system resources will be necessary.

*3 To ensure enough hard disk space, It is recommended to free the hard disk space, if the status update operation is done once in a day for a period of six months.

*4 If the amount of free hard disk space is less than 12GB, then a warning message will be displayed when you log into SRDM to notify you that the amount of free space is low. When the free space drops below 6GB, the SRDM service will be stopped.

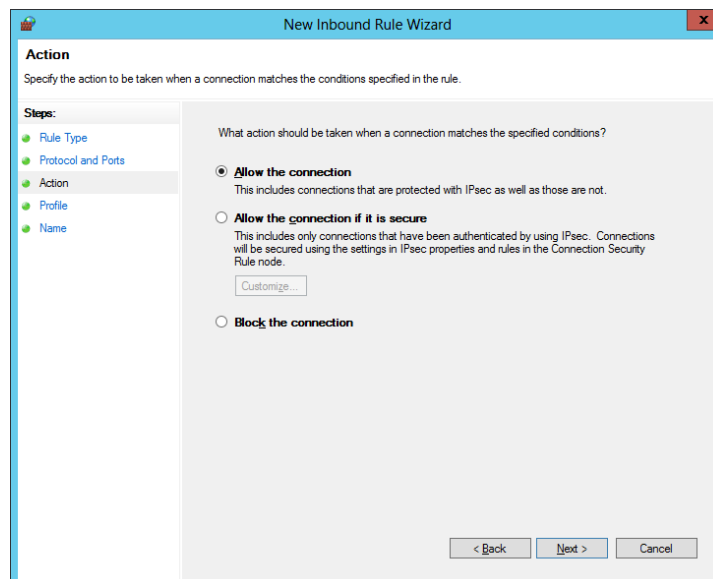
SRDM INSTALLATION

Windows Firewall settings

Windows Firewall settings of the computer on which SRDM is installed, must be updated, so that the SRDM can communicate with other devices and computers which all are connected via TCP/IP network.

To open the related ports and the protocol, you can edit the windows firewall settings by following the procedure below.

1. **Start “MMC” (Microsoft Management Console).**
 - **If using Windows 2008 / 2008 R2**
Click the Windows [Start] button and enter “MMC” in “Start Search”, then press enter key.
 - **If using Windows 2012 / 2012 R2**
On the desktop, move the mouse pointer to the top right corner of the screen. Click [Search], and enter “MMC.” Then press the ENTER key. If the “User Account Control” screen appears, click the [Yes] (or [Continue]) button.
2. **Click [File] - [Add/Remove Snap-in...], select [Windows Firewall with Advanced Security], and click [Add] button.**
A computer selection screen will be displayed. Select [Local Computer] and click [Finish] button.
3. **Click the [OK] button.**
4. **Add a new rule.**
 - (1) **Expand [Windows Firewall with Advanced Security on Local Computer] from the menu on the left side of the screen.**
 - (2) **Click [Inbound Rules] so that it is selected, and then right-click [Inbound Rules] and select [New Rule...].**
 - (3) **Follow the on-screen instructions to add the new rule.**



Select the settings for the new rule as indicated below. Use the default settings for all other items.

- For the [Rule Type], select [Port], and click [Next] button
- For [Protocol and Ports], select [TCP]. Select [Specific local ports] and enter the "8085, 8086"
- After selecting connection settings, and rule application option, enter any name in [Name] to complete the settings.

Note: Port numbers specified in the inbound rules must be same as the port numbers specified in the SRDM Service Control Panel.

5. Select [Exit] from the [File] menu.

A confirmation screen will appear. Click the [Yes] button and then click the [Save] button to save the console.

Installing SRDM

You need to have administrator privileges to install SRDM on the server machine.

■ Installation using the installer

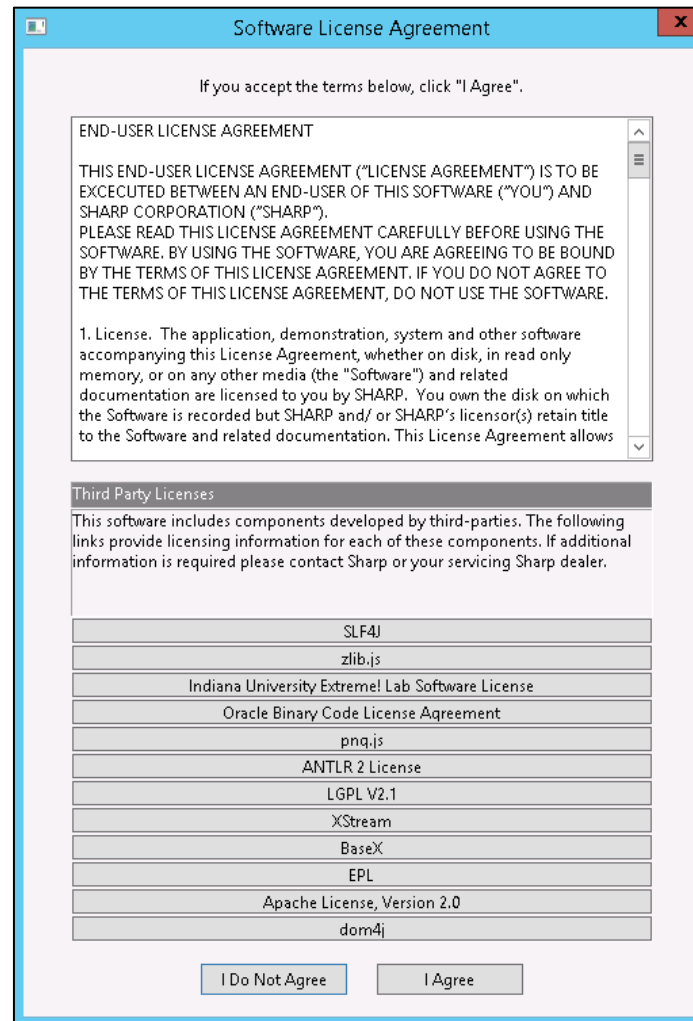
1. Double click the SRDM executable file [SRDM2.x.x.xxx.xx.exe] to run the installer.

- Ensure you have the administrator rights
- A user account control dialog box will be displayed. After reviewing its contents, click the [Next >] button to continue.



2. Install the software by following the on-screen instructions.

3. Once the setup wizard is finished, a dialog box will be displayed and informing you that installation is completed. Click the [Finish] button to launch the SRDM Service Control Panel. Once the [Finish] button is clicked, the 'END-USER LICENSE AGREEMENT' will be displayed as follows.



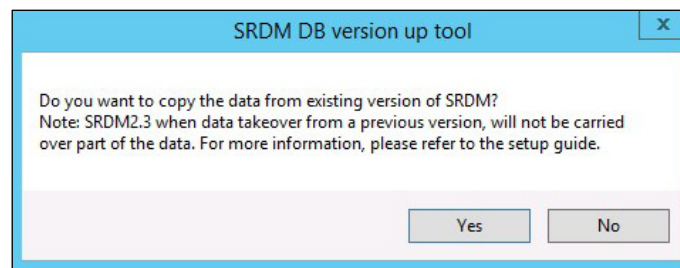
After reviewing its terms, click the [I Agree] button to accept them.

If you click the [I Do Not Agree] button, the 'END USER LICENSE AGREEMENT' screen will be closed and SRDM application launch will be cancelled.

This 'END USER LICENSE AGREEMENT' screen will be displayed until the user agrees the license terms.

If you click the [I Agree] button, the license terms will be accepted and SRDM will be launched.

After agreeing to the license agreement, a dialog box will be displayed with a message asking whether you wish to launch the DB update tool.



Click [No] if you are not using an older version of SRDM. Click [Yes] if you want to use data from an older version of SRDM. Refer to "[UPDATING SRDM](#)" for more information on how to continue using data from an older version of SRDM.



- During the installation of this software, the following warning may be displayed: "Windows protected your PC. Windows Smart Screen prevented an unrecognized app from starting. Running this app might put your PC at risk." If this warning is displayed, click [Details] and then [Run] to continue with the installation.
- You can migrate existing data which has been created for features such as scheduling (however, only or basic operations, advanced features and file distribution; scheduling operations relating to device discovery and information update will need to be reset), discovery conditions, registered device information, device logs and operation logs. For details, refer to "[SRDM DB version up tool](#)".
- You can only migrate existing data when updating from SRDM 2.3.4 to SRDM 2.4.1. If you are using a version which is older than SRDM 2.3.4 and you need to continue using existing data, first update the version to SRDM 2.3.4, and then update to SRDM 2.4.1.

Deploying SRDM

Before using SRDM, the settings on the SRDM Service Control Panel must be configured. SRDM can be installed in either [Portable Deployment Mode] or [Permanent Deployment Mode].

- In [Portable Deployment Mode], SRDM will be installed as an application but not as a windows service. The following will happen when SRDM is launched in [Portable Deployment Mode].

When the SRDM server is stopped, SRDM is terminated; hence it is necessary to deploy SRDM again when the server is restarted.

This mode is suitable for users who frequently stop the SRDM service.

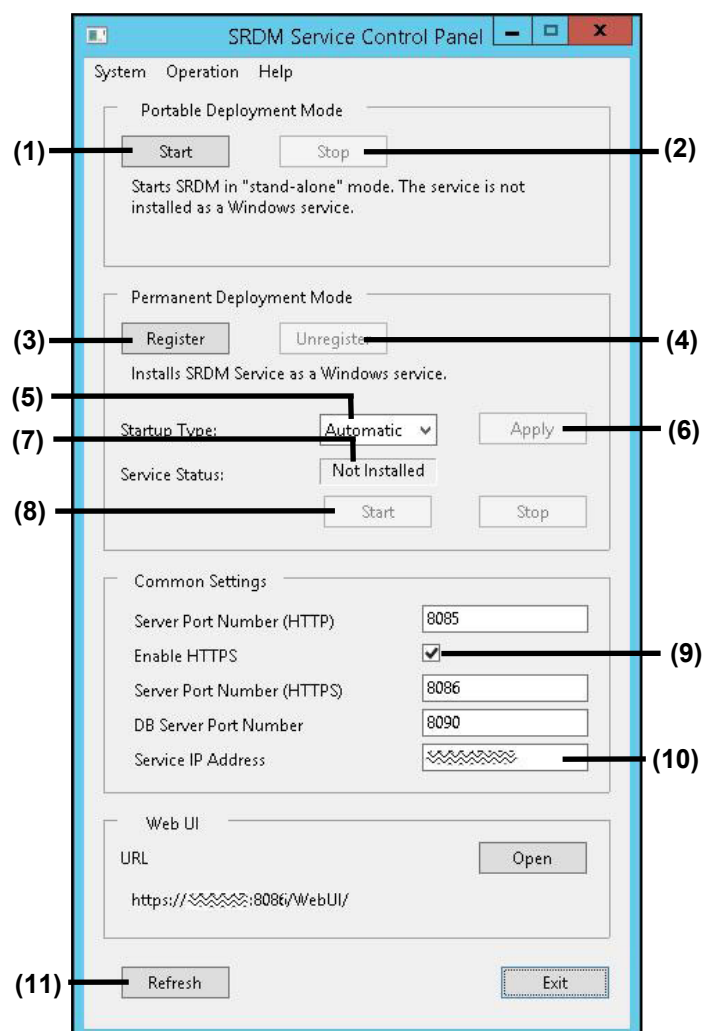
Select this installation type when SRDM is present on a portable HDD or a USB flash drive, where Windows OS is not installed.

- In [Permanent Deployment Mode], SRDM can be installed as a Windows service. It is suitable for users who want SRDM to be launched automatically when the server is started.

Deployment in “Portable Deployment Mode”

1. Select the check box (9) if HTTPS communication is required.
2. Enter the server IP address in which SRDM is installed in field (10).
3. Click the Start (1) button.

Once the process of executing the SRDM service has been started based on the settings provided, the Start (1) button will be disabled, and the Stop (2) button will be enabled.



Deployment in “Permanent Deployment Mode”

1. **Select the check box (9) if HTTPS communication is required.**
2. **Enter the server IP address in which SRDM is installed in field (10).**
3. **Click the Register (3) button.**

The Register (3) button will be disabled and the Unregister (4) button will be enabled. This happens when the registration of SRDM as a Windows service is completed.

4. **Select the startup type (Automatic, Manual or Disabled) in the combo box (5), and then click the Apply (6) button.**
5. **Click Start (8) button to start SRDM service.**
SRDM service preparation will be completed once the “Service Status” (7) changes to [Start]



- If the Service Status is not reflected properly on the SRDM Service Control Panel, click Refresh (11) button to refresh the status.

OPENING SRDM

■ Starting on the computer (server) on which SRDM is installed

Open SRDM from “SRDM Service Control Panel”

Click the “Open” button to start SRDM. The web browser which is set as the default browser will be launched and SRDM will be displayed.

Open SRDM from a browser

Enter the following address in the address bar on a web browser.

- **HTTP connection (Default settings):**
http://<<Service IP address>>:8085/WebUI/
- **HTTPS connection (Default settings):**
https://<<Service IP address>>:8086/WebUI/

In place of "<<Service IP address>>", enter the IP address which has been set as the service IP address for the common settings in the SRDM Control Panel or the host name.

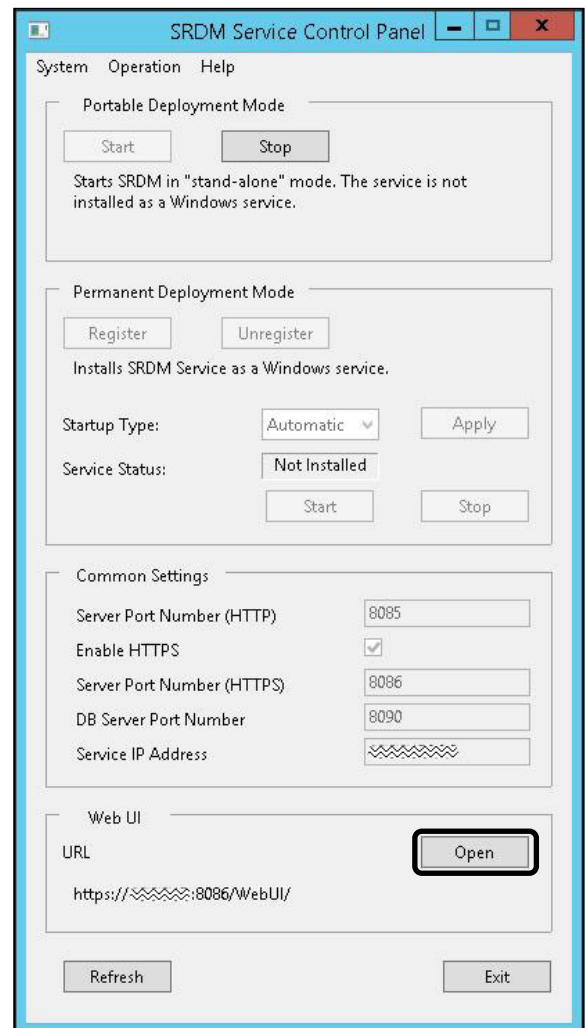
■ Open SRDM from a computer at a remote location

SRDM can be accessed using a web browser from any computer that is connected by a TCP/IP network to the computer on which SRDM is installed.

Launch the web browser in the computer and enter the URL for SRDM in the address bar.

- **HTTP connection (Default settings):**
http://xxxxxx:8085/WebUI/
- **HTTPS connection (Default settings):**
https://xxxxxx:8086/WebUI/

In “xxxxxx”, specify the IP address or host name of the computer on which SRDM is installed

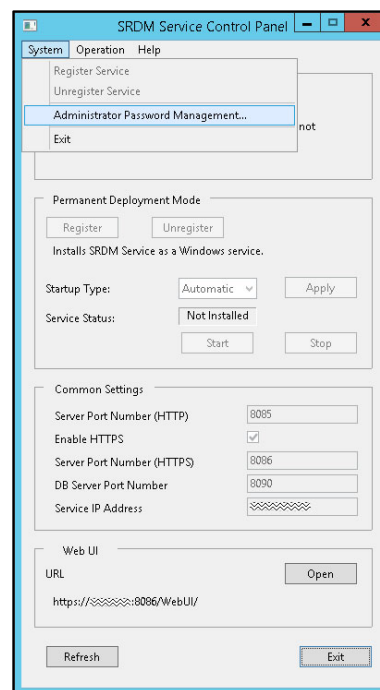
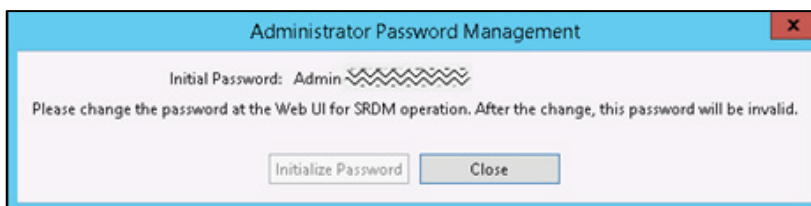



- Please make sure that JavaScript is enabled in your Web browser settings.
- Cookies must be enabled for the browser on a client computer to run properly. SRDM uses session variables and cookie files to store session data and user settings.

Logging into SRDM

1. Confirm the login ID and initial password.

- Select [Administrator Password Management] from the SRDM Service Control Panel [System] menu.
- You can check the initial password in the [Administrator Password Management] dialog box. It is recommended that you change the initial password after logging in for the first time.
- Regenerating the initial password.
You can generate a new initial password by clicking [Initialize Password]. You can use this option if you forgot the password.



 ● You need to stop SRDM before changing the password.
● Once the password is changed, this initial password does not work. The updated password will be displayed.

2. Enter User Name (1) and Password (2) in the login screen as shown below.

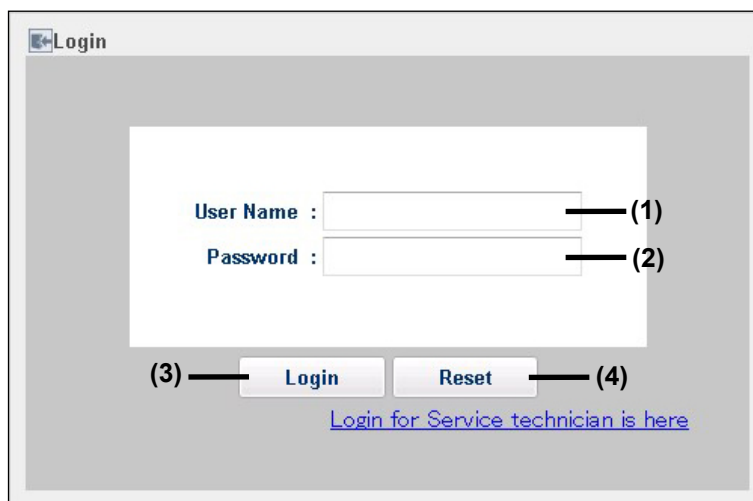
Default credentials are as follows:

User Name: admin

Password: (Administrator password generated in the previous step)

If you want to reset the entries, click the Reset (4) button.

3. Click the Login (3) button to log in.



The login page will be displayed in English when you log in for the first time.

- About a warning message and an error during logging in when disk space is low:

If the amount of free hard disk space is less than 12GB, then a warning message (*"Warning: SRDM server is running with low disk space. Please contact administrator or refer Server Setup Guide."*) will be displayed when you log into SRDM to notify you that the amount of free space is low. When the free space on the hard disk drops below 6GB, the SRDM service will be stopped with an error (*"Service is not available (E0046). Please contact administrator or refer to Server Setup Guide."*) and you will no longer be able to log in. If this happens, carry out the steps below to increase the amount of free space on the hard disk to 6GB or more.

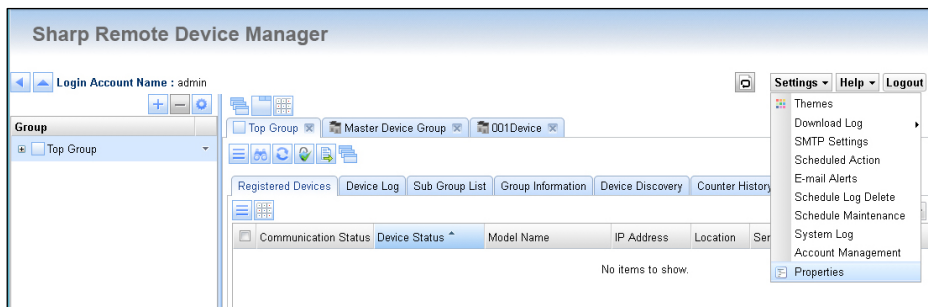


- Delete unneeded files from the hard disk.
- Optimize the database. (Refer to the "[DATABASE OPTIMIZATION](#)")
- Delete old SRDM log files. Old log files can be deleted automatically using the schedule log delete setting. The schedule log delete setting allows you to keep logs for a maximum of 12 months. In addition, you can set the shortest period for keeping logs to only the latest log entry. Even if you use the "Latest one log" setting, operation log and system log data will be kept for a minimum of one month, but only the latest log entry will be available for other logs. For more information about settings for scheduled log deletion, refer to "Basic window configuration" in the Operation Guide.

SETTING DISPLAY LANGUAGE AND TIME ZONE

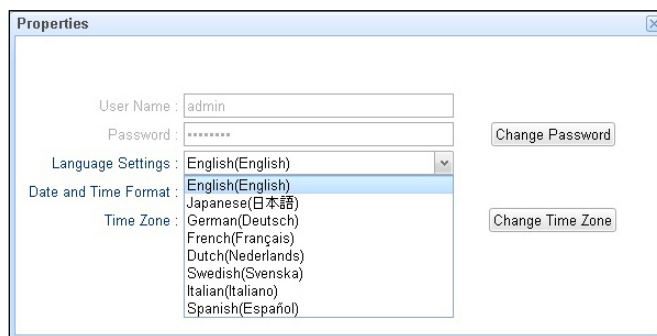
You can configure the SRDM UI display language and time zone according to the location where the software is being used. The display language and time zone settings can be configured for each login account. You can configure these settings by the following procedure.

1. Click [Settings] and select [Properties].

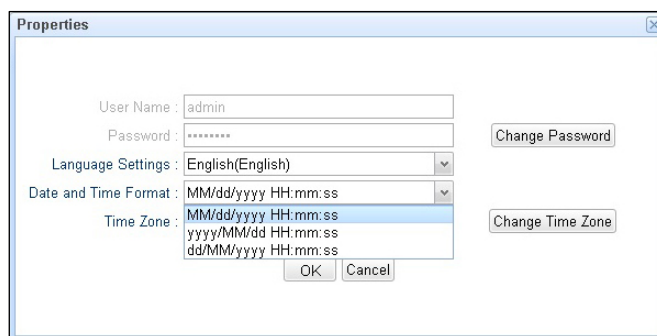


Open the [Settings] menu, and then select [Properties].

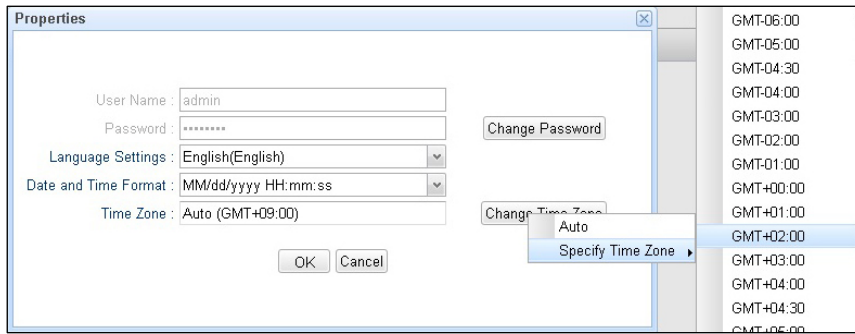
2. Select the display language from the [Language Setting] list.



3. Select the format for the date and time from the [Date and Time Format] list.



- Click the [Change Time Zone] button, and then either select the appropriate time zone from the [Specify Time Zone] list or select "Auto".



- Click the [OK] button to close the dialog box.



- If you select "Auto" as the time zone setting, the web browser time zone will be used in the SRDM UI. Furthermore, the time zone which is selected as the time zone setting in "Properties" will not be applied to the schedule settings.

BASIC SRDM OPERATIONS

The following section provides an overview of the basic tasks that must be performed in order to start using SRDM after installing it. The following information should be prepared before starting this process:

- List of MFPs and printers to be managed.
- List of administrators.
- E-mail account information used for e-mail notifications (when necessary).

Basic setup tasks

The first operations that must be performed in order to start managing devices after installing SRDM are discovering and registering the devices.

As part of installation, SRDM performs local broadcast discovery and automatically registers the discovered devices so that they can be managed.

To manage the devices which are not discovered as part of initial discovery, you can perform discovery and registration operations manually.



- SRDM also carries out local broadcast discovery and registers the discovered devices automatically when the service is started.

Searching for devices

You can discover network connected devices by the following procedures.

Search using the [Menu] button “☰”

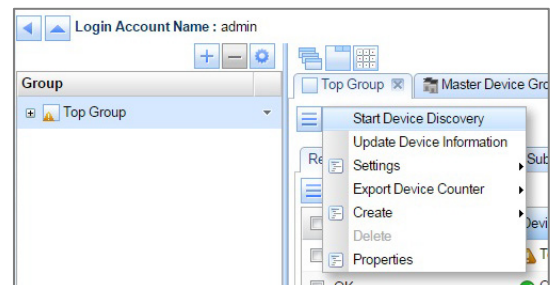
1. Click the [Menu] button “☰” in a group tab.
2. Click [Start Device Discovery].

Discovered devices will be listed in the [Device Discovery] tab.

Device discovery can also be performed by clicking the “🔍” button.

The “🔄” icon will be displayed and the “🔍” button will change to “🛑” while the device discovery is in progress. To stop the device discovery, click on “🛑” button. The default device discovery settings cover only local broadcast searches.

You can also discover the devices using the [Discover] button in the [Device Discovery] tab. For detailed information, refer to the Operation Guide.



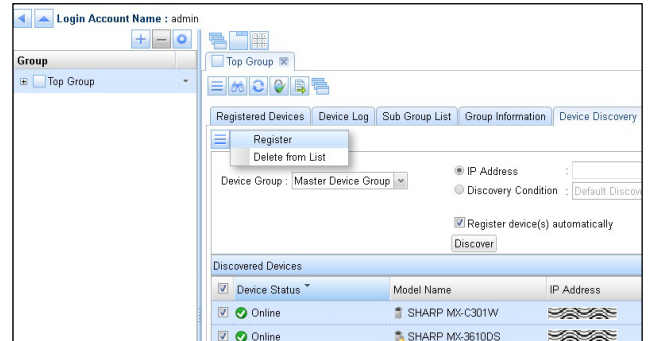
Registering devices in the device list

Devices which have been found during device discovery are listed in the “Device Discovery” tab. These devices must be registered in order to view and manage them.

You can register the discovered devices by the following procedure.

1. Select the devices you wish to register in “Device Discovery” tab.
2. Click the [Menu] button “☰” in the [Device Discovery] tab.
3. Click on [Register].

Registered devices will be displayed under “Registered Devices” tab and will not be displayed in “Device Discovery” tab.



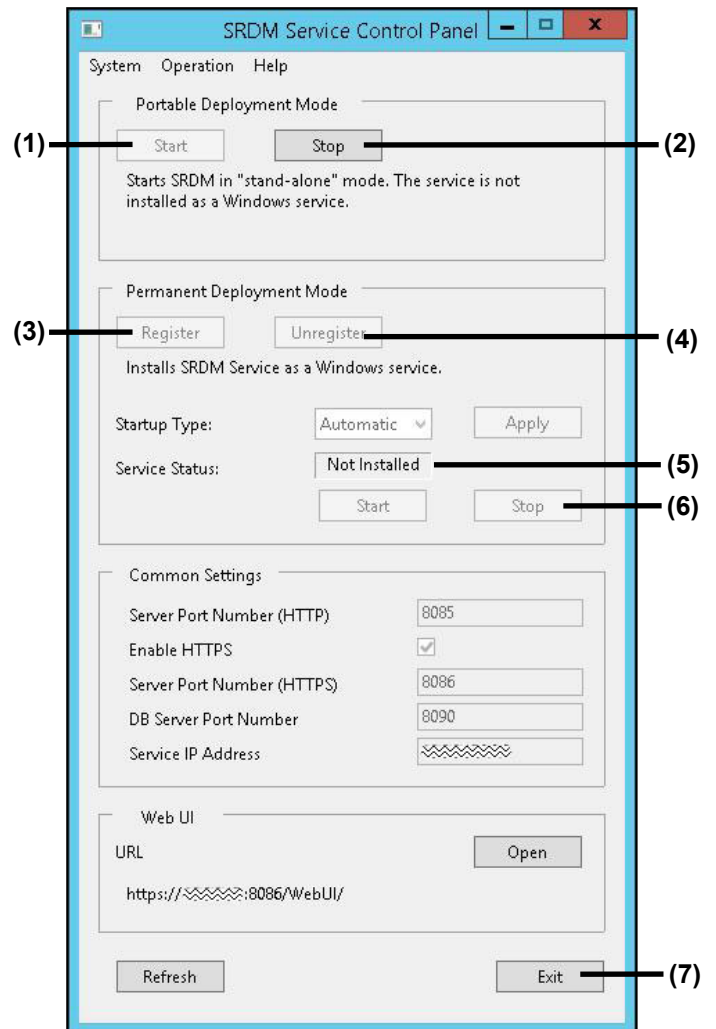
UNINSTALLING SRDM

■ Stopping “Portable Deployment Mode” service

1. **Click the Stop (2) button.**
The SRDM process will be stopped. When SRDM is stopped, the Stop (2) button will be disabled, and the Start (1) button will be enabled.
2. **Click the Exit (7) button to close the SRDM Service Control Panel.**
3. **Delete the folders.**
Delete all folders and files which were extracted while installing.

■ Stopping “Permanent Deployment Mode” service

1. **Click the Stop (6) button.**
The SRDM service will be stopped. When SRDM is stopped, the Service status (5) will change to “Stop”.
2. **Click the Unregister (4) button.**
The Unregister (4) button will be disabled and the Register (3) button will be enabled. After this, registration of SRDM as a Windows service will be canceled.
3. **Click the Exit (7) button to close the SRDM Service Control Panel.**
4. **Delete the folders.**
Delete all folders and files which were extracted while installing.



UPDATING SRDM

If you are updating from SRDM 2.3.4, you can migrate some data from the old version to the new version. Use the DB update tool to perform the update process. Usage of the DB update tool depends on the procedure followed for updating SRDM.

- **Stop the old SRDM service.**

For more information about how to stop the SRDM service, refer to “[UNINSTALLING SRDM](#).”

- **Install the software by following the instructions provided by the installer’s setup wizard.**

For more information about how to install the software, refer to “[Installation using the installer](#).”

- **The SRDM DB update tool will be launched automatically.**

For more information, refer to “[SRDM DB version up tool](#).”

SRDM DB version up tool

When updating from SRDM 2.3.4, you can inherit some data by using the SRDM DB version up tool. When the SRDM DB update tool is launched, a dialog box will be displayed asking whether you wish to migrate the old data. If you wish to continue using data from SRDM, click the [Yes] button.

Note the following when using the SRDM DB version up tool:



- Supported versions (pre-update) for upgrade: SRDM 2.3.4
- The copy of SRDM being updated must adhere to the required folder hierarchy.
- Both copies of SRDM (the version being updated and the new version) must be stopped.
- Run the DB update tool for the copy of SRDM in the folder where the tool is located.
- If any process fails the tool will not roll back the DB, hence it is recommended to back up the DB file before upgrade.
- You can only migrate existing data when updating from SRDM 2.3.4 to SRDM 2.4.1. If you are using a version which is older than SRDM 2.3.4 and you need to continue using existing data, first update the version to SRDM 2.3.4, and then update to SRDM 2.4.1.

Migrating data from SRDM 2.3.4

The following restrictions apply to migrating data when updating from SRDM 2.3.4 to SRDM 2.4.1.

Data item		Migrates to SRDM2.4.1	
Group/System information	User accounts *	No	Please create the accounts again.
	Device filters	No	Please configure the settings again.
	Toner level setting	No	
	Paper level setting	No	
	Status level setting	No	
	Display theme	No	
	Language setting	No	
	Time zone	No	
	Date and time format	No	
	Schedules	Yes	
	Basic operations	Yes	Please configure the settings again for scheduling device discovery and information updates.
	Advanced features	Yes	
	File distribution	Yes	
Discovery conditions	Yes		
E-mail alert settings	No	Please configure the settings again.	
Other	Yes		
Other (registered device information, device logs, operation logs, etc.)		Yes	

* User accounts which were added to an authority group in SRDM 2.3.4

Tool configuration and storage

This tool is included in the SRDM software package. The tool is stored in the following folders.

SRDM

|--Svr

 |--DBUtility

 |--Versionup . . . (1)

 |--DBVersionup.cmd . . . (2)

 |--DBVersionup.jar . . . (3)

 |--log . . . (4)

 |--Versionup_YYYYMMDD_hhmmss.log . . . (5)

(1): Storage folder of this tool.

(2): Tool activation file.

(3): Tool execution environment.

(4): Execution result log folder.

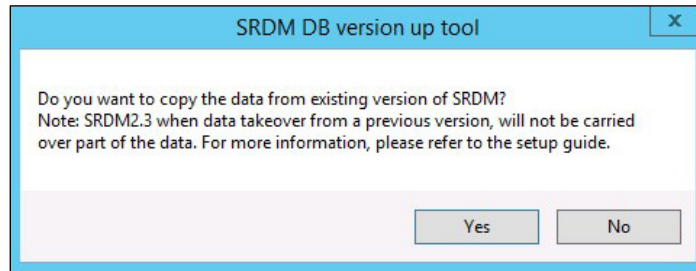
(5): Execution result log (Versionup_YYYYMMDD_hhmmss.log).

※(4), (5) are created automatically when the tool is executed.

※Execution result log file is based on the local time.

Execution procedure

When launching the tool manually, run [SRDM\Svr\DBUtility\Versionup\DBVersionup.cmd] which is available in the folder of SRDM which is being updated. Run it from the command prompt without specifying any arguments.

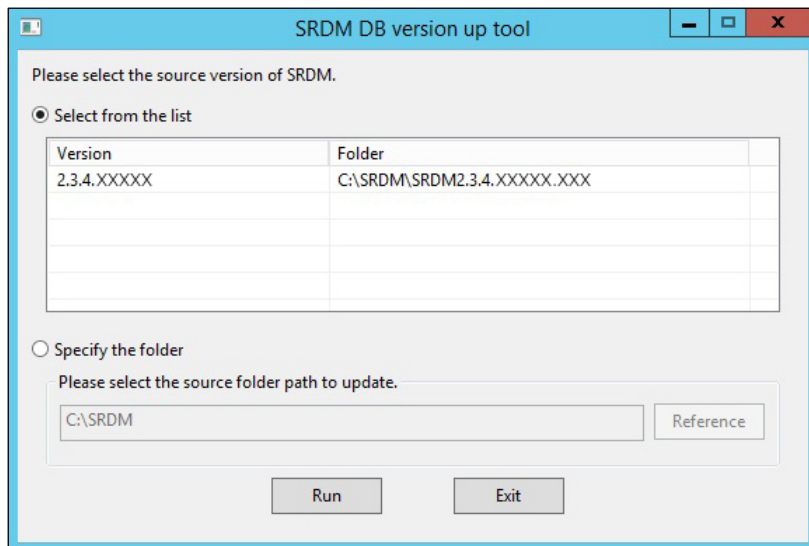


When you click the [Yes] button, the SRDM DB version up tool dialog box is launched.

You can update SRDM by selecting either the "Select from the list" or "Specify the folder" option displayed in the dialog box.

■ Select from the list

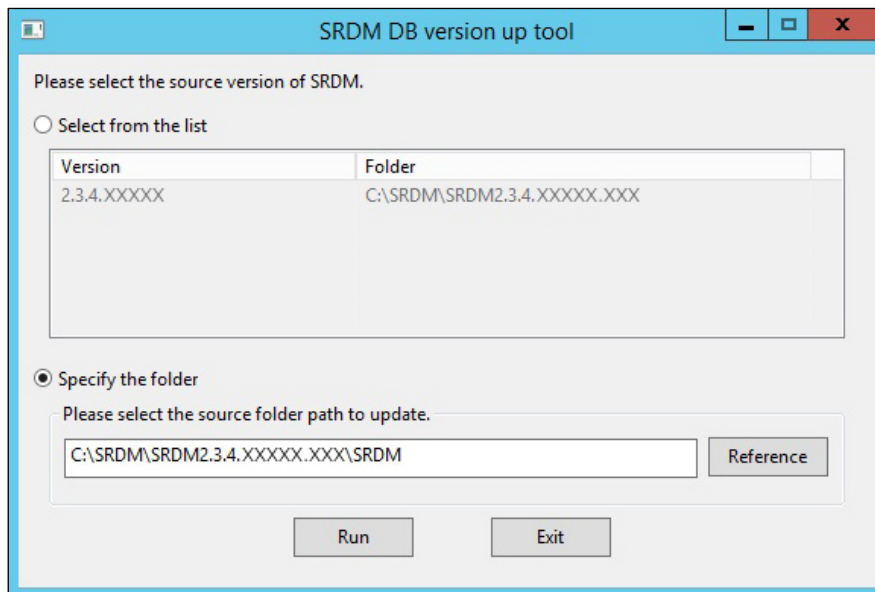
1. Select the version of SRDM which needs to be updated in the displayed dialog box as shown below.



2. Click the [Run] button.
3. A dialog box will be displayed informing you that the DB update is being processed.
4. A dialog box will be displayed asking you to confirm that the update is completed.

■ **Specify the folder**


1. You can click the [Reference] button to select the folder containing the copy of SRDM which needs to be updated.



2. After selecting the SRDM folder, Click [Run] button.
3. A dialog box will be displayed informing you that the DB update is being processed.
4. A dialog box will be displayed asking you to confirm that the update is completed.

If an error code is not displayed, it means that the update is successful. If the update fails, an error code will be displayed.

For error codes, refer to [“When an error occurs”](#).



- SRDM cannot be used while the database is being updated.
- Update process takes time normally. However, it is not recommended to stop the process during the update.
If update process is interrupted then refer to [“Restarting the interrupted tool execution”](#).

DB after the completion of tool execution

Once the update is completed, the DB for the new version of SRDM’s environment will be added separately from the data folder as a new “data_org” folder under “SRDM\Svr\basex”. The old “data_org” folder contains the DB before tool execution.

When an error occurs

When an error occurs during execution of the update, the error code below will be displayed.

Exxxx-y

xxxx is a 4 digit number.

y is either 1 or 2.

For output error codes, refer to [“Error code and resolution method”](#).

Error code and resolution method

The error codes which can be displayed during execution of an update and their resolution methods are described below.

Error code	Resolution method
E0001	<ul style="list-style-type: none"> Specify the path to the copy of SRDM being updated.
E0002	<ul style="list-style-type: none"> Check whether the input path is correct. Check whether the input path points to the old version of SRDM.
E0100	<ul style="list-style-type: none"> Stop the corresponding SRDM. When the corresponding SRDM is accessible even when it is stopped, there is a possibility that another application is running. Please identify and end the application.
E0101	<ul style="list-style-type: none"> Check whether the folder configuration of corresponding SRDM is correct. This error code is displayed when the "ControlPanelPreChecker-Settings.properties" file cannot be found in the location being updated.
E0102	<ul style="list-style-type: none"> You have not accepted the terms of the software licensing agreement for the new version of SRDM.
E0200	<ul style="list-style-type: none"> Check whether the folder configuration of corresponding SRDM is correct. This error code is displayed when the BaseX.jar file cannot be found in the same location as the updated copy of SRDM.
E0201	<ul style="list-style-type: none"> Check whether the folder configuration of corresponding SRDM is correct. This error code is displayed when the BaseX lib folder for either the copy of SRDM being updated or the updated file cannot be found.
E0300	<ul style="list-style-type: none"> Check whether the data folder is present in the relevant SRDM environment. This error code is displayed when the "BaseX.jar" data file cannot be found in the same location as the updated copy of SRDM.
E0301	<ul style="list-style-type: none"> Check that the data folder subdirectory for the relevant SRDM environment is not empty.
E0400	<ul style="list-style-type: none"> Check that the copy of SRDM which is being updated is a supported version. This error code is displayed when the version of the copy of SRDM being updated or the version of the newly updated copy of SRDM is not supported by the DB update tool.
E0500	<ul style="list-style-type: none"> Version up has already been implemented. Refer to "Restarting the interrupted tool execution" for restarting the tool execution.
E9999	<ul style="list-style-type: none"> System error. Refer to "When error cannot be resolved."

When error cannot be resolved



- Error codes E0100, E0101, E0200, E0201, E0300, E301, and E0400 are appended by "-1" if the error involved the copy of SRDM being updated or by "-2" if the error involved the newly updated copy of SRDM.

When an error persists even when it is resolved as mentioned in "[Error code and resolution method](#)", or when E9999 occurs, the log file ("[Tool configuration and storage](#)"(4)) is necessary for investigation. In addition, the DB may be required depending on the investigation result.

Restarting the interrupted tool execution

When the tool execution process is interrupted due to reasons such as PC power failure, or when the tool is to be re-executed, check that the "data_org" folder described in "[Tool configuration and storage](#)" is present. If the folder is present, then renaming the data folder to any name (the folder may also be deleted), and renaming the "data_org" folder to "data", will return SRDM to the state prior to tool execution.

■ Starting the new version

Refer to "[OPENING SRDM](#)" for the method of starting SRDM.

■ Deletion of old version

If no longer needed, delete the files belonging to the old version.

BACKING UP DATABASES

Backing up Databases

1. Stop SRDM service

- For details on stopping SRDM, refer to "[UNINSTALLING SRDM](#)".

2. Copy the following folders and files to backup media. These folders and files are in the folder in which SRDM is installed.

No.	Folder name / File name
1	Svr\basex\data
2	Svr\tomcat\webapps\deviceImage
3	Svr\tomcat\srdmData
4	Svr\ControlPanel_settings
5	Svr\tomcat\webapps\SrdmCloudScheduleService\WEB-INF\classes\processing-system-to-remove-config.properties

Restoring Databases

1. Stop SRDM service

- For details on stopping SRDM, refer to "[UNINSTALLING SRDM](#)".

2. Restore the backed up data to the following folders in which SRDM is installed.

No.	Folder name / File name
1	Svr\basex\data
2	Svr\tomcat\webapps\deviceImage
3	Svr\tomcat\srdmData
4	Svr\ControlPanel_settings
5	Svr\tomcat\webapps\SrdmCloudScheduleService\WEB-INF\classes\processing-system-to-remove-config.properties



- In case of restore, the SRDM version of the restore destination must be the same as the backup source.

DATABASE OPTIMIZATION

Based on the usage, SRDM database file size will be increased. This may affect performance of SRDM (for instance, loading of the SRDM UI page will take time).

Even if the logs are deleted, the database file size still remains the same.

Performance can be improved by optimizing the database.

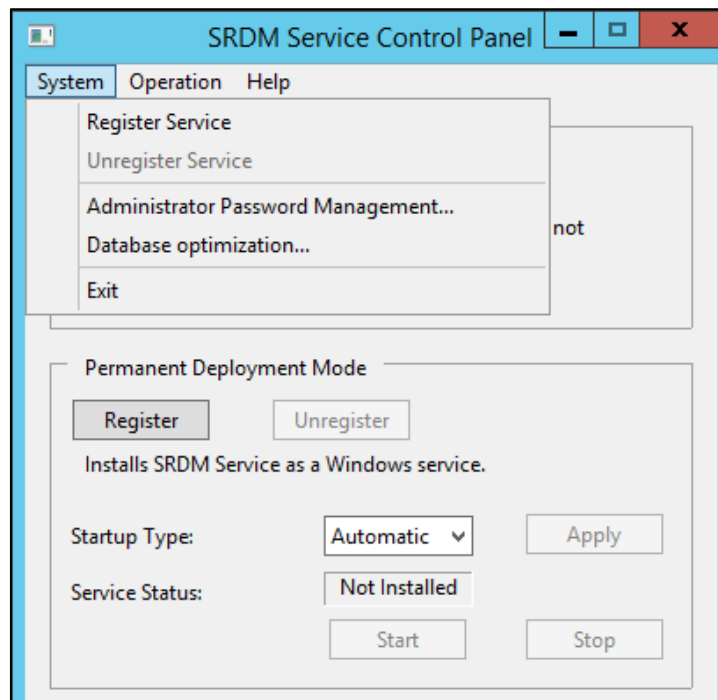


- Optimization process will not compress the data, but this will delete the unnecessary data and reduces the size of database file.
- If free space of hard disk becomes less than 6 GB, SRDM service will stop and user will not be able to Login. If there is still not enough free space after the database has been optimized, you will need to increase the free space on the hard disk to more than 6 GB by carrying out the following steps
 - Delete old logs within SRDM (Refer to the Operation Guide)
 - Delete unnecessary files in hard disk.

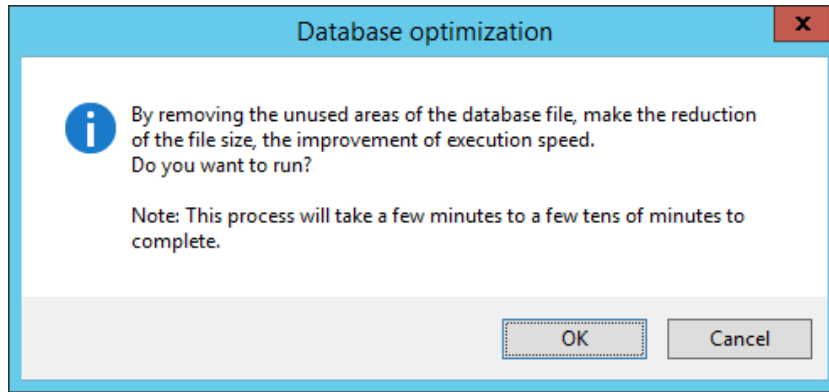
You can perform database optimization by the following steps.

1. Launch the SRDM Service Control Panel.

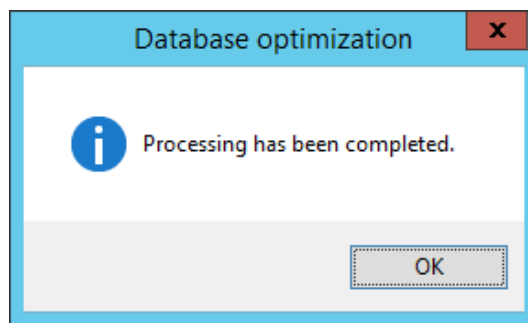
Stop the SRDM service if it is running. In the case of Permanent Deployment mode, Stop and Unregister the SRDM service.




2. Select [System] → [Database optimization...] and click [OK] in the following dialog box.



3. After the database optimization process is completed, the following dialog box will be displayed. Click the [OK] button.



4. Launch the SRDM service.

 ● During optimization, if it is forcibly interrupted due to unexpected power failure etc., files will not be deleted. In this case, execute this operation again. The files will be deleted when this operation is completed successfully.

● In addition to the manual procedure described above, database optimization can be carried out at regular intervals automatically by setting a schedule. For details, refer to the Operation Guide.

Before starting the database optimization, a backup of the database files will be created in the following location.

Database Backup Folder: Svr/basex/data.bak

After database optimization, a database folder will be created in the following location.

Database Folder: Svr/basex/data

To revert to the old database files, perform the following steps:

1. Stop the SRDM service, if it is running.
In the case of Permanent Deployment mode, Stop and Unregister the SRDM service.
2. Delete the database folder (Svr/basex/data) which was created after optimization.
3. Rename the database folder from "data.bak" to "data".
4. Re-launch the SRDM service.

TROUBLESHOOTING

Problem	Cause and solution
SRDM server cannot be started	Check whether the TCP port number is not being used by any other application.
SRDM cannot be accessed from a PC other than the one on which SRDM is running	If a personal firewall is enabled, make sure that the TCP port for SRDM access is set to "Enabled".
"Service is not available" is displayed in login screen and user cannot login	There is a possibility that there is insufficient free space in the hard disk . Refer to " DATABASE OPTIMIZATION " to increase the hard disk free space, and then re-launch SRDM.
Response takes long time (Displaying page takes time)	There is a possibility that the database file size is too large. Refer to " DATABASE OPTIMIZATION " to decrease the database file size, and then re-launch SRDM.
After making an error logging into the same account several times, the message "Login has failed." is displayed and login is not possible even when the correct account information is entered.	If you make an error logging into the same account five times in a row, the account will be temporarily locked, and logging into that account will not be possible for 30 minutes. In such cases, wait 30 minutes or more, and then try logging into the account using the correct details. When the account is locked, it will still be possible for a user with administrator privileges to log into SRDM and cancel the lock form the account management window. For details, refer to the Operation Guide.

APPENDIX:

Procedure for configuring SSL Certificates with SRDM

Overview

SRDM contains an SSL self-signed certificate. You can register your own SSL certificate with SRDM by following the procedure below:

1. **Delete the self-signed certificate.**
2. **Create a public and private key pair.**
3. **Have a certificate authority sign the public key (create a server certificate).**
4. **Embed the server certificate into SRDM.**

Preparing for the procedure

This description assumes the environment described below. Replace parameters as necessary to reflect your own environment.

Common name (SRDM server hostname)	your.server.com
Directory containing SRDM	c:\SRDM\SRDM2.4.x
Root certificate alias name	root
Intermediate CA certificate alias name	cacert
Server certificate filename	server.crt
Root certificate filename	root.cer
Intermediate CA certificate filename	cacert.cer
Keystore file password	changeit

Perform the steps described below on the server running SRDM. Make sure that the SRDM distribution files have been copied to c:\SRDM\SRDM2.4.x. and SRDM is not running. If it is running, stop the SRDM service. The SRDM private key and certificate are stored in the keystore file. The keystore file can be found at the following location:

```
c:\SRDM\SRDM2.4.x\SRDM\Svr\tomcat\conf\.keystore
```

In the default configuration, the self-signed certificate is stored in the keystore file. If you use SSL to access SRDM in this state, most browsers will display a warning. The private key cannot be regenerated once it has been created. Back up the keystore file that contains the private key so that you do not lose it.

The remaining steps are performed by entering commands in a command prompt. Open a command prompt and set the execution path.

```
set PATH=c:\SRDM\SRDM2.4.x\SRDM\Svr\tomcat\jre\bin;%PATH%
```

Move to the work directory.

```
pushd "c:\SRDM\SRDM2.4.x\SRDM\Svr\tomcat\conf"
```

Deleting the certificate

In the default configuration, the self-signed certificate is stored in the keystore file. Before creating the public and private key pair, delete this self-signed certificate.

```
keytool -delete -alias tomcat -keystore .keystore -storepass changeit
```

Creating a public and private key pair

The key pair will be stored in the keystore file in the SRDM directory. Run the following command on the server on which SRDM is installed:

```
keytool -genkeypair -alias tomcat -keyalg RSA -keysize 2048 -
keystore .keystore -storepass changeit -dname "CN=your.server.com,
O=COMPANY, L=CITY, ST=STATE, C=COUNTRY" -validity 365 -keypass changeit
```

Replace “your.server.com”, “COMPANY”, “CITY”, “STATE”, “COUNTRY”, and “-validity365” with values that are appropriate to your environment. This command will generate a single private key in the keystore file. This keystore file is used to register the certificate. It is recommended to back up the keystore file that contains the private key.

Having a certificate authority sign the public key (creating the server certificate)

Run the following command on the server on which SRDM is installed to generate a certificate request file:

```
keytool -certreq -alias tomcat -file server.csr -keystore .keystore -
storepass changeit
```

Submit the server.csr file that is created by the command to the certificate authority and obtain a server certificate. You may need to obtain a root certificate and intermediate CA certificate from the certificate authority.

Embedding the server certificate into SRDM

Register the certificate with the server on which SRDM is installed. The certificate will be stored in the keystore file in the SRDM directory. Obtain the following files from the certificate authority:

- Signed server certificate (server.crt)
- Root certificate (root.cer)

In addition, some certificate authorities may require you to obtain one or more intermediate certificates.

- Intermediate CA certificate (cacert.cer)

Register the root certificate (intermediate CA certificate) and the server certificate (in that order) to the keystore file.

■ Registering the root certificate

Register the root certificate:

```
keytool -importcert -trustcacerts -alias root -file root.cer -keypass
changeit -keystore .keystore -storepass changeit
```

If you are asked “Trust this certificate?” while executing the command, enter “yes.”

■ Registering the intermediate CA certificate(s)

If more than one intermediate CA certificates are required, repeat the below procedure the necessary number of times to register and register them.

If registering multiple intermediate CA certificates:

- Start with the intermediate CA certificate that is closest to the root certificate and register them in that order.
- Change the alias name (“cacert” is used below) and the intermediate CA certificate filename so that they do not duplicate other alias names.
- Replace the intermediate CA certificate filename (“cacert.cer” is used below) to reflect your environment.

```
keytool -importcert -trustcacerts -alias cacert -file cacert.cer -keypass  
changeit -keystore .keystore -storepass changeit
```

■ Registering the server certificate

Register the server certificate in the following procedure:

```
keytool -importcert -trustcacerts -alias tomcat -file server.crt -keypass  
changeit -keystore .keystore -storepass changeit
```

When specifying the alias name, use the same string as the alias name that you specified when creating the key pair in “Creating a public and private key pair” (in this example, “tomcat” is used).

Checking operation

Launch SRDM, access the following URL from a Web browser, and verify that no SSL warning is displayed.

Replace the server name and port number to reflect your environment.

```
https://your.server.com:8086/WebUI
```

Reference

The following commands can be used to check keystore file contents and delete certificates:

To check keystore file contents

```
keytool -list -keystore .keystore -storepass changeit
```

To delete a certificate in the keystore file

```
keytool -delete -alias <certificate alias name> -keystore .keystore -  
storepass changeit
```

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