Saflok System 6000 & LENS Server
Installation Procedure

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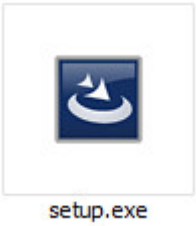
Purpose

This document will guide you through installing the Saflok System 6000 & LENS software on to the Saflok server. There are also instructions for installing & configuring a USB or TCP/IP encoder and an HH6 LPI device. These devices do not necessarily need to be connected to the server.

There are 3 components available to install: Program, PMS, and Messenger+LENS. The Program installation installs the core applications needed to run Saflok System 6000. The PMS installation installs the applications necessary for interfacing with a PMS company. The Messenger+LENS installations install the applications necessary for the server to communicate with the Saflok Messenger wireless lock system. The PMS and Messenger+LENS components only need to be installed if there is a PMS interface or Messenger+LENS system at the property respectively.

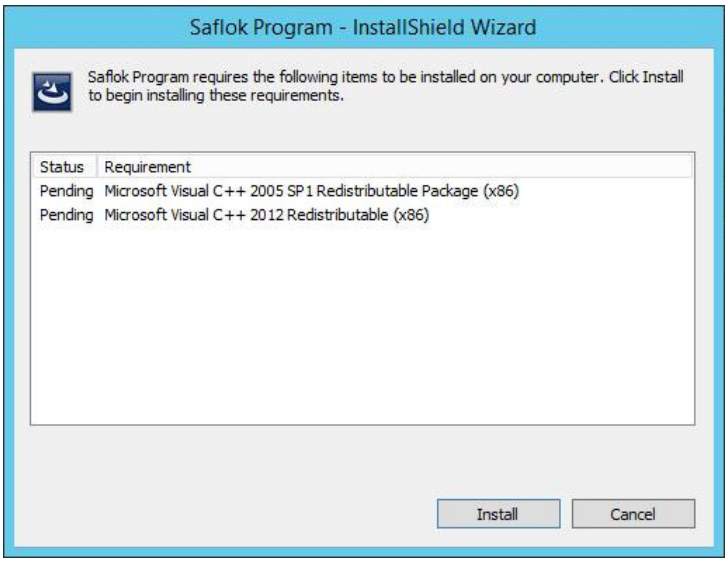
Program Installation

You can use the installation CD, or you may copy the installation CD to the Saflok server or any other computer on the network.

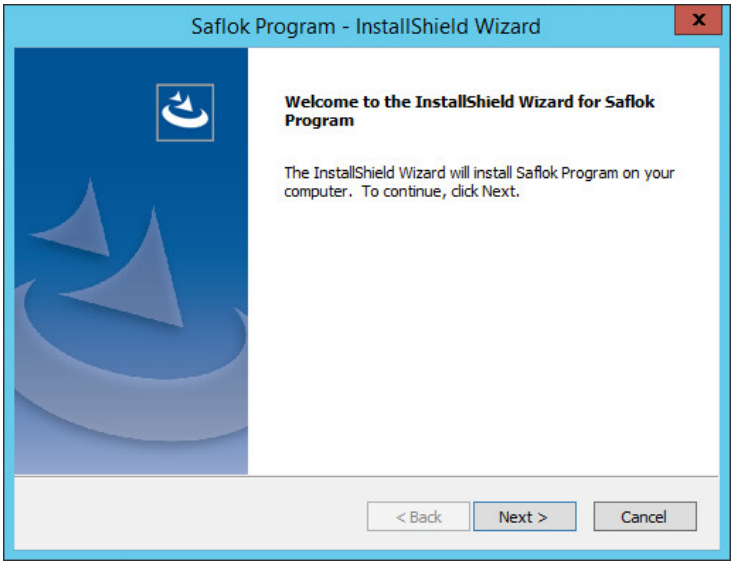


If you are using the CD, browse to the CD's drive letter after inserting it. Launch Setup.exe from the root of the CD folder. If installing over the network, browse to the folder where the software is located, and double-click setup.exe from the Program installation package, and the installation process will begin.

If Microsoft .NET 4.5 or required Visual C++ packages are not installed, the setup program will automatically prompt you to install them before the System 6000 Program Installation begins. Click the install button to continue.



Click next to begin.



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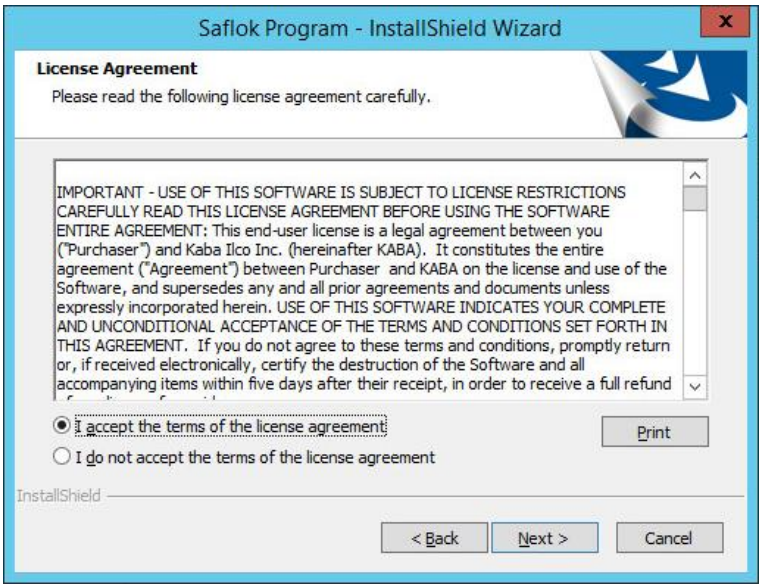
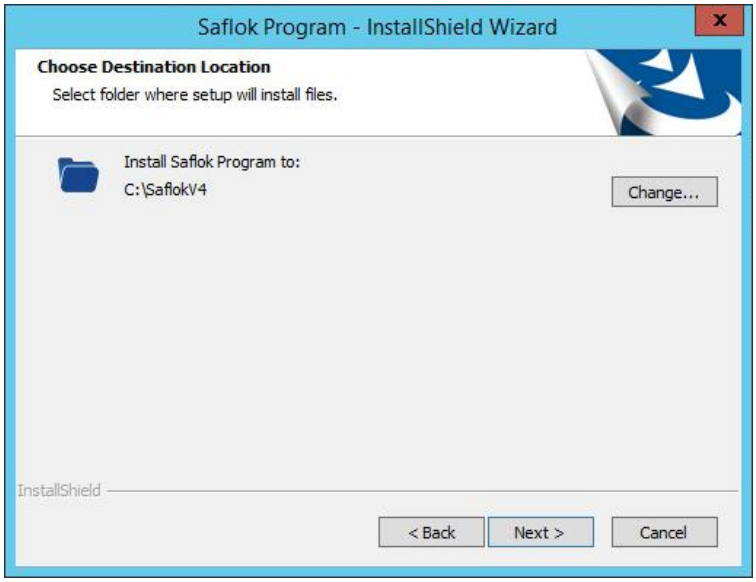
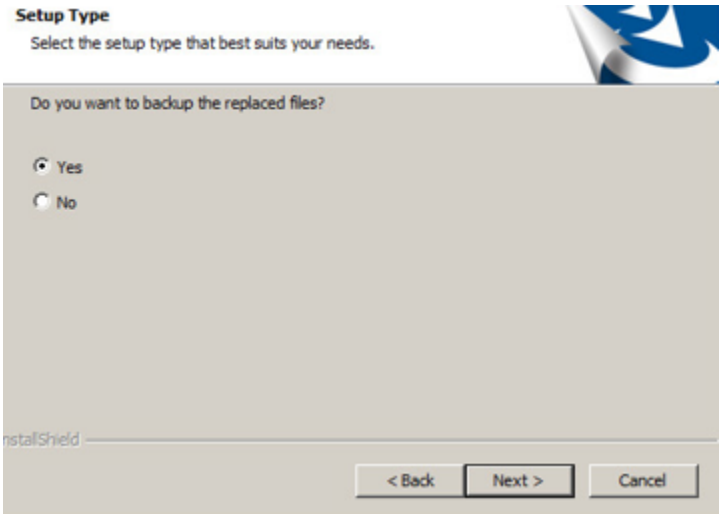
Accept the License Agreement, click Next to continue.



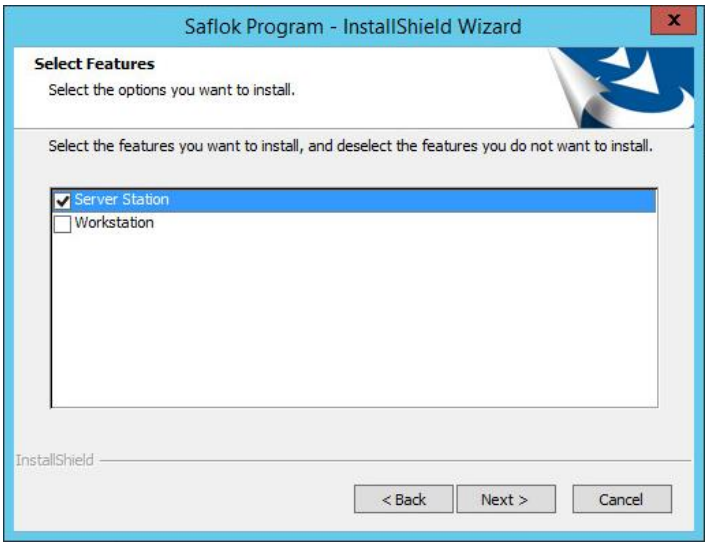
Select the destination directory. Click next to use the default. **Note: The default installation folder is still C:\SaflokV4.**



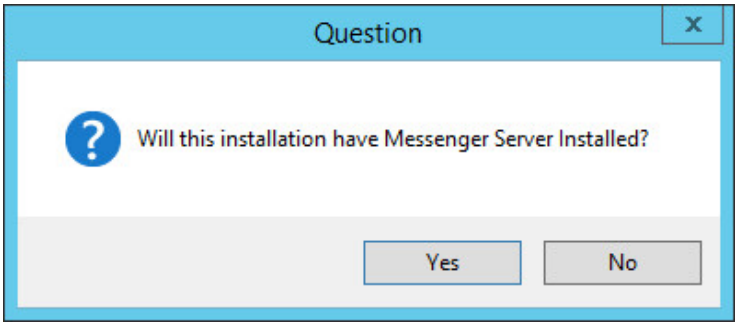
Select whether you would like to backup replaced files. This is only screen will only appear if there are existing files in the SaflokV4 folder, and not on an initial installation.



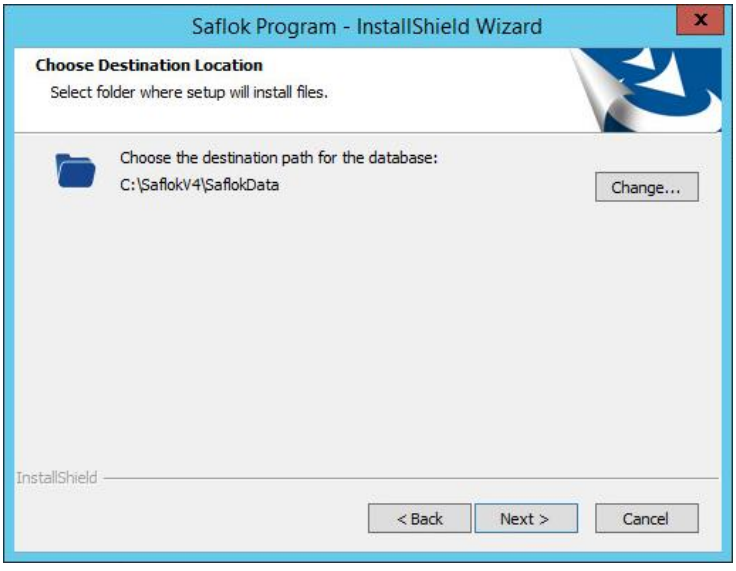
The Server Station installation feature is selected by default, click Next to continue.



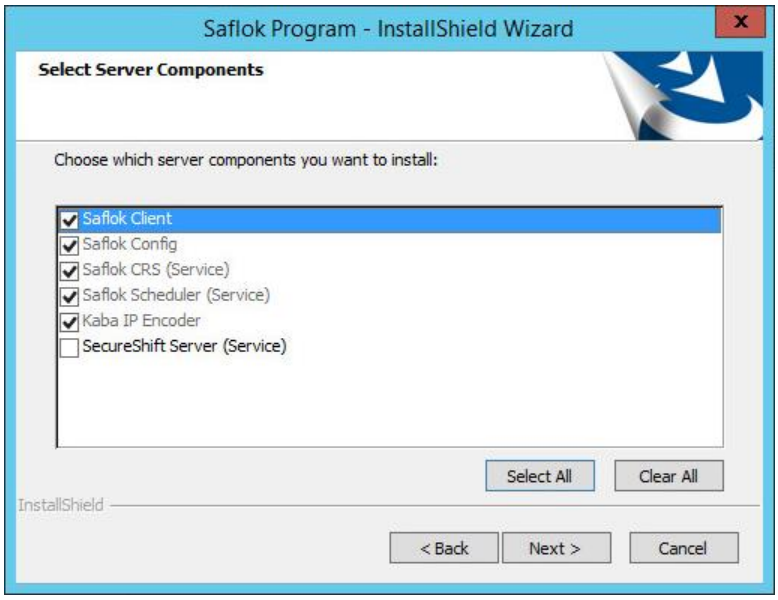
The setup program will prompt you if Messenger Server will be installed. Answer yes or no based on the type of locks that are at the site.



The default database folder is still C:\SaflokV4\SaflokData. If you would like to change the path, click the Browse button and select the folder to store the database files in. Click Next to continue



By default, the setup program will install Saflok Client, Config, CRS, Scheduler, and the Kaba IP Encoder service. These settings cannot be modified.

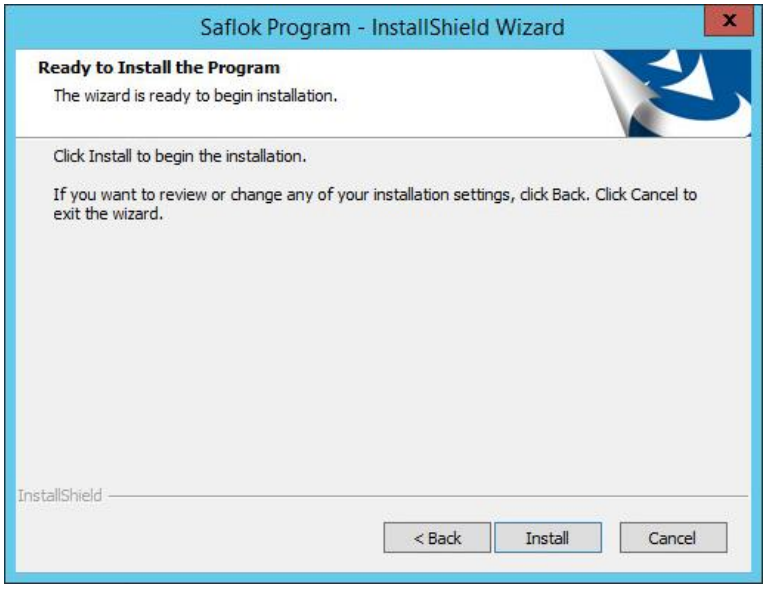


Saflok Client is the program you use to make keys. Saflok Config is for modifying the database, and is generally only used by Saflok technicians. The Saflok CRS service handles communications to LPIs and encoders. The Saflok Scheduler service performs a backup of the database at specified intervals. The Kaba IP Encoder service is required for Datacard RFID printers and possible future encoding devices.

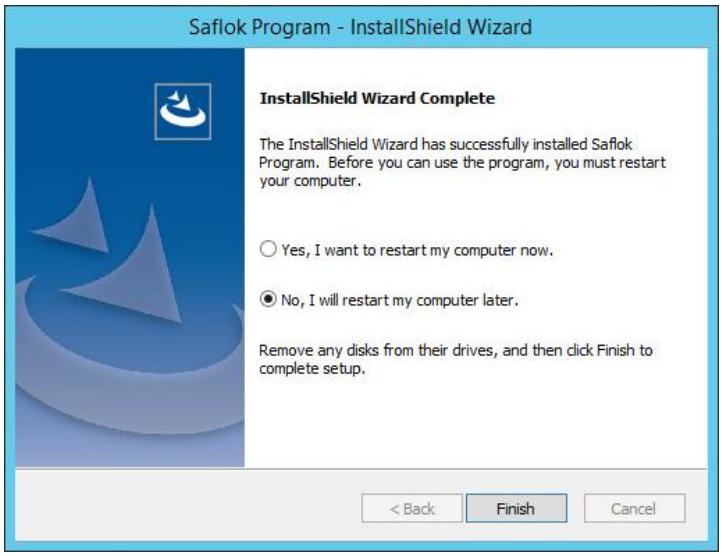
Saflok Secure Shift Server handles the communication from a Legacy Saflok Secure Shift (not SSA) device to the Saflok server. This component is not needed if there will be a TCP/IP interface using IRS (rare).

All services will be installed using the Local System Windows account. You can manually change the account the service uses in the Windows Services dialog if necessary (e.g. for having Scheduler back up to a network location).

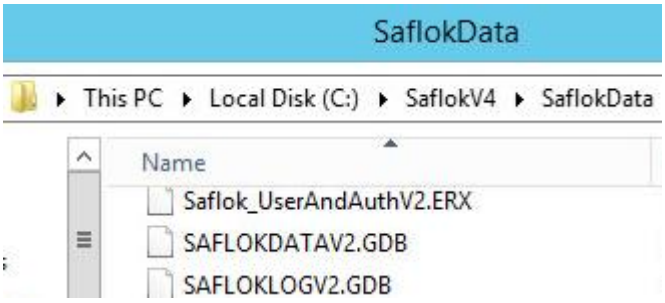
Click Install to begin the installation.



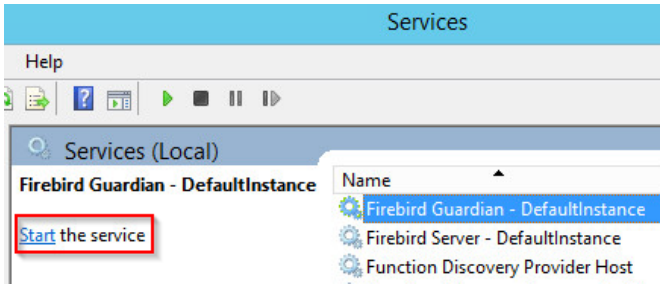
Once the installation is completed, the installer will prompt you to reboot. We don't need to reboot at this time – select the No, I will restart my computer later option, and click Finish.



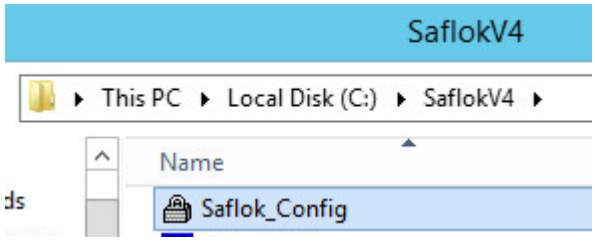
Copy SaflokdataV2.gdb and Safloklogv2.gdb to the SaflokData folder.



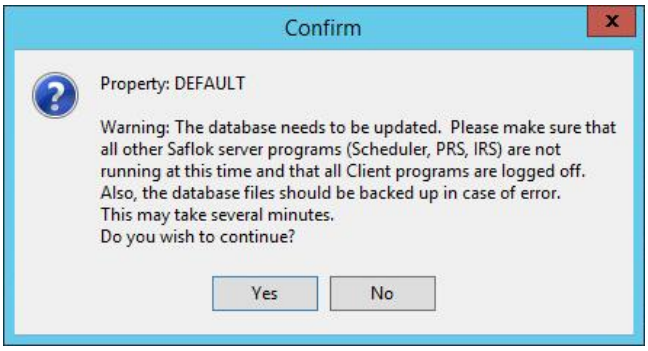
Open the Windows Services dialog, and start the Firebird Guardian Service.



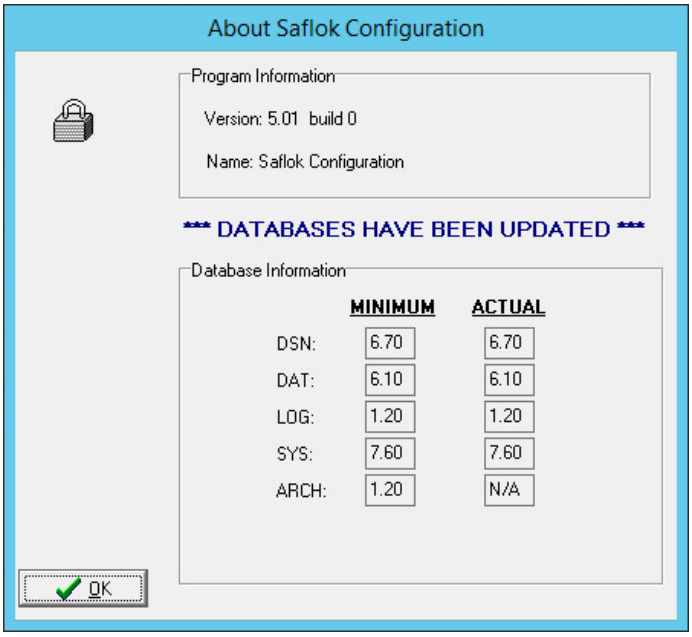
Launch the Saflok Config program from C:\SaflokV4.



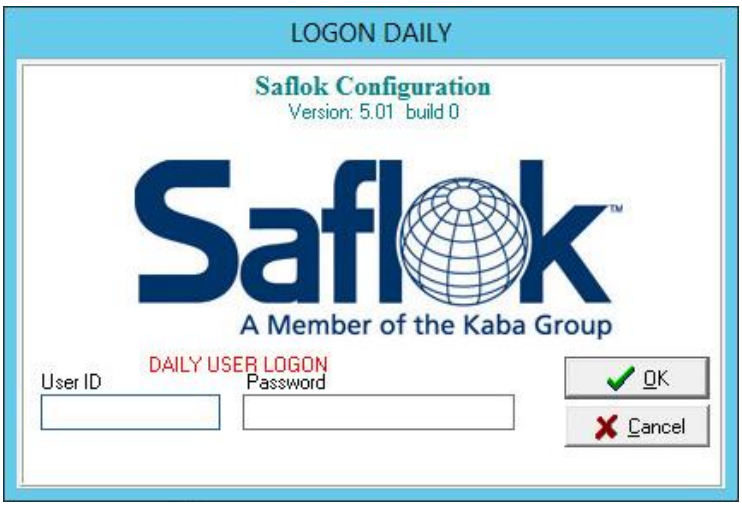
If the database needs to be updated, you will see a window like this. Click Yes to continue.



Click OK once the database is complete.



If the database does not need to be updated, Saflok Config will immediately display a Logon screen. If the database did need to be updated, the Logon screen will be displayed after the update. Click Cancel to close Config.



The Program installation is now complete.

If you are installing *only* the Program component, reboot the server now. If you are installing the PMS or Messenger components, you should reboot the server after installing those components.

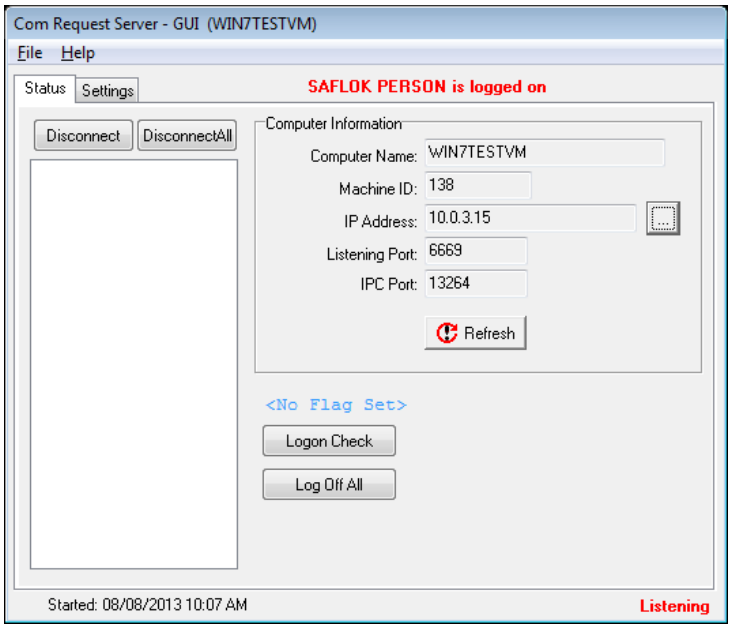
After rebooting, follow the instructions on the following pages to configure the CRS, Scheduler and Service Launcher.

CRS Configuration

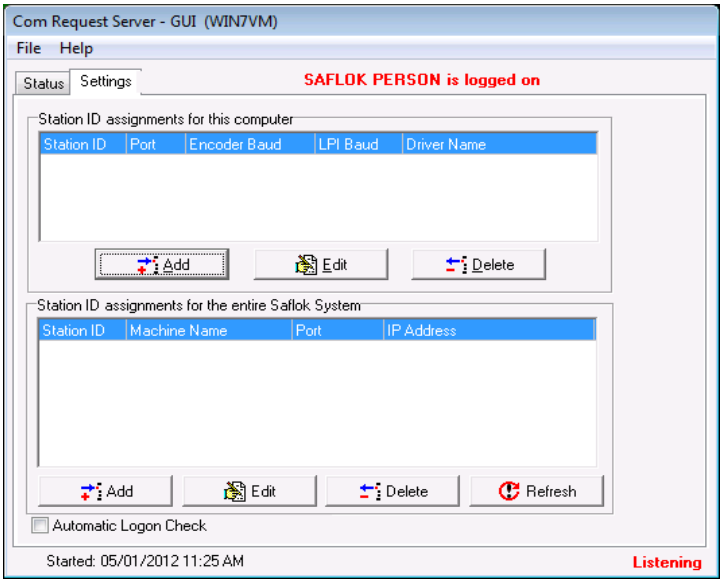
Open the CRS GUI by double-clicking the CRS icon from the desktop to launch the GUI. Then double-click the CRS icon in the system tray to bring up the GUI.

Click File-Logon. Enter username SETUP and password PASSWORD for initial installations. Otherwise, use a known Saflok administrator account.

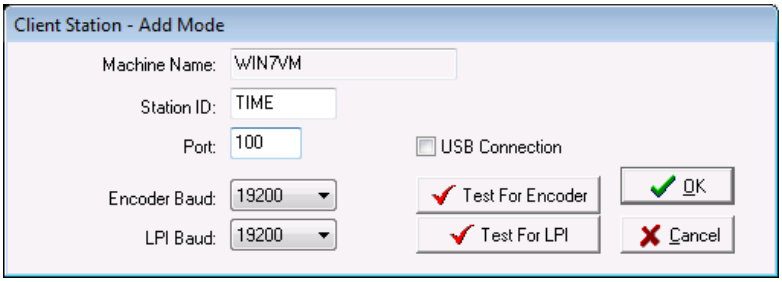
Note: If the server has multiple IP addresses, open the IP selection box ( ) and select the IP address that the workstations will use to connect to the Saflok server. If there is only a single IP address, this step is not necessary.



Click the Settings tab, and then click the Add button under the “Station ID assignments for this computer” box.



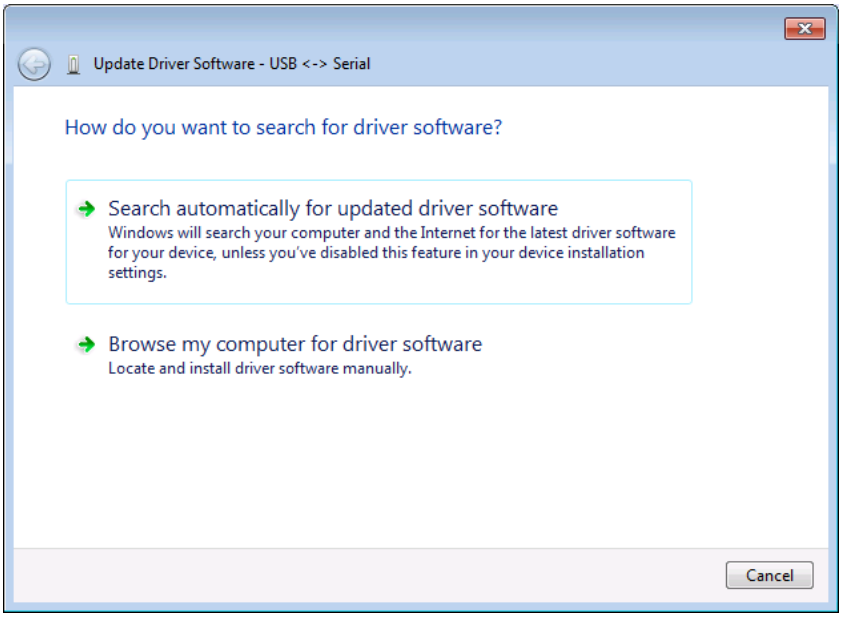
Enter TIME for the Station ID and 100 for the Port. Click OK to save the station. Click File-Minimize to minimize the CRS window.



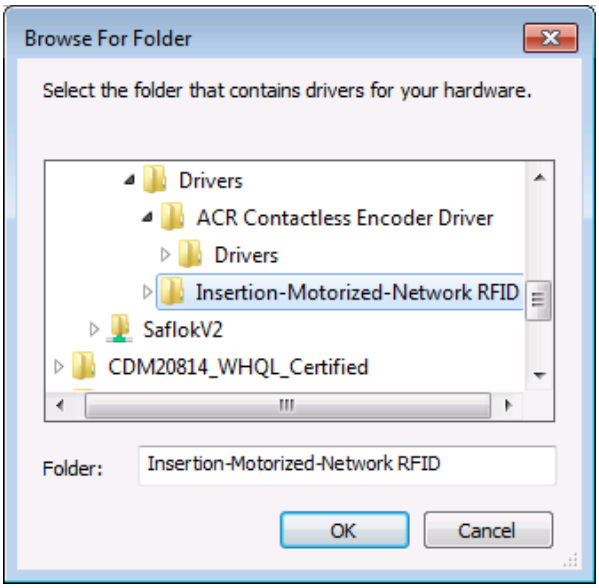
Configuring a USB Encoder

Plug power and the USB cable into the encoder. Plug the USB cable into the computer.

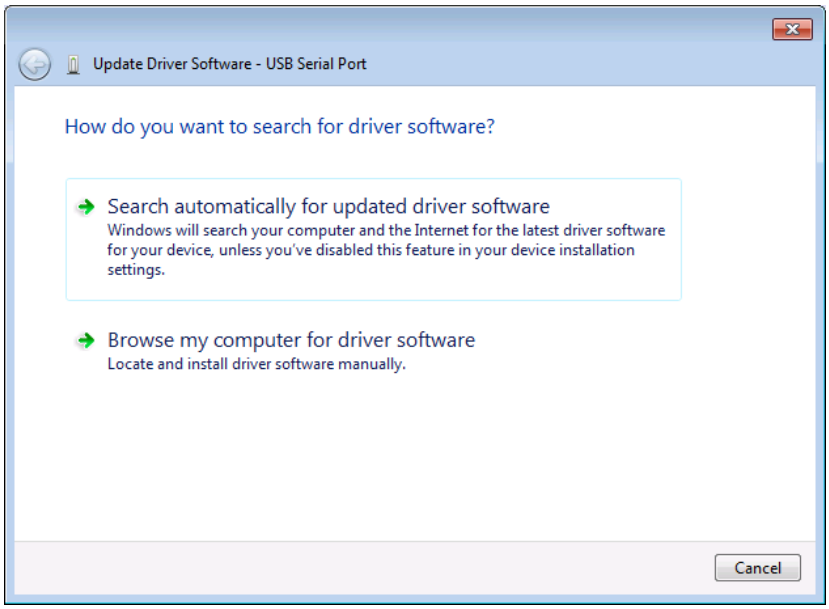
Windows will recognize the new hardware, and ask for a driver. Select “Browse my computer for driver software”.



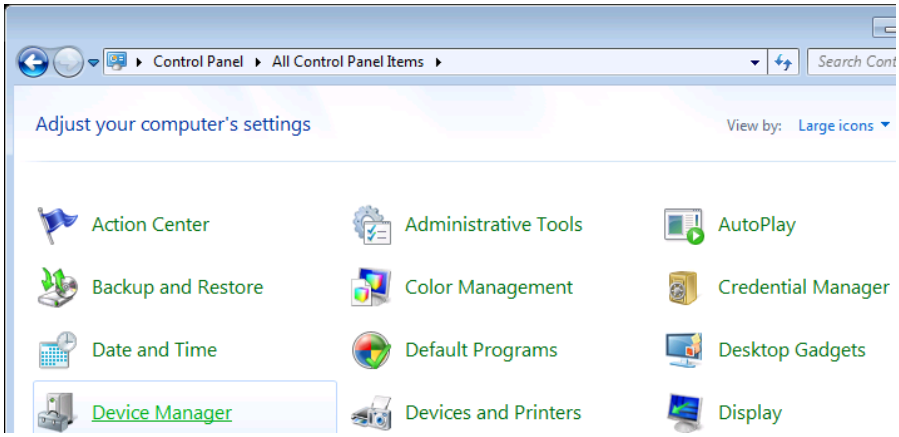
If needed, the USB drivers are located on the Saflok Program installation CD, in the Drivers folder. Select the appropriate driver folder based on the host computer's operating system and the USB <-> Serial converter will then be installed. Windows 7 or later will usually install the drivers automatically.



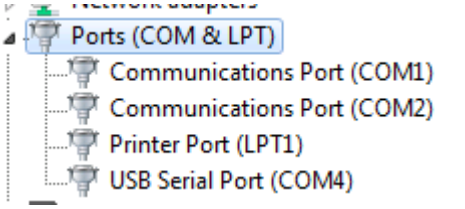
Windows will then prompt you to install the driver for the USB Serial port. Windows will need the drivers for it as well. Browse to the Insertion-Motorized Network RFID.. folder on the CD again.



After the driver installation is completed, check the device manager to determine which COM port it is on. Click the Windows Start button, then Control Panel. Select to View By: Large Icons. Double click Device Manager.



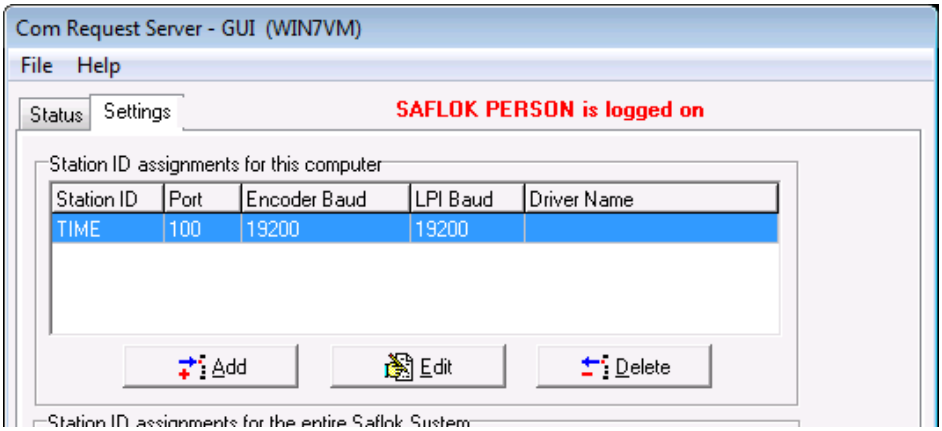
Expand the Ports section. Look for USB Serial Port (COM#). Take note of the number, you will need it when you add the encoder station to the system.



Double click on the CRS icon in the system tray.

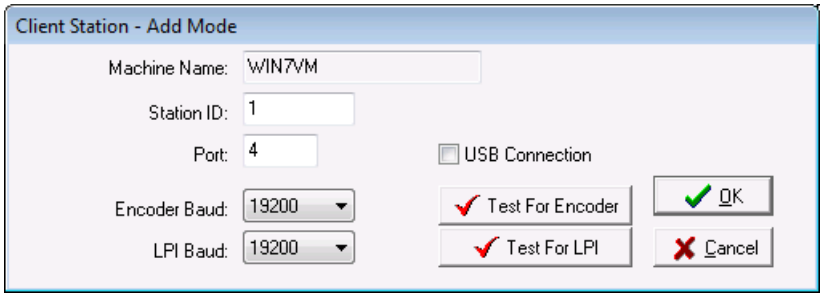
Click File, and then Log on. Enter your Username and password. Then, click the settings tab.

Click Add under the Station ID assignments for this computer section.



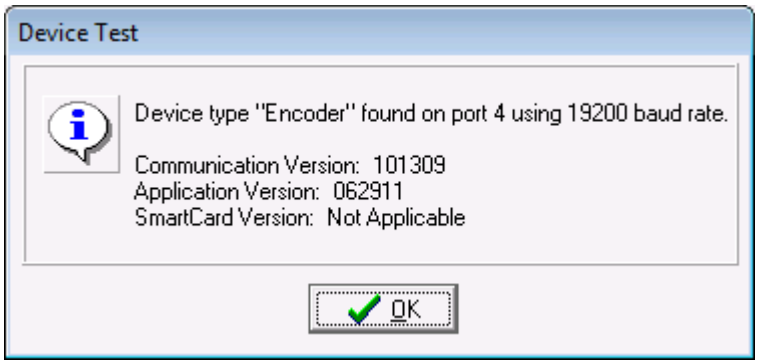
Enter the Station ID number you wish to give this encoder.

Enter the COM Port number from the Device Manager listing (i.e. if USB Serial Port = COM4, enter 4 in this field.) Check the USB Connection box. The Encoder baud rate should be left on the default of 19200.



Click Test for Encoder.

If the encoder is communicating properly, you will see a success message. Click OK to continue, and click OK again to save the encoder settings.

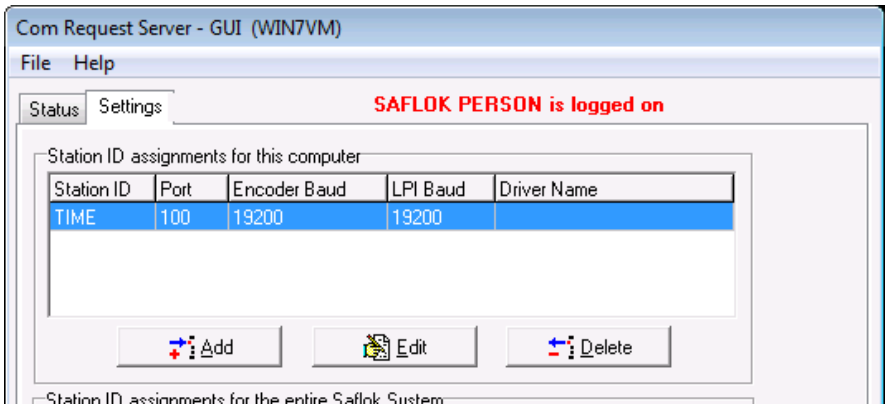


The encoder is now ready to be used.

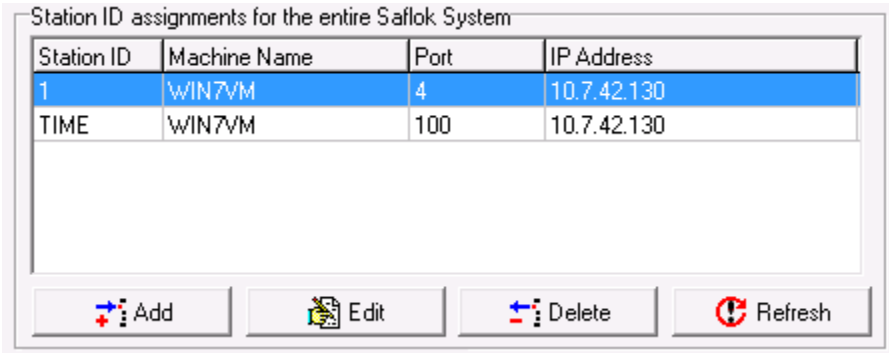
Configuring a TCP/IP Encoder

Double click on the CRS icon in the system tray.

Click File, and then Log on. Enter your Username and password. Then, click the settings tab.



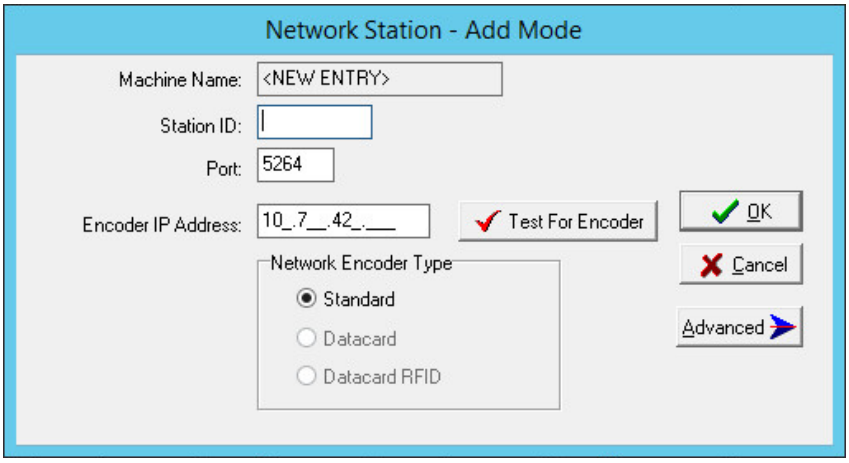
Click the Add button under the Station ID assignments for the entire Saflok System.



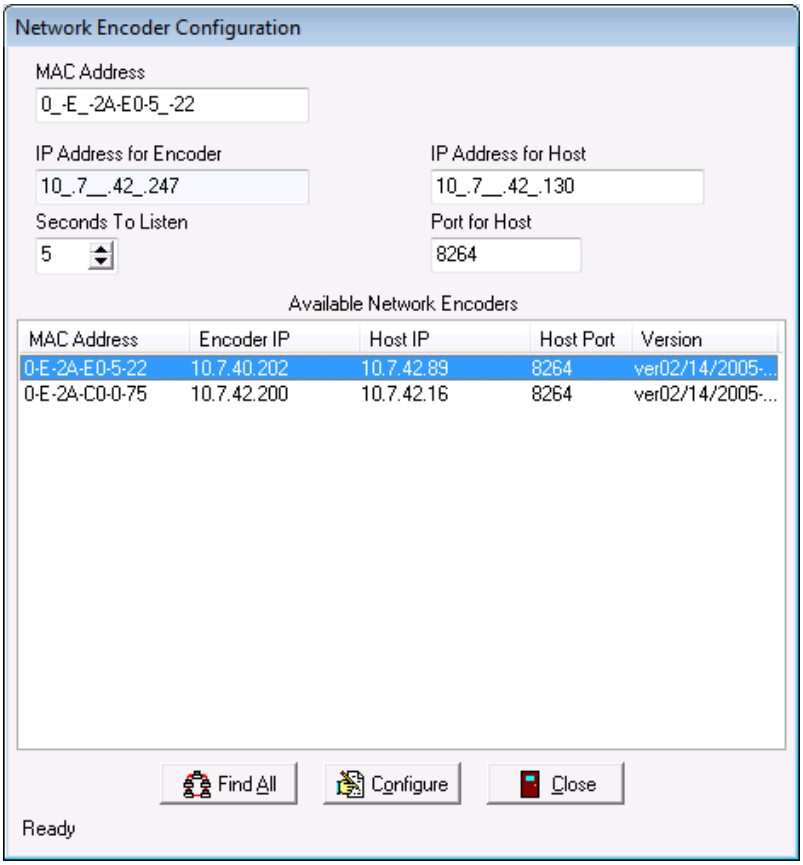
Enter the desired station ID for the encoder.

Do not change the port number.

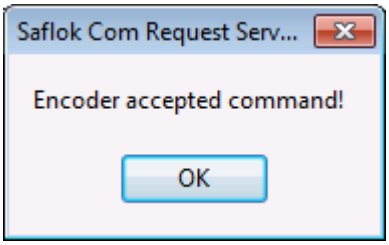
Enter the desired IP address for the encoder, and click Advanced.



Click the Find All button. This will search the network for all available IP Encoders (using a UDP broadcast), and list them by MAC Address. Each encoder has a label on the bottom of the unit that shows its MAC address. Find the encoder you wish to configure in the list, and double click on it. Click Configure.

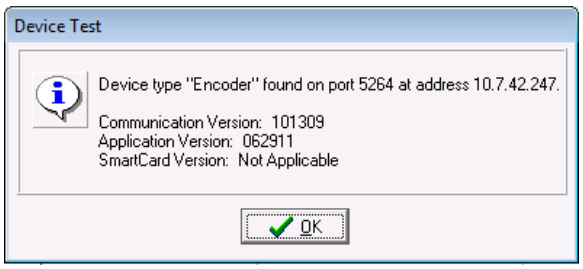


You will receive a message that the encoder accepted the command. Click OK to continue, and then click Close. Reset power to the encoder in order for the changes to take effect.



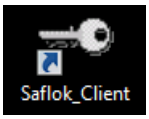
After the encoder has finished powering up, click the test for encoder button.

If the configuration is correct, you will see a success message. Click OK to continue, and then click OK to save the encoder settings. The encoder is now ready to be used.



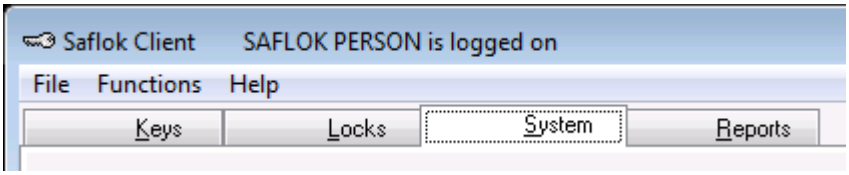
Setting the Default Encoder Station & HH6 Configuration

Double click the Saflok Client icon.



Log on with your username and password.

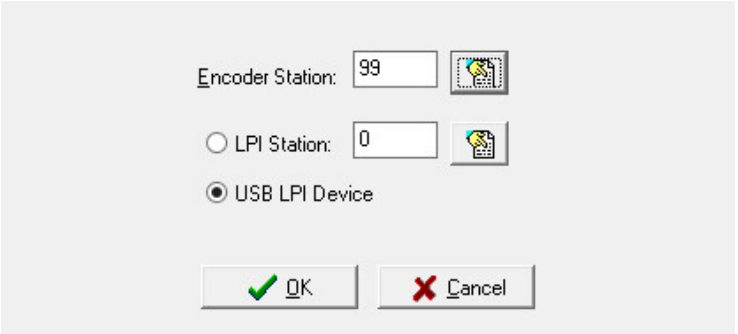
Click the System tab.



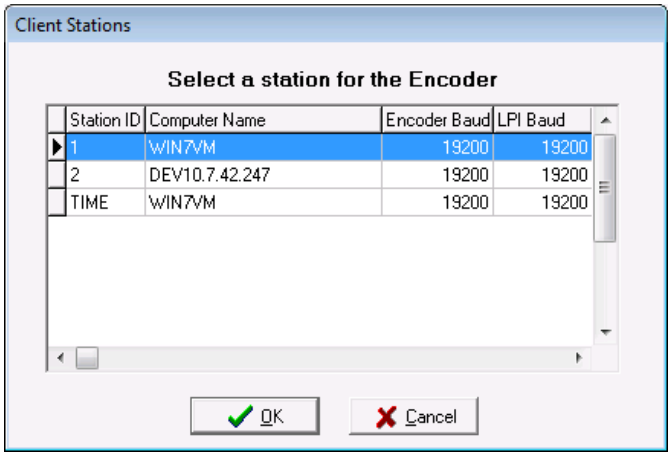
Click the Terminal Settings button.

Select the USB LPI device option to enable the HH6 for this station.

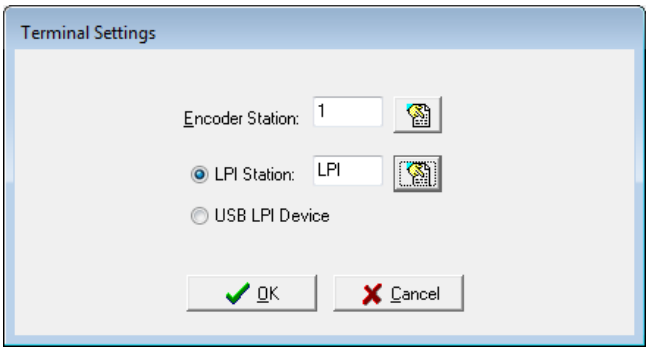
Click the icon next to Encoder Station to set the default encoder station.



Select the station number that you created for the encoder to be used with this computer. Click OK to confirm.



Click OK to save the new settings.



The encoder and HH6 are now configured and ready to be used on the system.

Scheduler Configuration

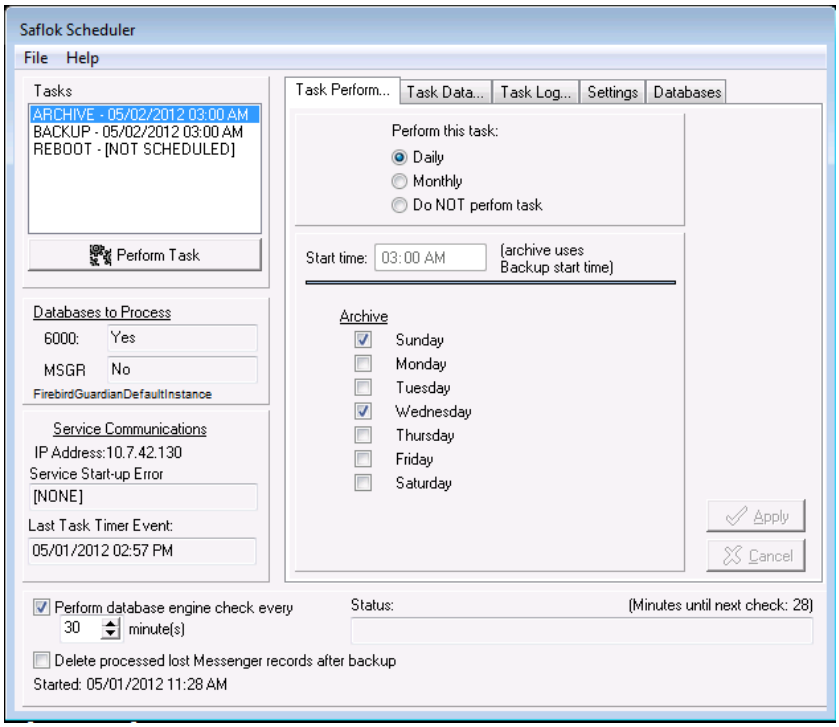
Next, you will need to configure the Saflok Scheduler. This program creates a backup of the database at a specified time each day. By default, this time is 3:00AM. It also creates an archive of the transaction log file to keep it manageable. This is performed at the same time as the backup.

Scheduler Archive Configuration

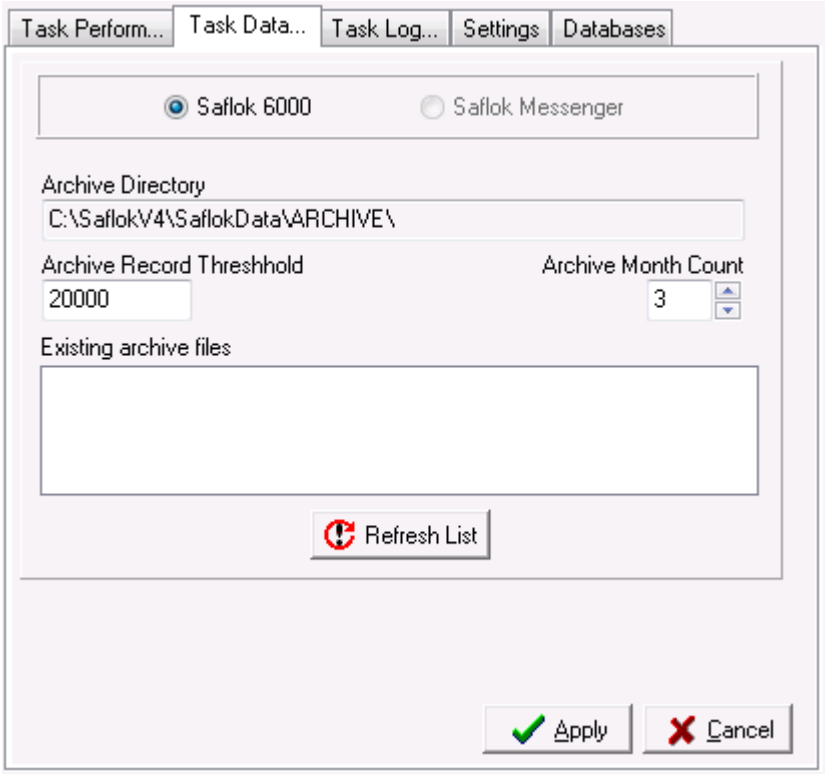
To begin, double-click the Scheduler Icon from the system tray.

Click File-Logon and log on using the username and password.

Click "Archive" under the Tasks section. On the Task Perform tab, set "Perform this task:" to Daily. Set the "Archive" days of the week to Sunday and Wednesday. Click Apply.



Click the Task Data tab. Select either Saflok 6000 or Saflok Messenger. Set the Archive Record Threshold and Archive Month Count for each database and click Apply.



Archive record threshold is one of the criteria Scheduler uses to determine if an Archive is necessary. The default setting is 20000. In this case, when Scheduler scans the Transaction Log file and it has more than 20000 transaction records, it will also check the Archive Month Count to see if it should create an archive. If there are less than 20000 records in the database, it will not perform an archive.

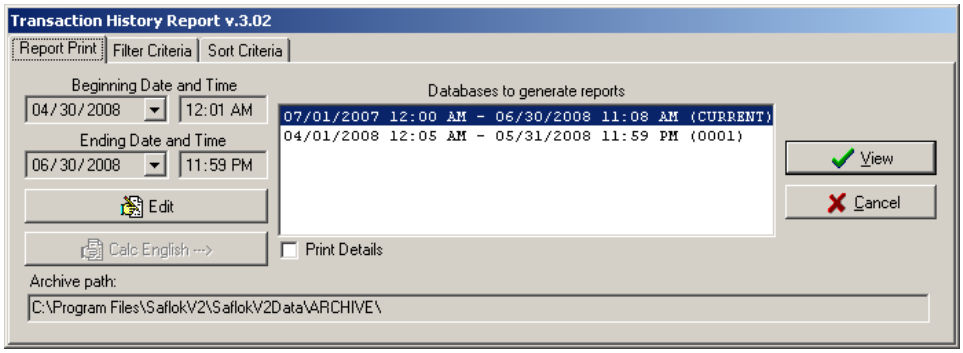
Archive Month Count is the number of months that you want to keep in the current log file; anything older than this setting will get archived. The default setting is 3 (only 1, 2, or 3 months selected). In this case, if there are over 20000 transaction records and they are older than 3 months, Scheduler will create an archive file.

If there are 20000 records, and they are all under 3 months old, an archive will not be created. Similarly, if the records are older than 3 months but there are fewer than 20000, an archive will not be created.

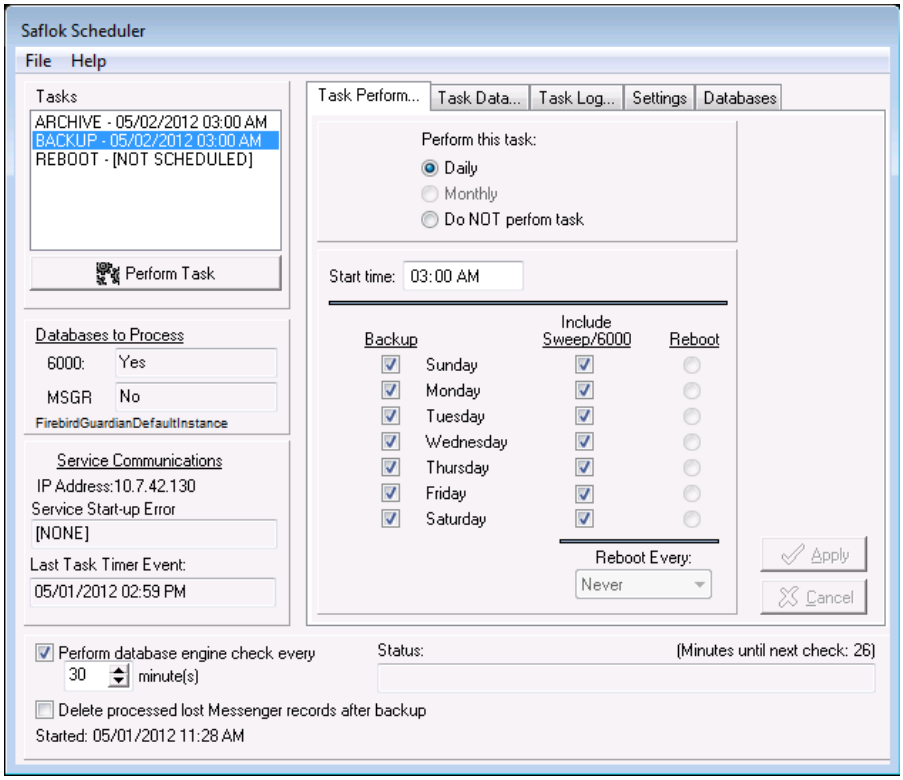
The recommended settings for the Messenger database are 10000 records and 1 Month. As there are typically many hundreds or thousands of records per day that are stored in the Messenger transaction log file (Saflokmsgrlogv2.gdb).

Once Scheduler has determined that an archive needs to be performed, it will archive the records from the Safloklogv2.gdb file, and put them into an ARC_SAFLOKLOG####.gdb file.

Once an archive file has been created, and a transaction history report is run that spans into the archived records, you will get 2 or more different reports, illustrated above. The top report would be from the Current database, and the second report is from the archive.

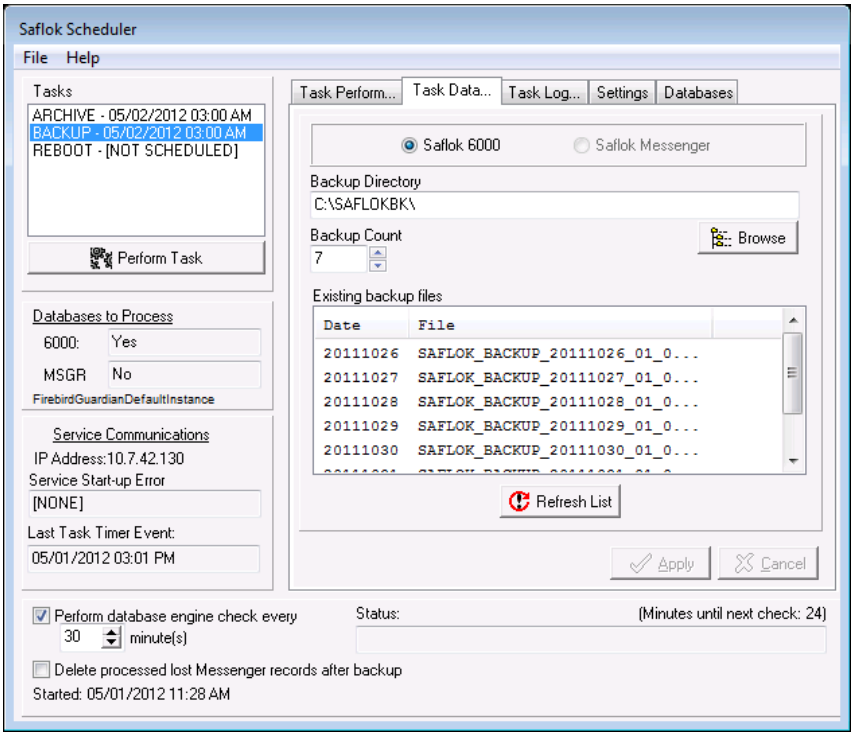


Scheduler Backup Configuration



Next, we will configure the Backup settings. Click on the "Backup" entry under the "Tasks" field. Then, click "Daily" under "Perform this task:" This setting will configure the backup task to run every day, at the time specified in the "Start time" field. By default, this is 3:00AM. A backup usually takes around 15-20 minutes. Keys cannot be made during this time. Choose a time that will interfere with the property's operations the least. Check all of the boxes for each day of the week, and also check the boxes for "Include/Sweep 6000". The Sweep performs extra maintenance and cleanup on the database.

Next, click the "Task Data" tab. In the "Backup Directory" field, select where you want the database backups to be stored.



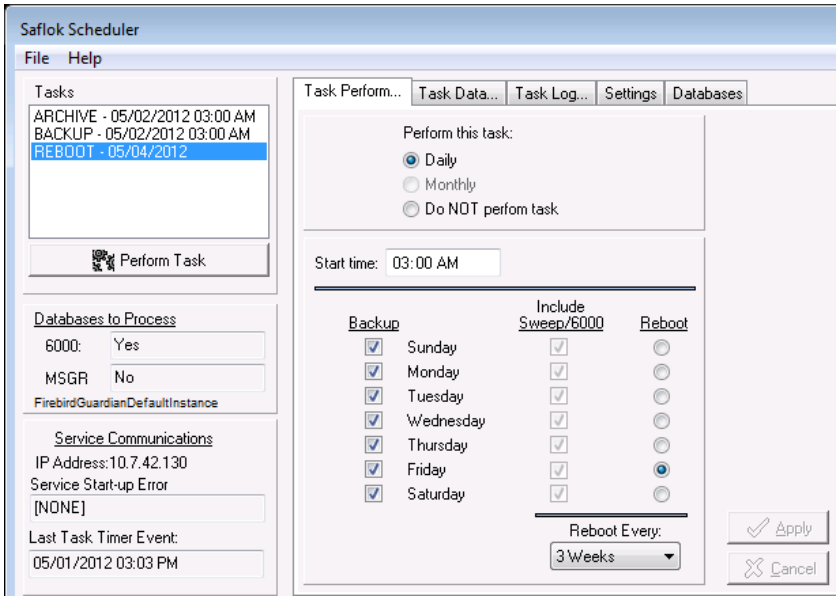
The best practice is to backup to an external location, such as a network drive or USB flash drive. If neither is available, then you must create a folder on the local hard disk to store the backups. Click browse and select the folder/drive you wish to store the backups in.

By default, the Backup Count is set to 1. This determines the number of backups that are stored in the Backup Directory. It is recommended to change this setting to 7. When the number of backups reaches the Backup Count number, the newest backup will replace the oldest backup.

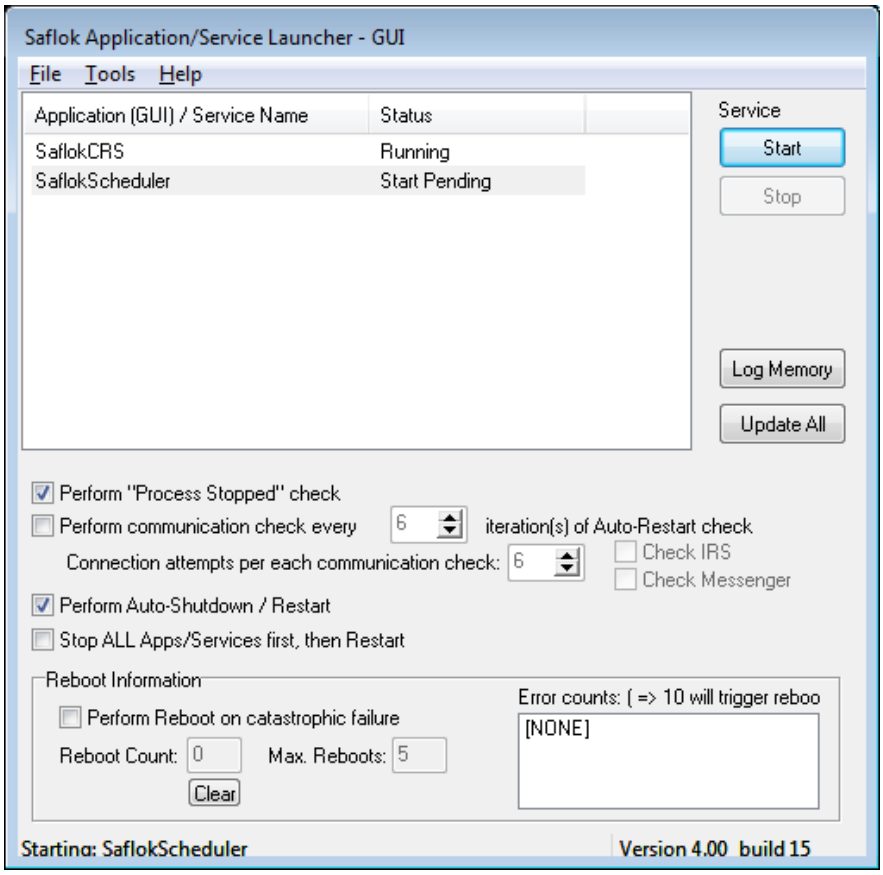
When finish, click Apply to save the settings. The Scheduler is now configured properly.

Scheduler Reboot

This option should only be enabled if the property requests it to be turned on, or if they are having issues that would be resolved by a periodic reboot.
To enable it, select the Reboot function under Tasks. Next, select a day of the week to reboot the server, then select how often to reboot from the drop down menu: Never, 1, 2, 3, or 4 weeks. The reboot option is set to Never by default. The server will reboot after the backup process has been completed for that day.



Service Launcher



The Service Launcher should be configured as shown.

Perform "Process Stopped" check: This option will check every 10 seconds to see if a Saflok service has stopped running. If it identifies a stopped service, it will restart the service. If the service was manually stopped using the Service Launcher the stopped service(s) will not be restarted automatically. This option is enabled by default and should remain enabled.

Perform Communication Check Every (#) iterations(s) of Auto-Restart Check: When this option is enabled, the Service Launcher will check to see if the IRS and/or Messenger Server program(s) are running and able to receiving communication from a PMS interface, Saflok hub, or other third party interfaces. By default, it performs this check every 6 iterations of the auto-restart check. The Service Launcher performs an auto-restart check to determine if the Scheduler is performing a backup. When Scheduler is finished with the backup process, Service Launcher will shutdown/restart all of the services if the "Perform Auto-Shutdown/Restart option" is enabled. By default, the auto-restart check happens every 10 seconds If it does not receive a response, Service Launcher will stop and restart the IRS and/or Messenger Server. This option is not enabled by default, but should be enabled after installing the software.

Connection Attempts per each communication check: This option determines how many times the Service Launcher will attempt to communicate with the IRS/Messenger server. The default is 6.

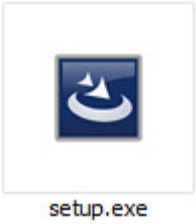
Perform Auto-Shutdown / Restart: When this option is enabled, the Service Launcher will stop and restart each day after the backup process has been completed. By default, this option will stop and restart 1 service at a time. This option is enabled by default and should remain enabled.

Stop ALL Apps/Service first, then Restart: When used in conjunction with the Auto-Shutdown / Restart option, this option will stop all services, and then restart all services. This option is not enabled by default, and should only need to be enabled if the property encounters problems.

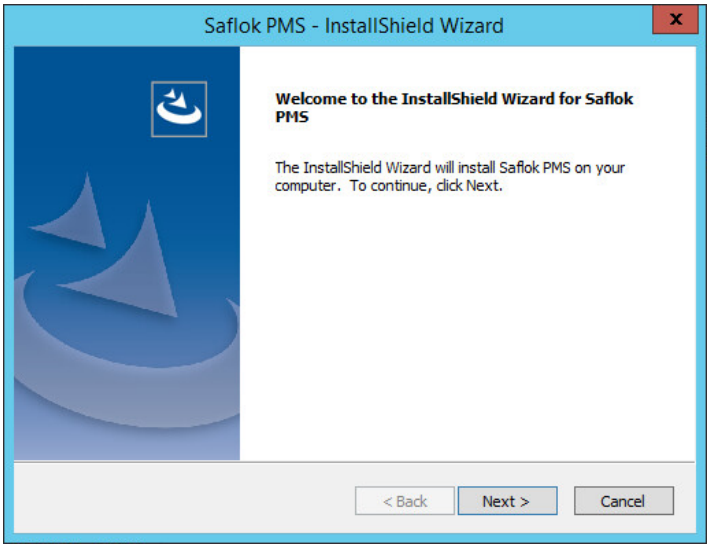
Perform Reboot on Catastrophic Failure: When enabled, this option will cause the Service Launcher to reboot automatically if it detects a catastrophic failure with 1 or more of the Saflok services. Catastrophic failures are any error messages that will not allow the services to start properly. After any service encounters an error 4 times, Service Launcher will trigger a reboot. This option is not enabled by default, and should only need to be enabled if the property encounters problems.

PMS Installation

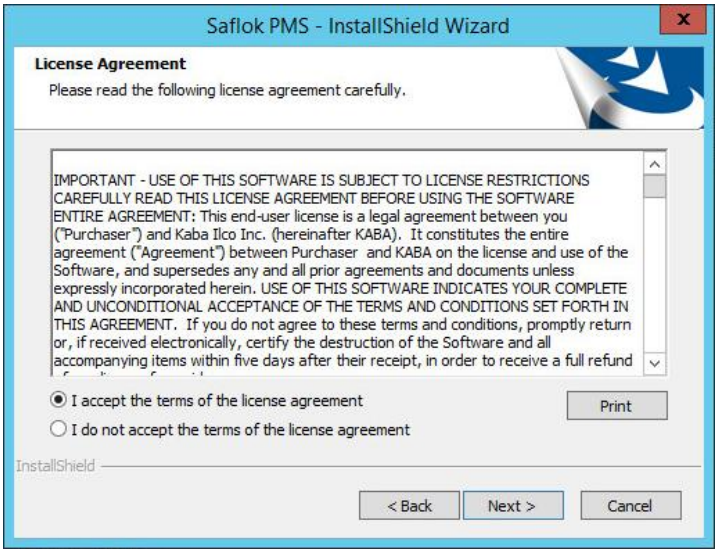
The PMS installation is located on the same CD as the Program installation, in the Supplemental Installs folder. Once that folder is located, double-click the setup.exe file to begin the PMS installation.



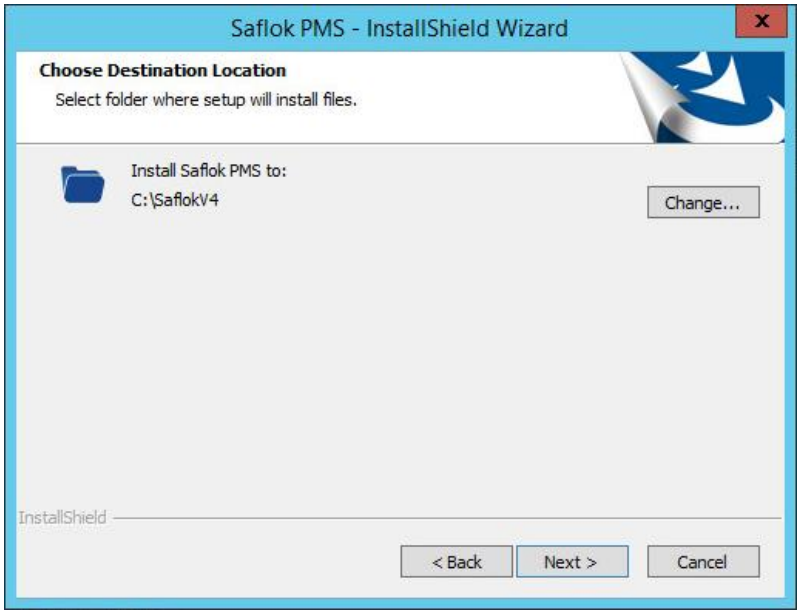
Click next to continue.



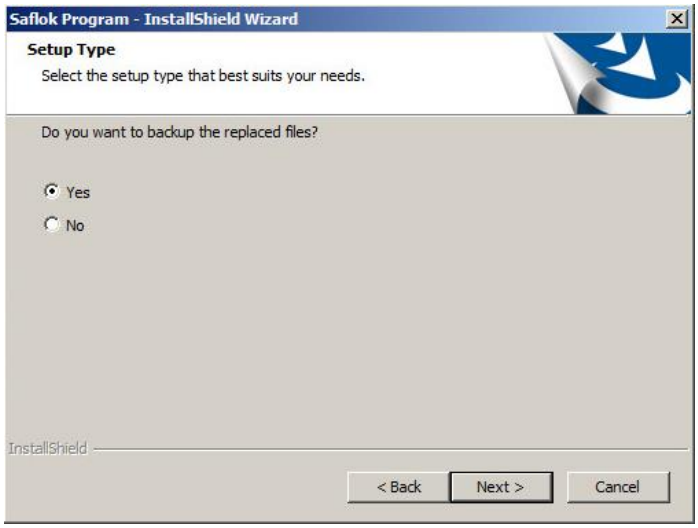
Accept the license agreement and click Next to continue.



Select the destination directory. If you installed the Program Installation in a folder other than the default, install the PMS software in the same location.



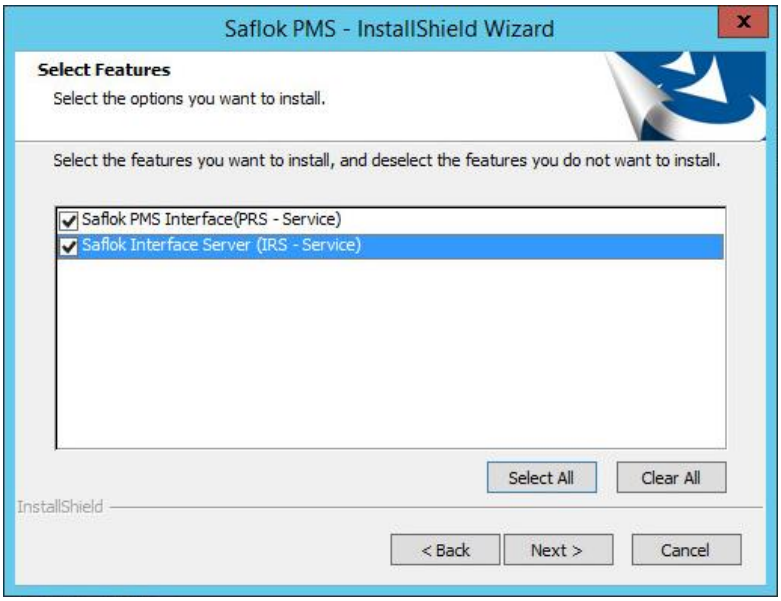
Select whether you would like to backup replaced files. This is only screen will only appear if there are existing files in the SaflokV4 folder, and not on an initial installation.



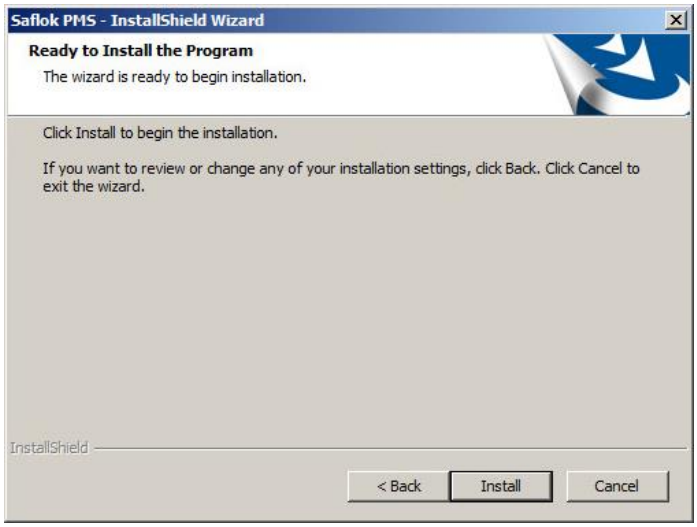
Select the components you wish to install. Select the PMS Interface (PMS) for an interface that will be connected via a Serial cable. Select the Saflok Interface Server (IRS) if the PMS interface will be over a TCP/IP connection.

By default, all services will be installed using the Local System Windows account.

Note: The IRS must also be installed if HH5 or HH6 LPIs will be used for key making in conjunction with a TCP/IP encoder (auxilary terminal). The PRS and IRS may both be installed and running at the same time.



Click Install to continue the installation. The necessary files will then be copied to the computer.



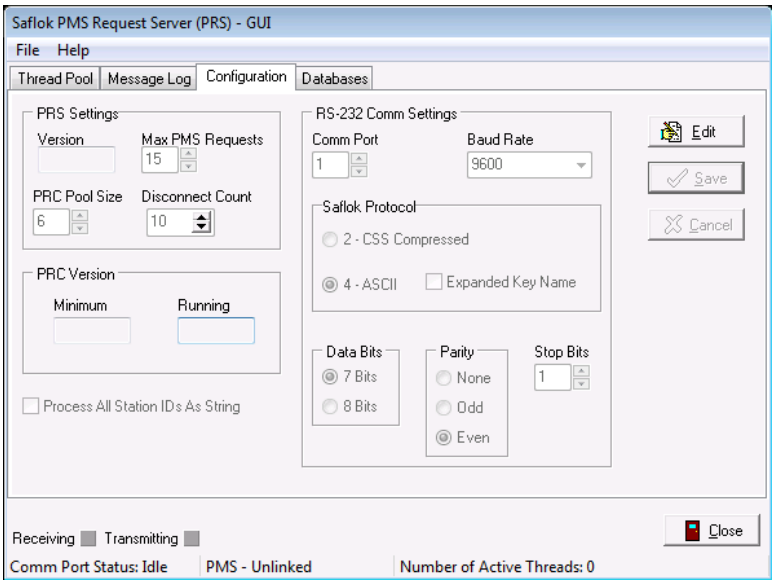
Click Finish to complete the installation.

Reboot the computer. IRS and/or PRS will start automatically upon reboot. Alternatively, you can manually start the PRS and IRS services from Service Launcher or Windows Services.

PRS Configuration

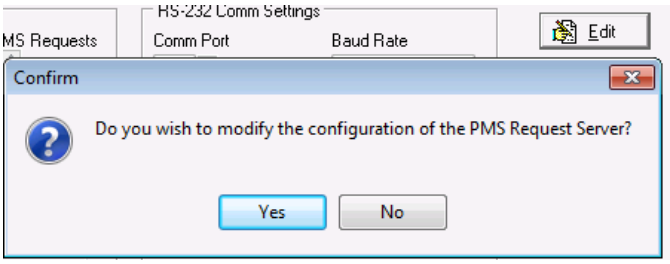
The PRS configuration settings only need to be modified if you are using a serial port other than COM1, or if there are non-standard communication settings (extremely rare).

Double click the PRS icon from the desktop to launch the GUI, and then double click the PRS icon in the system tray.



Click the Configuration tab.

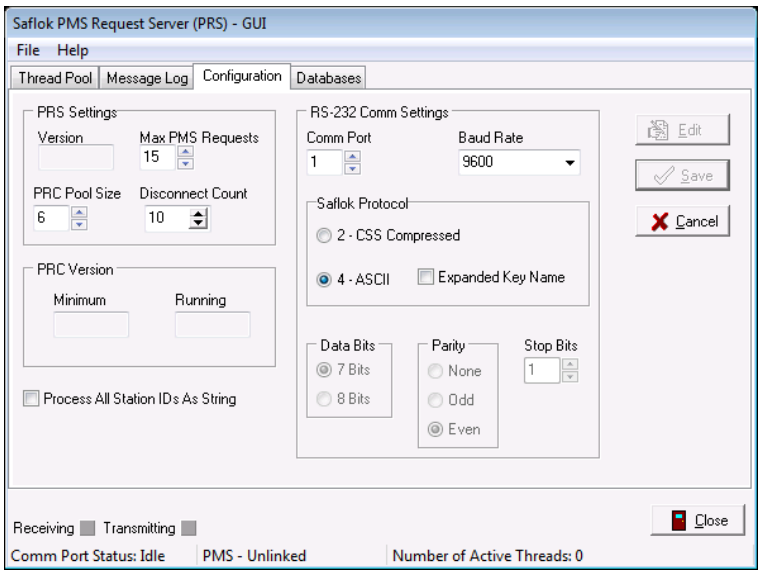
Click the Edit button.



Click Yes.

The Saflok serial interface default RS-232 Communication settings are set at **9600** Baud Rate, **7** Data Bits, **1** Stop Bit, and **Even** Parity. These rarely need to be changed. The "Comm Port" setting should match the serial port that the PMS interface is connected to (i.e. COM1 = 1, COM2 = 2, etc).

All other settings should be left to the defaults unless directed by Saflok and/or the PMS company.

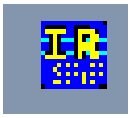


PRS is configuration is complete.

IRS Configuration (for standard TCP/IP tunnel interfaces)

The IRS configuration settings only need to be modified if the PMS interface vendor is using a non-standard PMS Port, if they require the message format to be set to Saflok w/o Checksum, or Beacon Check disabled (as with LMS).

Double click the IRS GUI from the desktop, and then double click the icon in the system tray.



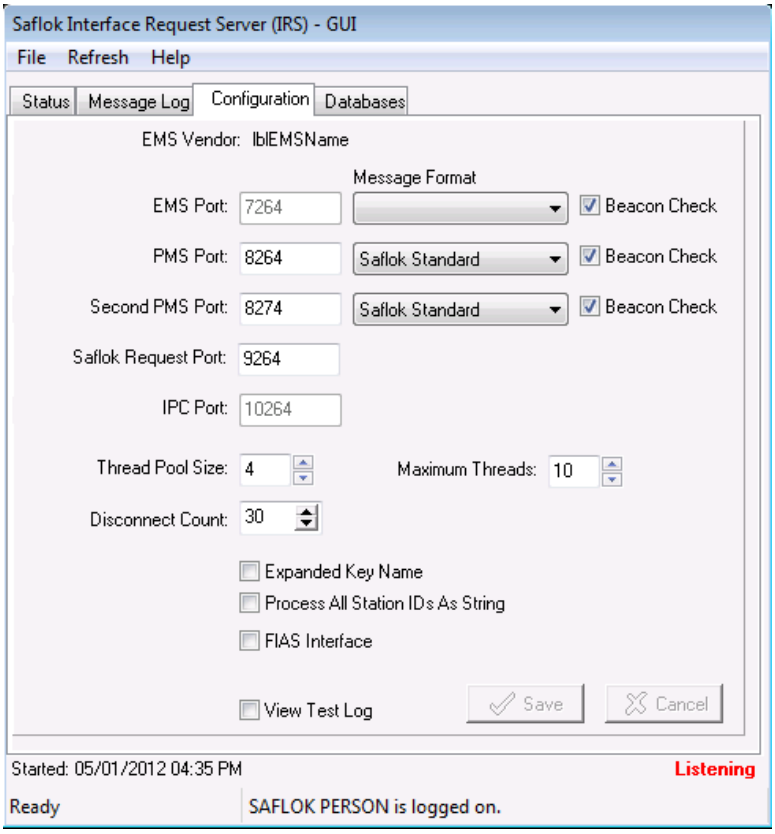
Click File-Logon, and log on with your username and password.

The port may need to be modified to match the PMS Company's port. The default port is 8264.
In the "Message Format" list box you should select either (depending on the PMS company's requirements):

1: Standard Saflok = data string will be sent with checksum (most common)

2: Saflok W/O Checksum = no checksum will be sent with data string (less common)

Check the "Beacon Check" box if you want to periodically check for interface connectivity otherwise leave unchecked. Some interfaces require this to be unchecked for best performance (i.e. Agilisys LMS).

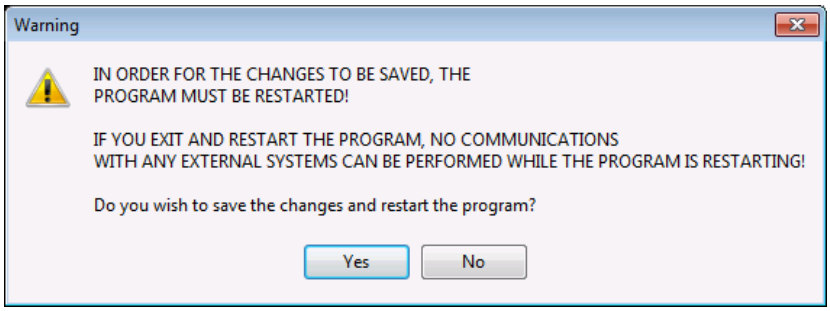


Click Save to save any changes.

The IRS needs to shutdown in order for the changes to take effect. Click OK to shutdown the IRS.

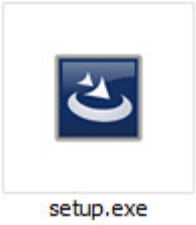
Double click the IRS icon on the desktop to restart IRS.

IRS configuration is complete.

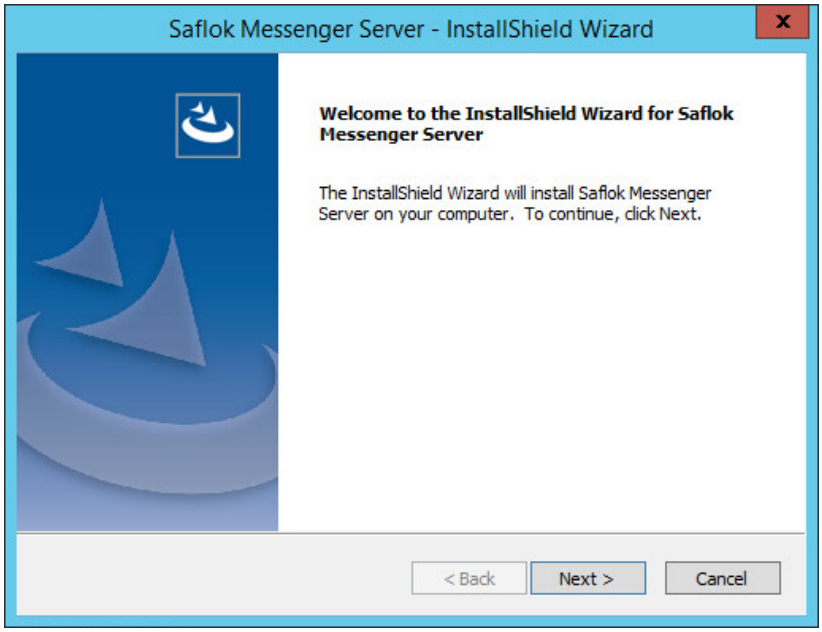


Messenger Installation

You can use the installation CD, or you may copy the installation CD to the Saflok server or any other computer on the network.

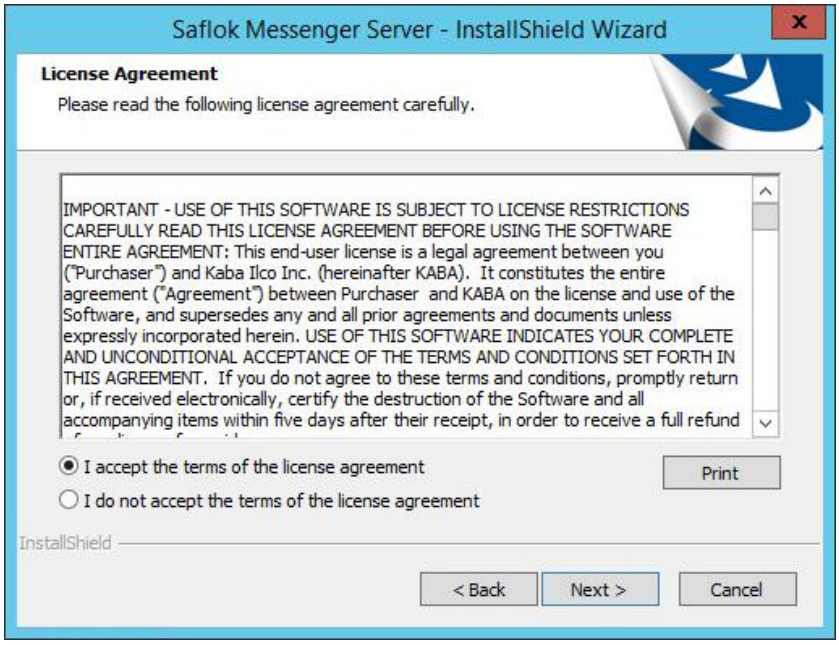


If you are using the CD, simply insert it into the computer you wish to install the software on, and the installation process will begin automatically. If installing over the network, browse to the folder where the software is located, and double-click setup.exe in the Messenger package, and the installation process will begin.

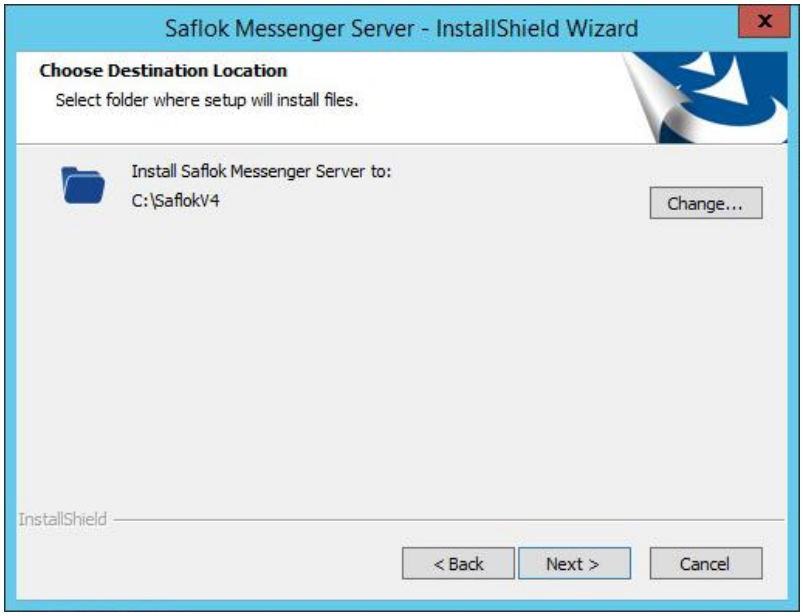


Click next to continue.

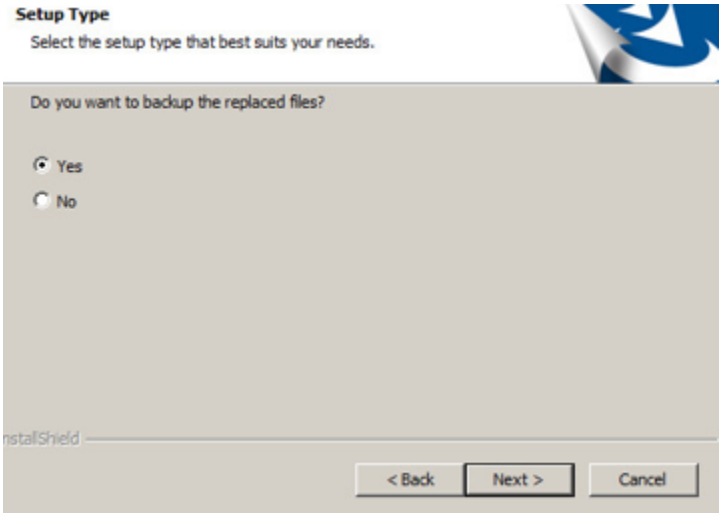
Accept the license agreement and click Next to continue.



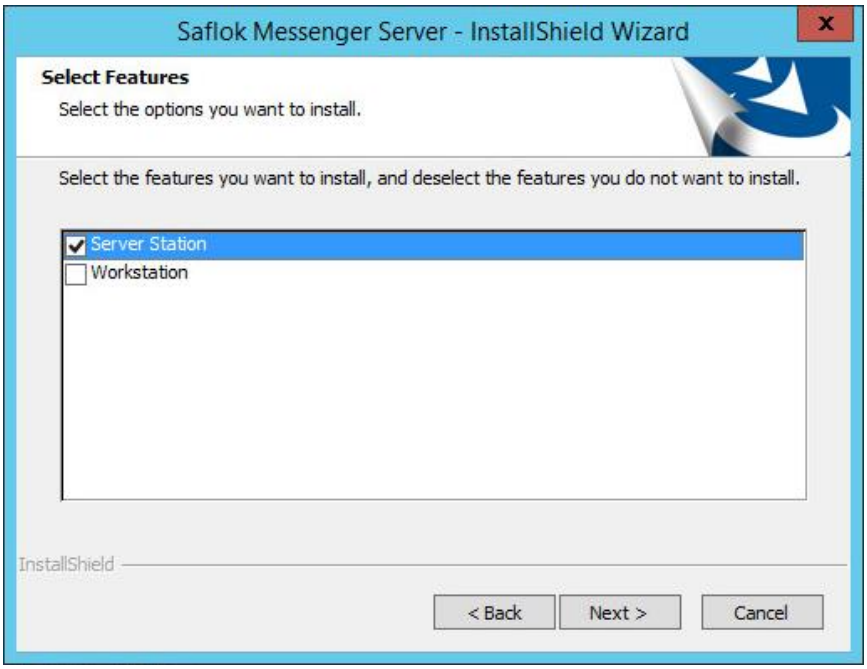
Select the destination directory. If you installed the Program Installation in a folder other than the default, install the Messenger software in the same location.



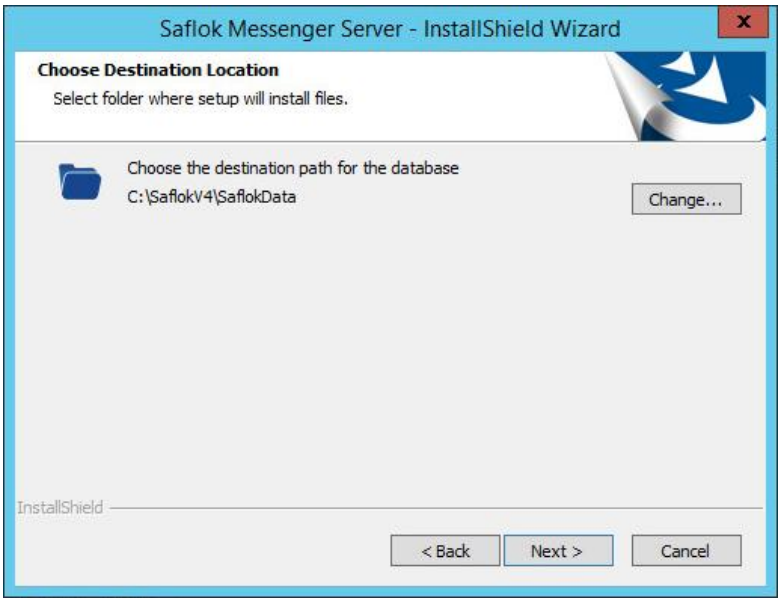
Select whether you would like to backup replaced files. This is only screen will only appear if there are existing files in the SaflokV4 folder, and not on an initial installation.



Select the Server Station installation type, and click Next.



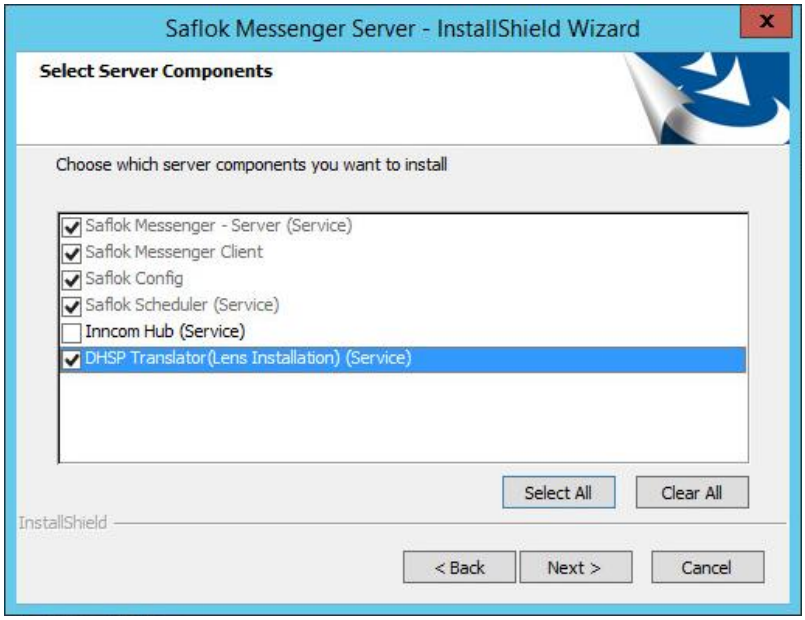
Select the database destination path. Click Next to continue.



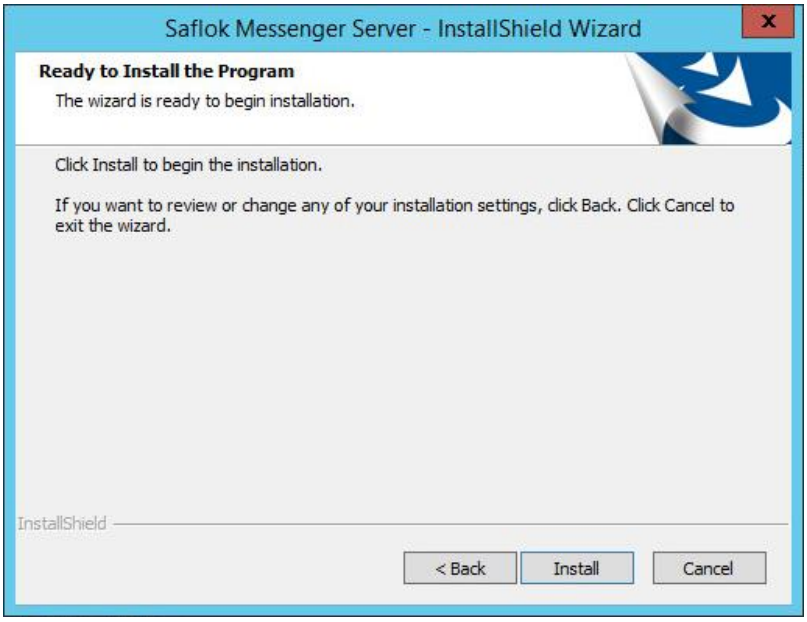
Select the Server Components to install. All default settings should be retained. Select the DHSP Translator component if the property will have Messenger LENS. Click next to continue.

Note: Only select the Inncom Hub component if the property will have Messenger with older MT1 & Inncom IR locks (**rare**) and does not work with LENS. **New Inncom RF locks use the DHSP Translator component for LENS.**

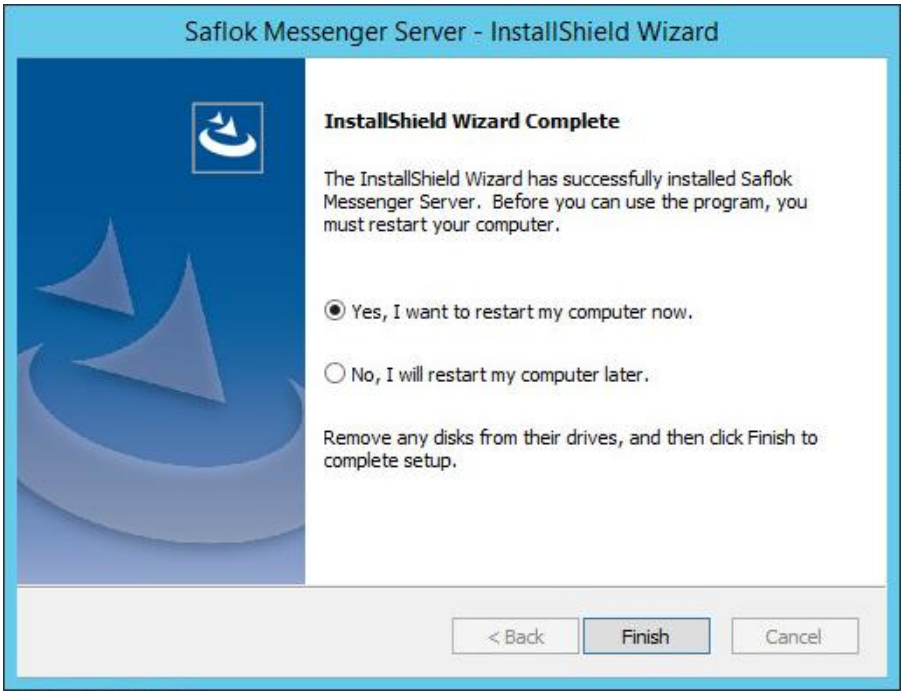
By default, all services will be installed using the Local System Windows account



Click Install to begin the installation.

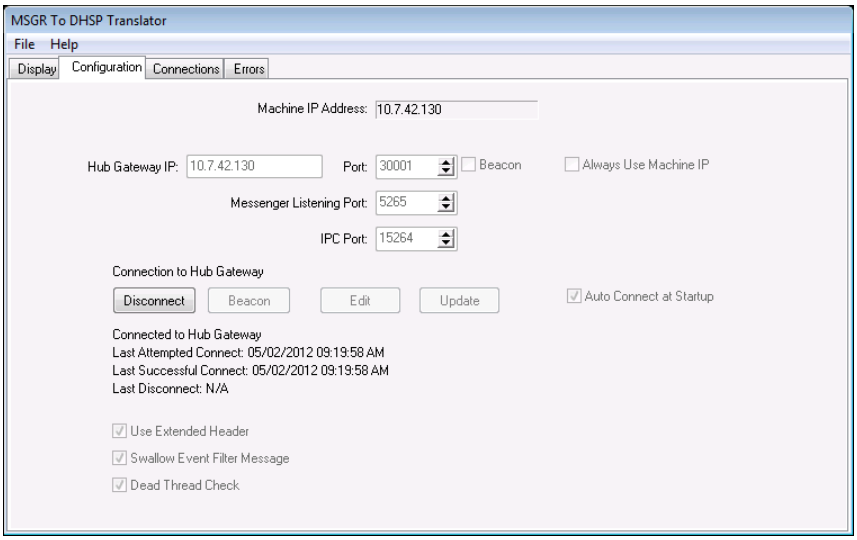


After the install process is complete, click Finish to reboot the computer. Alternatively, you can manually start the Saflok Messenger Server service, Saflok DHSP to MSGR Translator, and Saflok MSGR to DHSP Translator services in Service Launcher or Windows services.

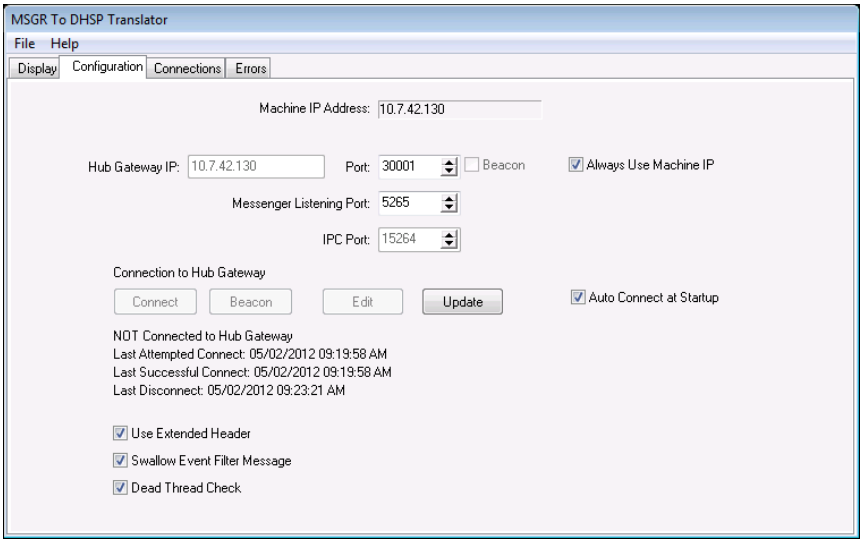


Upon rebooting, double click the red MSGR to DHSP GUI icon on the desktop, then double click the icon in the system tray.

Click the configuration tab.



Click the Disconnect button, then the edit button. Check the Always Use Machine IP checkbox. Click Update.
Click the Connect button.



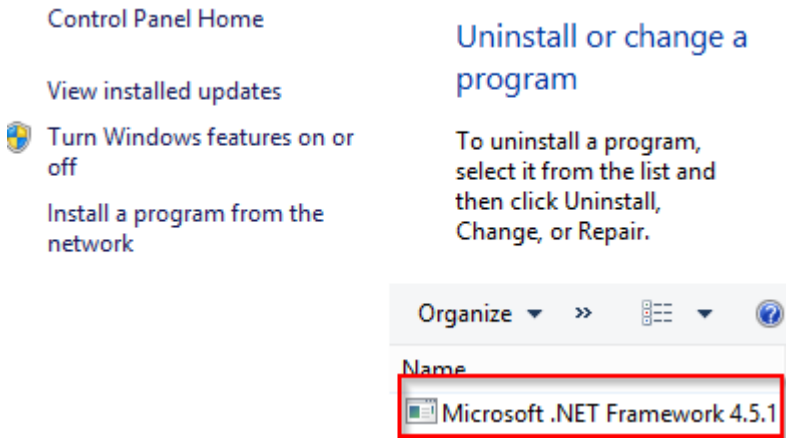
The System 6000 Messenger component has now been installed. You should now begin the LENS installation by following the next section.

LENS Installation

Windows Configuration Prerequisites

Microsoft .NET 4.5

For Windows 7, 8, and Server 2008, check the Installed Programs list for Microsoft .NET 4.5. If it's not installed, you can use the button in the LENS installer to install it. Server 2012 and Windows 10 include .NET 4.5 automatically.



IIS

Prior to beginning the LENS installation, you must ensure that IIS is installed in Windows. Follow the below guides for the Windows version you need.

IIS installation instructions for **Windows 7/8/10** are available here: http://www.howtogeek.com/112455/how-to-install-iis-8-on-windows-8/

Windows Server 2008 instructions are here: http://learn.iis.net/page.aspx/29/installing-iis-7-and-above-on-windows-server-2008-or-windows-server-2008-r2/

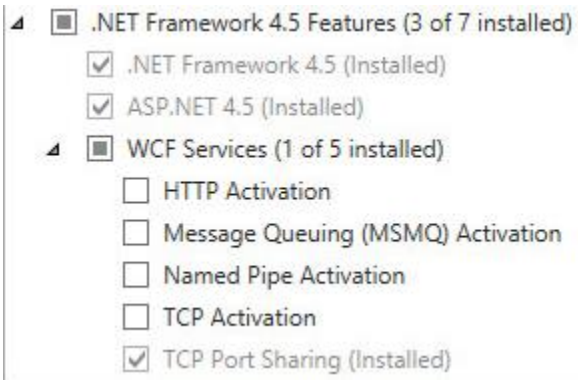
Windows Server 2012 instructions are here: https://www.iis.net/learn/get-started/whats-new-in-iis-8/installing-iis-8-on-windows-server-2012

Below are the IIS role services & features required for each version of Windows:

Server 2012:

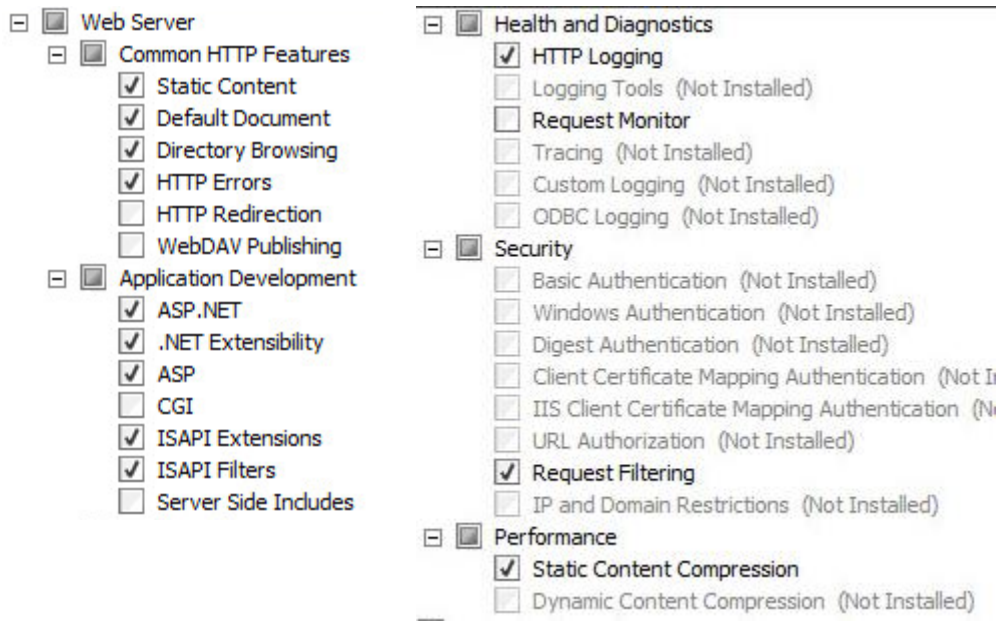
IIS Role Services

Server Features

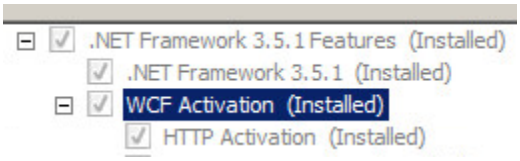


Server 2008:

IIS Role Services

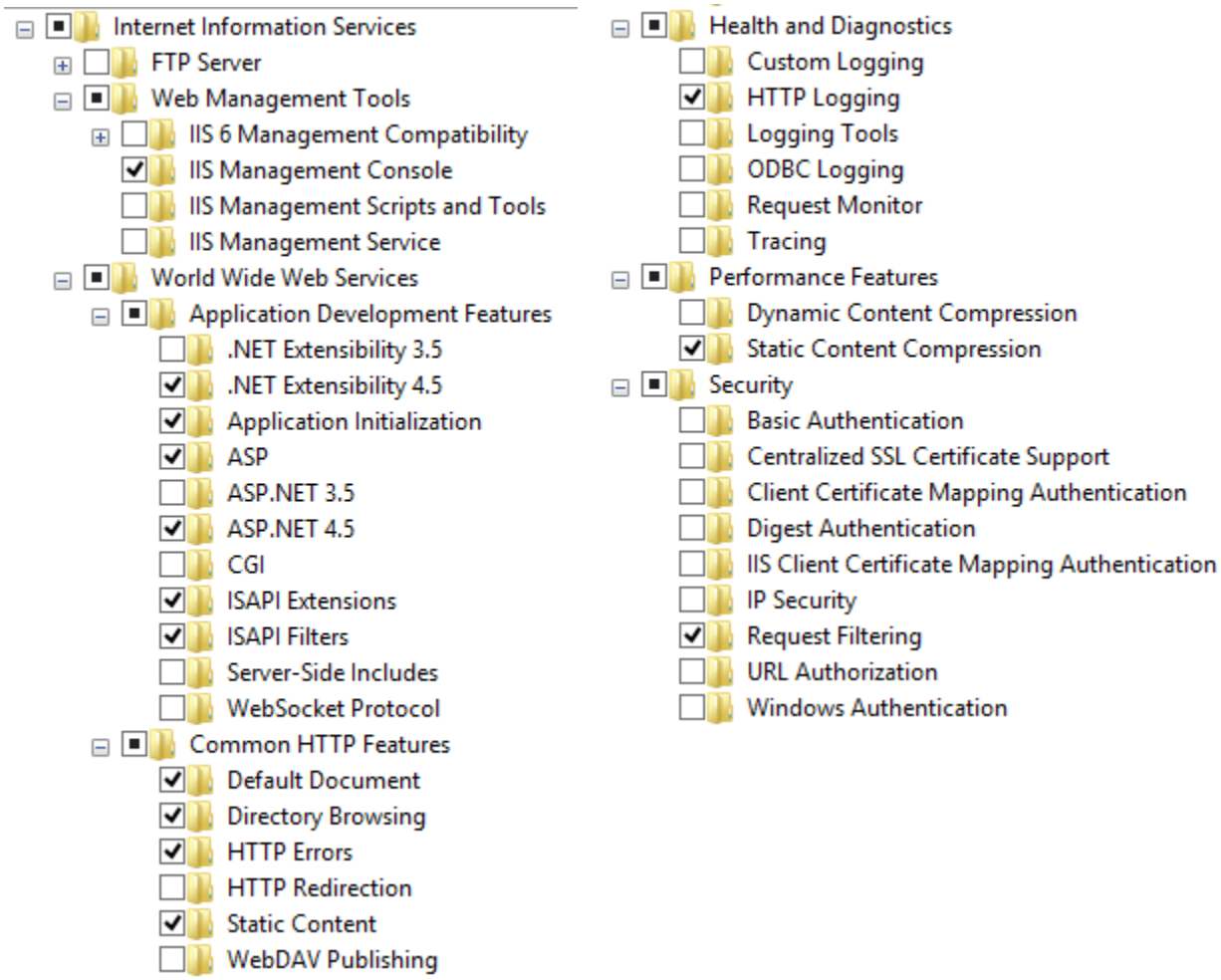


Windows Features

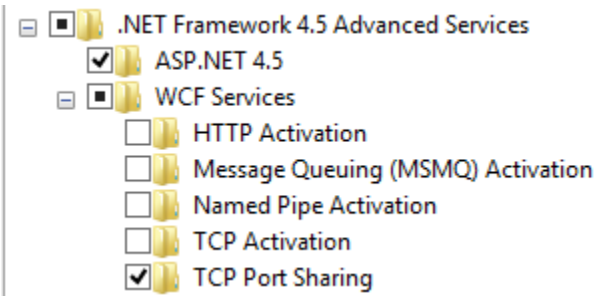


Windows 7/8/10:

IIS Features

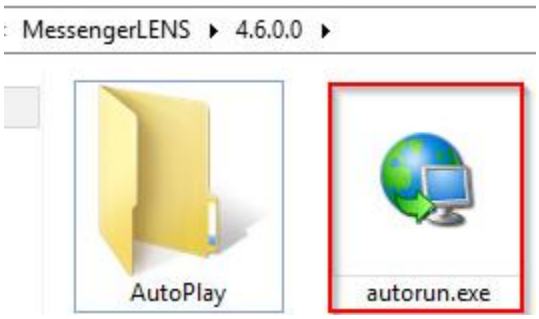


.NET 4.5 Features

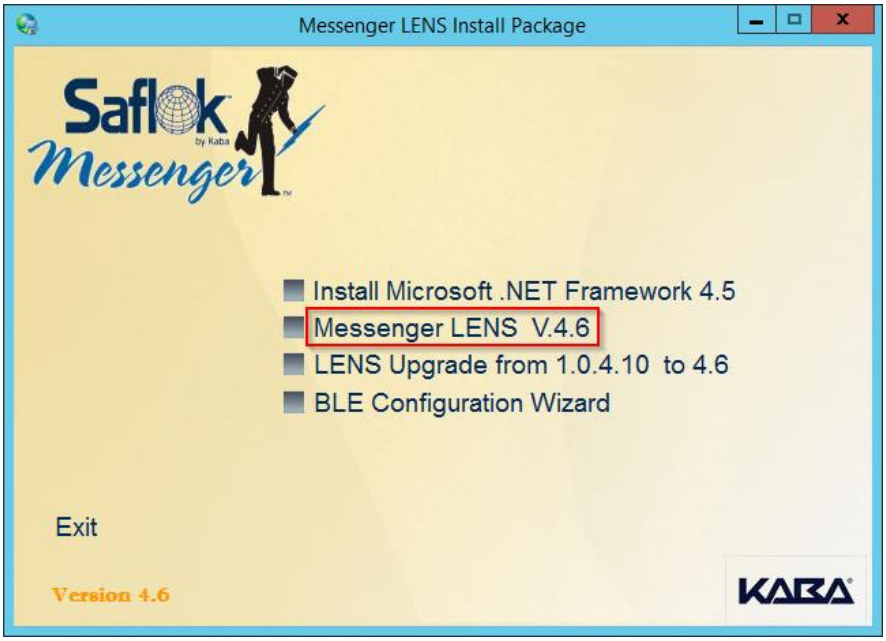


Application Installation

Browse to the Messenger LENS installation on the Saflok Messenger Install CD in the Supplemental Installations folder, or downloaded LENS package. Double click the Autorun.exe file to launch the LENS installer.

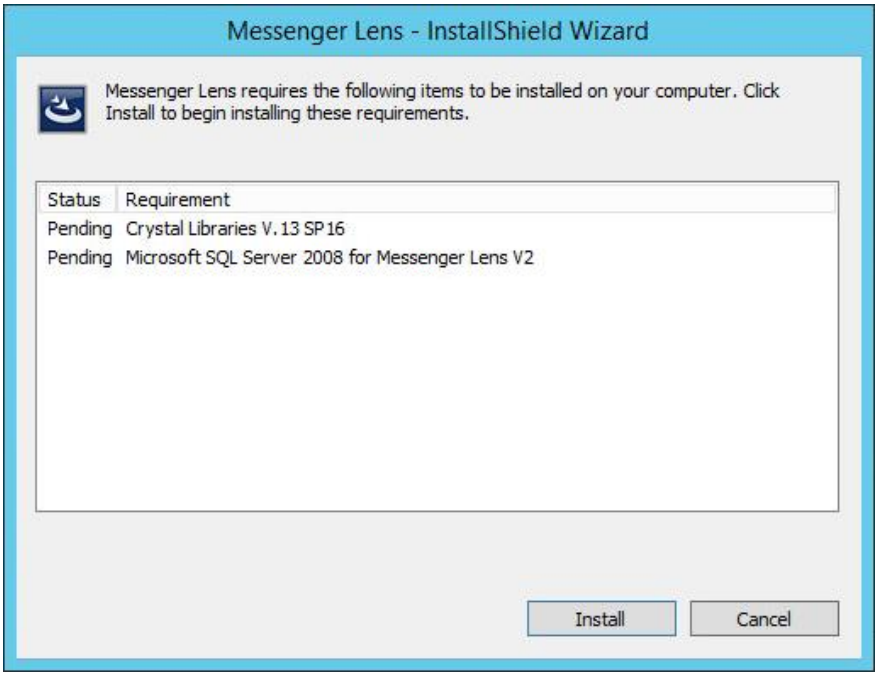


Click the text for Messenger LENS V.X.X.

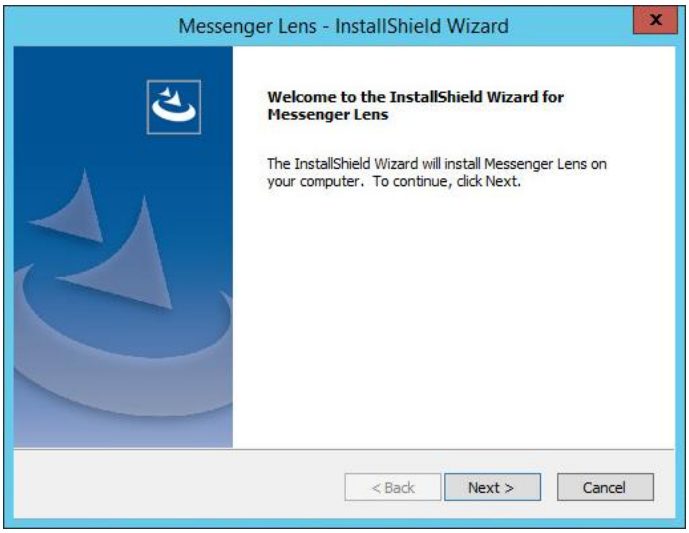


You'll be prompted to install the necessary pre-requisites. Click the Install button to continue.

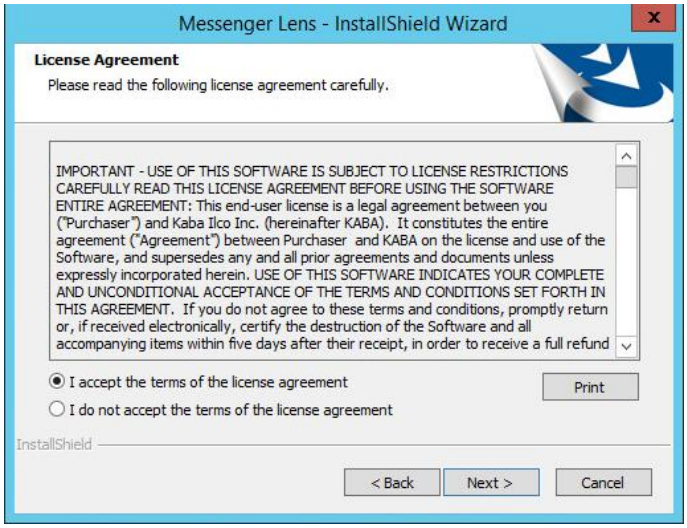
Note: The SQL 2008 installation can take 10 or more minutes to complete, but doesn't require any user interaction.



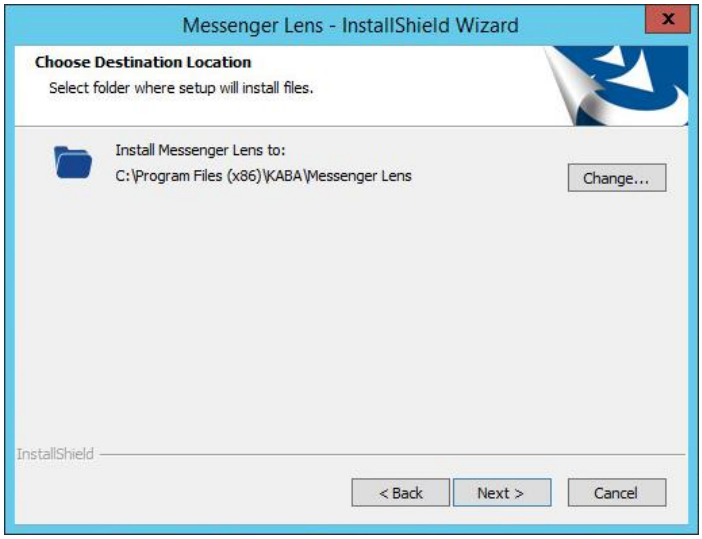
After the pre-requisites have installed, the Messenger LENS installation dialog box will appear. Click Next to continue.



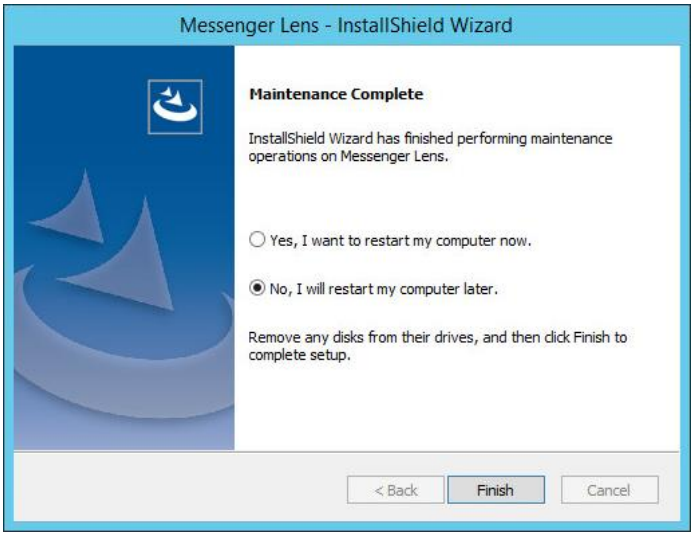
Accept the license agreement, and click Next to continue.



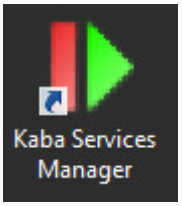
Select the installation destination, or click Next to continue & use the default.



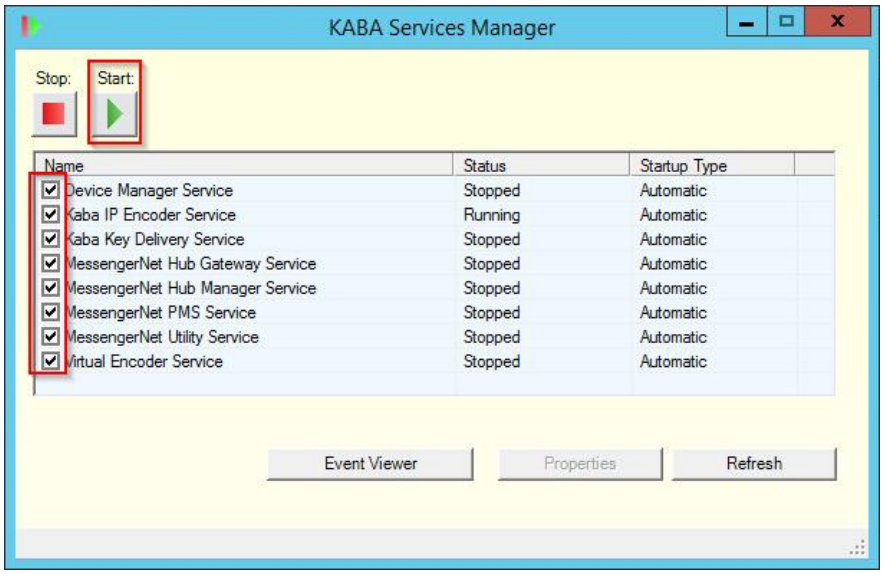
Once the installation is complete, select No, I will restart my computer later.



Launch the Kaba Services Manager from the desktop.

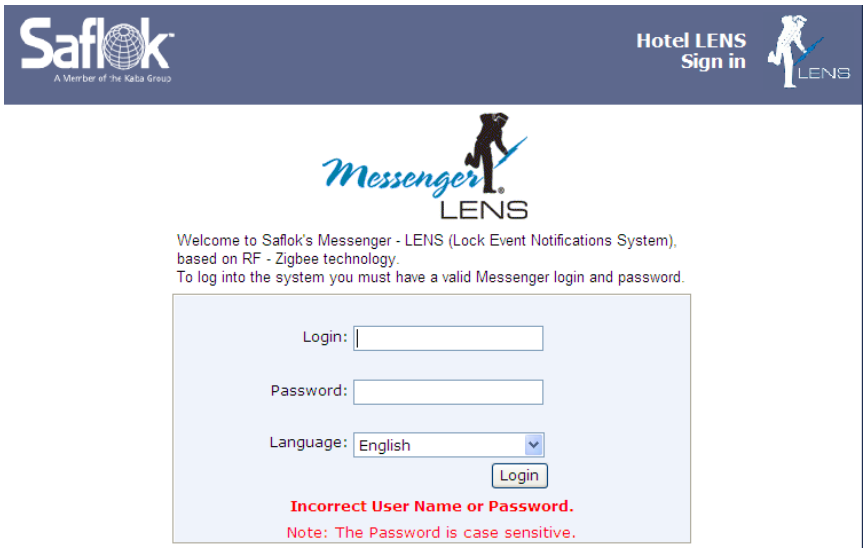


Select all of the checkboxes, and click the Start button.



Launch the Messenger LENS web page using the shortcut on the Desktop.

Log into the LENS web page using a Saflok administrator account.

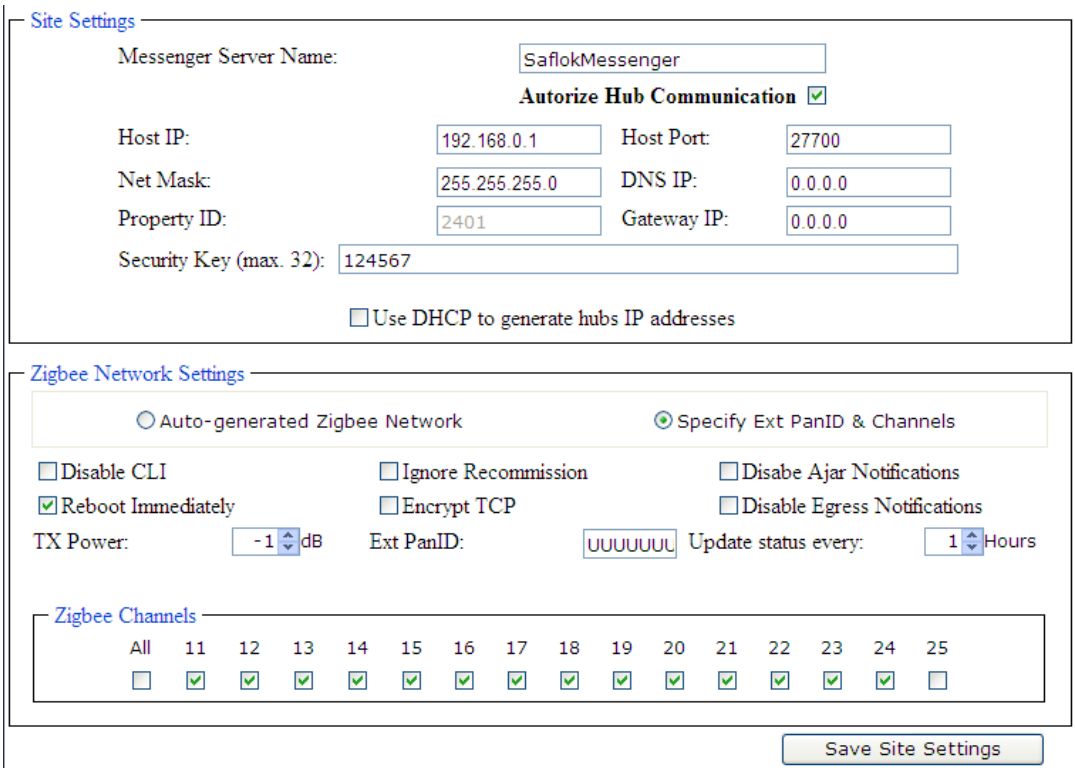


Change Messenger Server Name to match the computer's name.

Check the Authorize Hub Communication checkbox.

Set the Host IP to match the Saflok server's IP address that the hubs will use to connect to it. Set the Net Mask to the subnet mask of the Messenger hubs (***not*** the Saflok server's subnet mask). Enter the Gateway IP that the Messenger hubs will use (***not*** the Saflok server's Gateway IP).

If you're using DNS to resolve the server's IP, enter in the DNS IP that the hubs will use.



If you are using Static IP addresses for the Messenger hubs, uncheck the Use DHCP to generate hubs IP addresses checkbox **(this is the most common configuration).**

If using DHCP-assigned addresses for the hubs, enter the DNS and Gateway that the **hubs** will use and leave "Use DHCP to generate hubs IP addresses" checked.

Leave all other settings on their defaults. Click Save Site Settings when finished.

LENS is now ready to be used.