

Kaye LabWatch® LT

Startup Guide



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Chapter 1. Installing the Diva Telephone Board and Kaye LabWatch LT Software

Installing and setting up LabWatch LT is fairly straightforward. However, you must first be sure that your PC meets the necessary requirements.

1.1 System Requirements

- OS compatibility (MS Windows 7 32 bit and 64 bit, MS Windows XP SP3 32 bit, MS Windows Server 2008R2-Standard). English, German, French, Italian, Spanish, Portuguese and Chinese language version of above mentioned operating systems are supported.
- Minimum P4 or equivalent PC/Server design capable of running the required MS Operating System (OS).
- Memory – Minimum 4 GB of RAM
- Hard Drive – Minimum 40 GB free space
- CD or DVD Writable Drive
- Internet access
- IP address (assigned by customer's IT department) for each Base Station used
- One direct-connect USB (hubs or expansion cards do not work)
- One PCIe (1x or greater) slot for telephony media board
- 101-key standard Keyboard and mouse (can be used with KVM switching)
- Graphics – 1024x768, 256 color resolution
- SVGA flat screen or LCD monitor (17-inch recommended, can be used with KVM switching)
- 10/100/1000 Network Interface

1.1.1 Peripherals

- Networked black and white or color laser printer for all reports and printouts. (optional, recommended)
- Local color ink jet/laser printer for all reports and printouts (optional).

1.1.2 Computer Software

- OS compatibility (MS Windows 7 32 bit and 64 bit, MS Windows XP SP3 32 bit, MS Windows Server 2008R2-Standard). English, German, French, Italian, Spanish, Portuguese and Chinese language version of above mentioned operating systems are supported.
Hot Fixes is optional but strongly recommended.

Note: *LabWatch LT software package will be installed based on language OS (Win 7 German, Win 7 English etc.) instead of regional and language option selection in operating system. For any language OS which is not supported, the English version will be installed by default.*

- Anti-Virus and anti-Spyware/Spam software (optional, highly recommended)
- Word processing, spreadsheet software and Adobe Reader (Optional, export of reports to Word, Excel and PDF format not possible in absence of MS Office, no other impact on the system)

1.1.3 Application Software

- LabWatch LT 1.0 software package

IMPORTANT: *RF ValProbe, LabWatch Pro and LabWatch LT cannot run on the same machine. GE recommends using the LabWatch LT machine only for LabWatch LT.
GE cannot test with all applications that could possibly be installed and cannot guarantee how the system will react with other software on the same machine.*

1.2 Installing the Dialogic Diva Analog Telephone Board

This section defines the steps needed for installation of the LabWatch Telephone Service. It focuses on hardware installation of the Dialogic Diva Analog 2p board.

1.2.1 Prerequisites

- Dialogic Diva Analog 2p PCIe Board
- Dialogic Diva 64 bit (for 64 bit OS), 32 bit (for 32 bit OS) drivers.
- OS: Windows XP or Windows 7 (32 bit or 64 bit)
- System with PCIe (1x or greater) slot.

1.2.2 Installing Diva Analog 2p Board

This section will assist you in installing your Dialogic® Diva® Media Board and connecting it to an analog line.

You need to complete the following three procedures to use your Diva Media Board properly:

1. Insert your Diva Media Board into your computer as described below.
2. Connect your Diva Media Board.
3. Install your Dialogic® Diva® System Release.

Note: *You may need to consult your computer's manual during the installation of your Diva Media Board.*

1.2.2a Inserting Your Diva Media Board into Your Computer

1. For your safety, disconnect all technical and peripheral devices and all energy sources from the computer.
2. Drain static electricity from your body by touching the metal chassis (the unpainted metal at the back of your computer).
3. Remove the cover of the computer as described in your computer's manual.
4. Locate the PCIe slot in your computer.
5. If there is a metal plate at the end of the slot, remove the screw or loosen the clip and remove the metal plate. Keep the screw for fastening your Diva Media Board.
6. If your Diva Media Board comes with a retainer, and space does not permit the use of the retainer, simply remove it before you insert the Diva Media Board. The retainer is only an installation aid, and does not add functionality to the board.

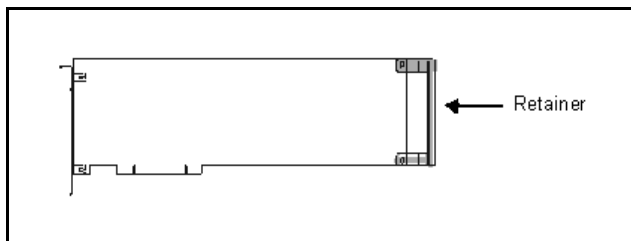


Figure 1: Retainer on PCI Board

7. Before you insert your Diva Media Board, read the following safety instruction:

CAUTION! To avoid damaging your hardware, insert the Diva Media Board only into a PCI or PCIe slot, according to your board type. Inserting the Diva Media Board into any other type of slot can damage your board, your computer, or both.

8. Firmly insert the Diva Media Board into the selected slot. Make sure that the Diva board does not touch the CPU, memory modules, or other parts on the motherboard.

1.2.2a Inserting Your Diva Media Board into Your Computer (cont.)

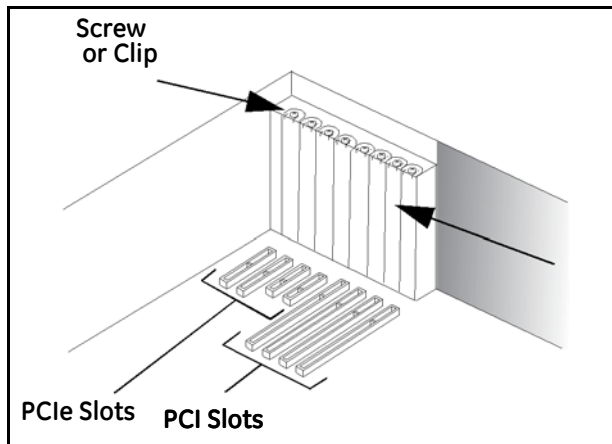


Figure 2: PCI Slots with Screw or Clip

9. Firmly secure the Diva Media Board with the screw or clip.

WARNING! For your safety, make sure that the Diva Media Board's bracket is properly secured to the PC's chassis by fastening the Diva Media Board with the screw or clip. This will ensure proper grounding and avoid personal injuries and damage to your computer, your Diva board, or both.

10. Replace the cover of the computer as described in your computer's manual.

1.2.2b Connecting Your Dialogic® Diva® Analog Media Board

Use the cables included with the Diva Analog Media Board.

Dialogic® Diva® Analog-2 Media Boards

Diva Analog-2 Media Boards have two RJ10 ports for connecting two separate analog lines. You can use any port; typically, you should specify port 1. The port numbers are shown in Figure 3 below. The diagram is oriented with the edge connector pointing downwards.

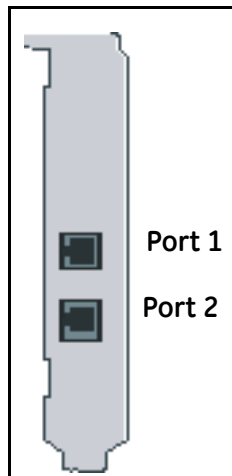


Figure 3: RJ10 Ports

Connect your Dialogic® Diva® Analog-2 Media Board as follows:

1. Take the two cables included with the Diva Media Board and plug the RJ10 connectors into the board.

1.2.2b Connecting Your Dialogic® Diva® Analog Media Board (cont.)

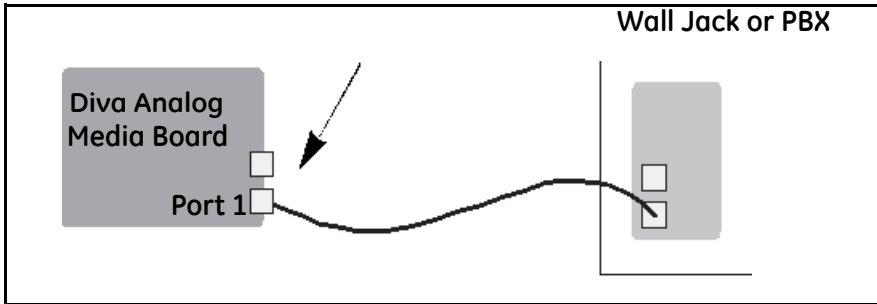


Figure 4: Connecting Media Board

2. Plug the RJ11 connectors into the wall jack or PBX.

Table 1: Contact Assignments (Plugs and Jacks)

RJ10	Signals	RJ11
Pin 2	Ring	Pin 3
Pin 3	Tip	Pin 4

Note: Looking at the RJ10 and RJ11 connector with the exposed connector pins facing you, the pins are numbered from 1 to 4 and 1 to 6 from left to right as shown below.

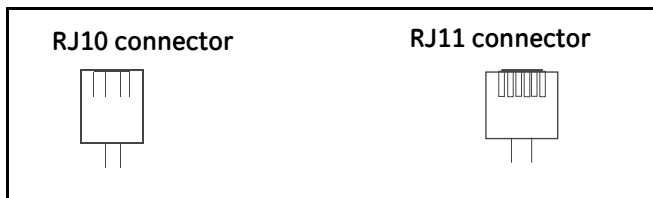


Figure 5: RJ10 and RJ11 Connectors

1.3 Installing Kaye LabWatch LT

Before installing LabWatch LT,

1. Close all applications and disable anti-virus software and any blocking firewall.
2. Make sure that TCP/IP port 1947 is available and not being used by other applications.
3. Make sure that the Windows Logo check is set to **Warn** mode if it is set to **Block** mode.

Windows XP:

To set the Windows Logo check to **Warn Mode** in Windows XP, go to **System Properties** -> **Hardware** and click on the **Driver Signing** button.

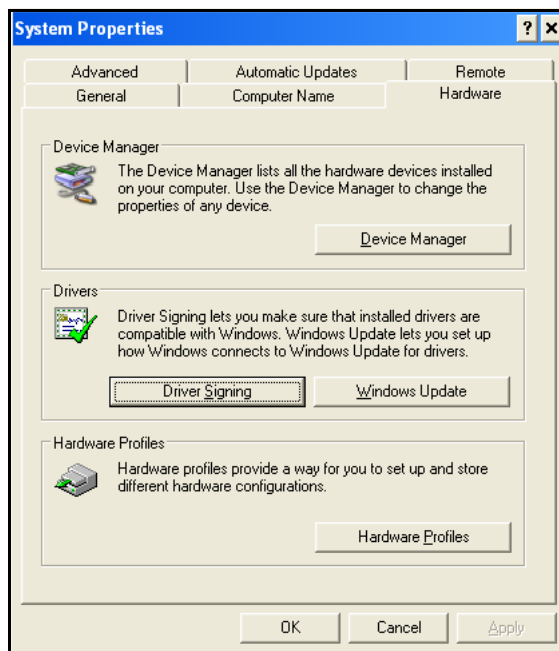


Figure 6: Driver Signing Button in Properties

1.3 Installing Kaye LabWatch LT (cont.)

Select the **Warn** option as shown below and click **OK**.

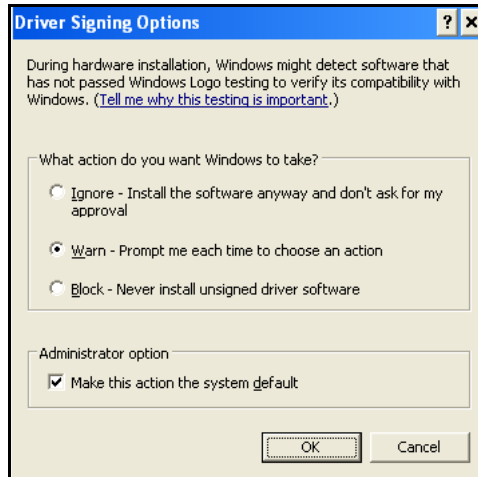


Figure 7: The Warn Option

Windows 7:

To set the Windows Logo (Driver Signing) check in Windows 7, open the **Run** window, type **GpEdit.msc** and click **OK**.

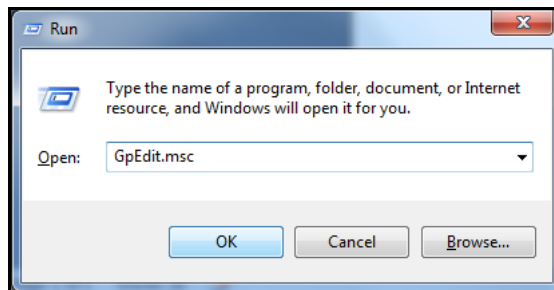


Figure 8: Entering GpEdit.msc

1.3 Installing Kaye LabWatch LT (cont.)

The window below will open. Select **Driver Installation** under **User Configuration -> Administrative Templates -> System Category**. Double click the **Code signing for device drivers** for device drivers.

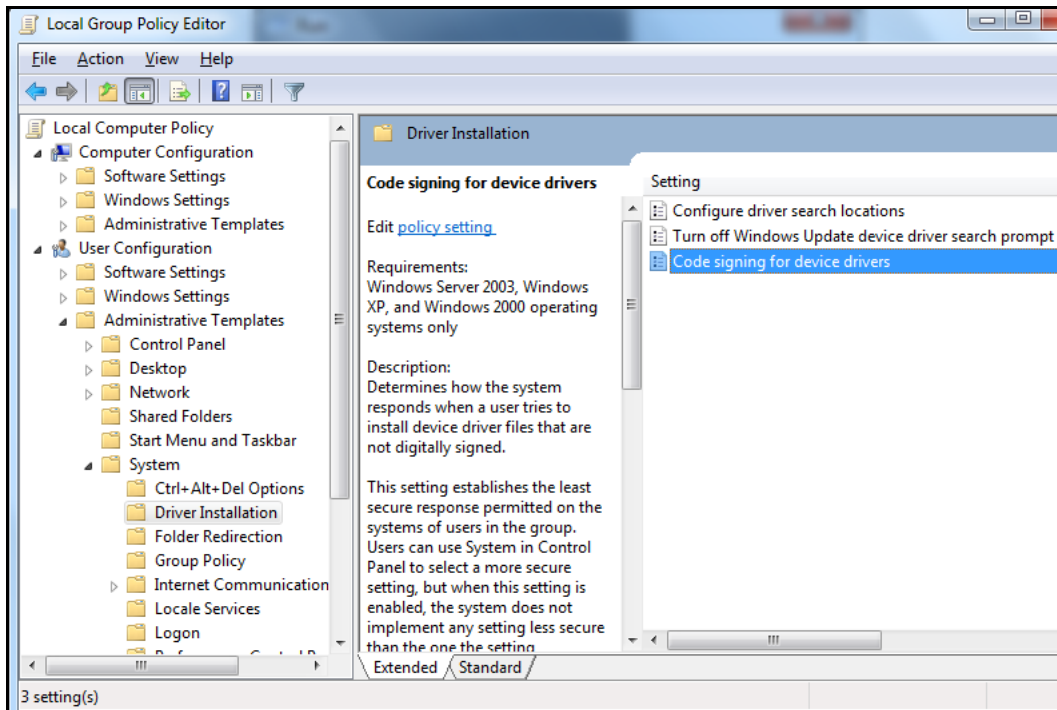


Figure 9: Driver Installation

1.3 Installing Kaye LabWatch LT (cont.)

Select the **Enable** option, and then select the **Warn** option from the dropdown list as shown in Figure 10 below

Click **Apply** and then click **OK**.

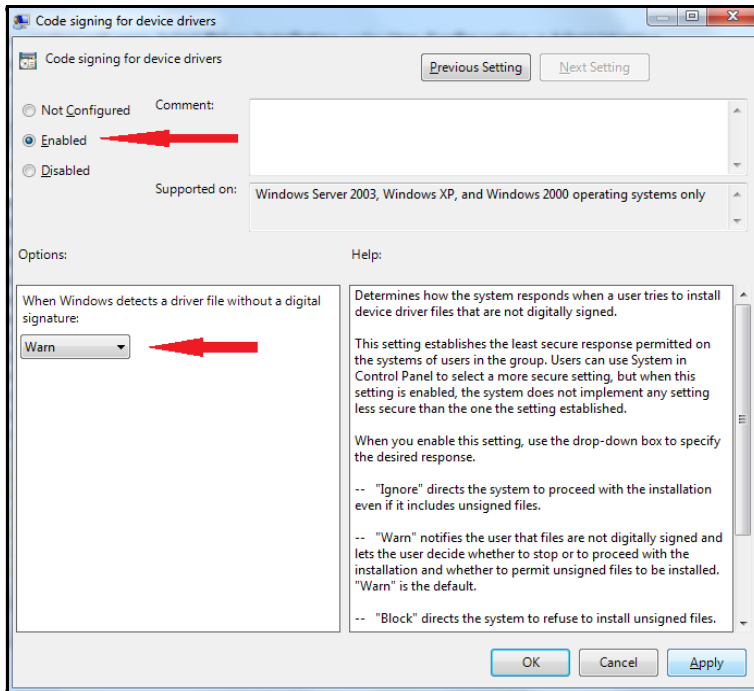


Figure 10: Code Signing for Device Drivers

1.3 Installing Kaye LabWatch LT (cont.)

Also, be sure the Windows Time service is running so that the Base Station can be time synchronized with the PC.

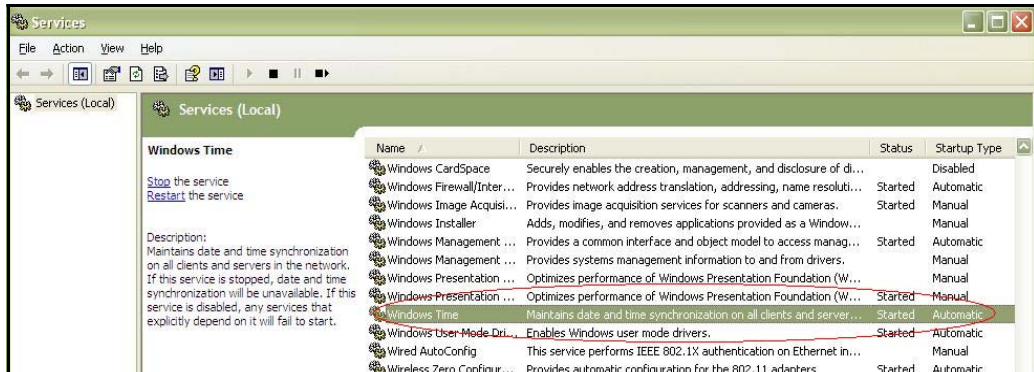


Figure 11: Windows Time Service

If your Windows Time service is not registered, follow the steps below to register:

1. In the **Run** window, type **cmd** to launch Windows command prompt.
2. On command prompt, type **w32tm /register** and click **Enter**.
3. If the service has registered successfully, then “W32Time successfully registered” message appears.



Figure 12: Successful Time Service Registration Message

4. If the service is unable to register, you might not have the appropriate permission level; contact your System Administrator.

1.3 Installing Kaye LabWatch LT (cont.)

Please follow the steps below in order to install Kaye LabWatch LT.

Note: *If the software does not self-start, complete steps 1 and 2 below. If it does self-start, proceed to step 3.*

1. From the CD, double click on the **setup.exe** icon.

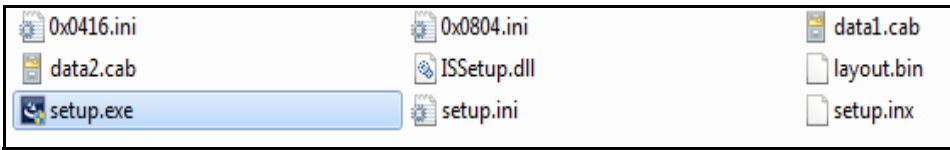


Figure 13: The Setup.exe Icon

Note: *On Windows 7, right-click the **setup.exe** icon or shortcut, and then click **Run as administrator**. On Windows XP, a logged in user needs to have Administrator rights to install the setup.*

2. The setup will install the prerequisites (.Net Framework 4 and Windows Installer) required for the setup if they are not installed already. Once the setup has installed the prerequisites, it will ask for system restart as shown below. Click on **Yes** button to restart system. After system restart, the setup will launch again.

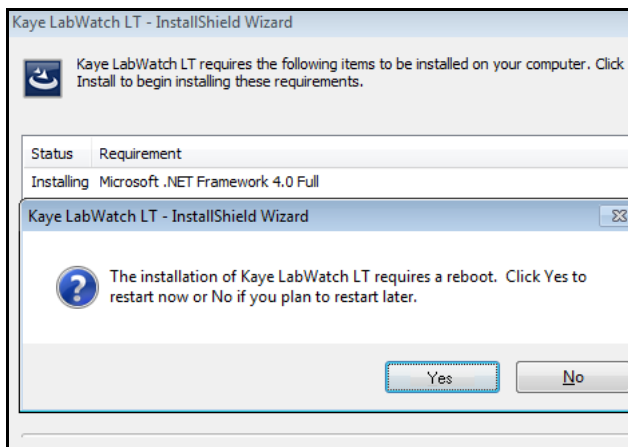


Figure 14: Rebooting

1.3 Installing Kaye LabWatch LT (cont.)

3. Click **Next** to open the InstallShield Wizard.

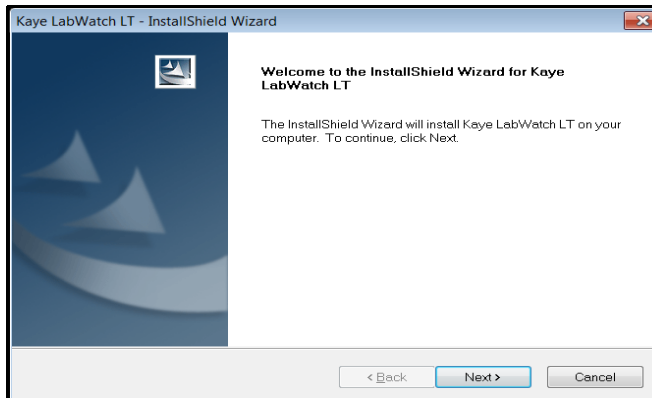


Figure 15: InstallShield Wizard

4. Accept the license agreement in Figure 16 below to proceed with the installation of Kaye LabWatch LT. Click **Next**.

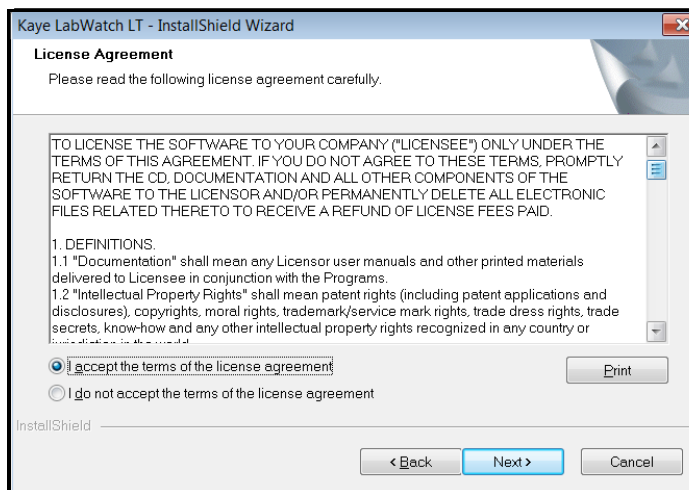


Figure 16: License Agreement

1.3 Installing Kaye LabWatch LT (cont.)

5. Enter **User** and **Company Name** and click **Next**.

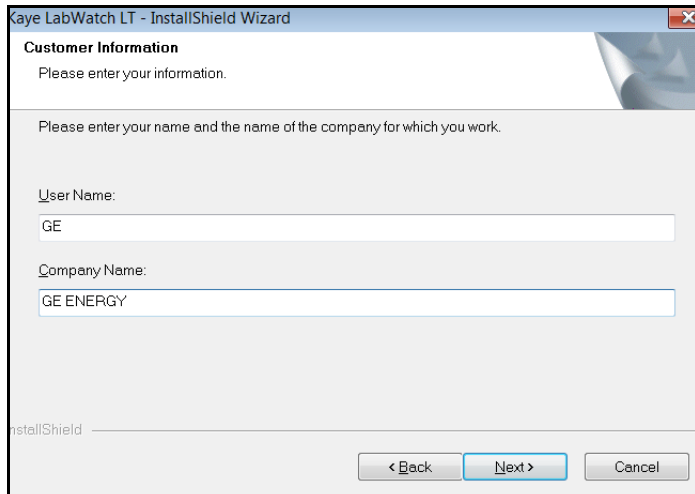


Figure 17: Customer Information

6. On the Setup Type screen, select **Complete** and click **Next**.

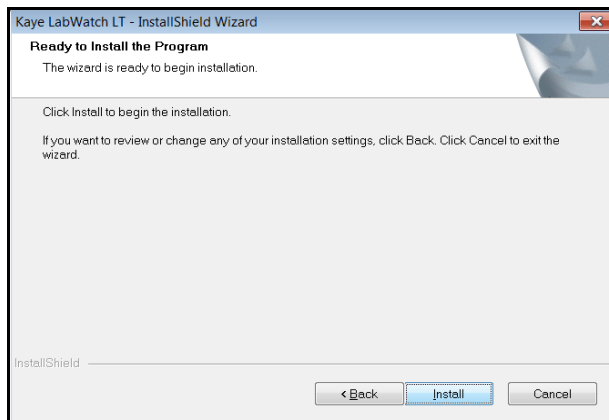


Figure 18: Ready for Installation

1.3 Installing Kaye LabWatch LT (cont.)

7. Click on the **Install** button to start installing LabWatch LT.

Note: Please do not interrupt any of the DOS command windows launched during the Setup to avoid any undesired results. This may require a few minutes. Please wait until the OPC Server screen (Figure 19 below) opens.

8. The OPC Server setup will be launched. Click **Next** to install the OPC Server.

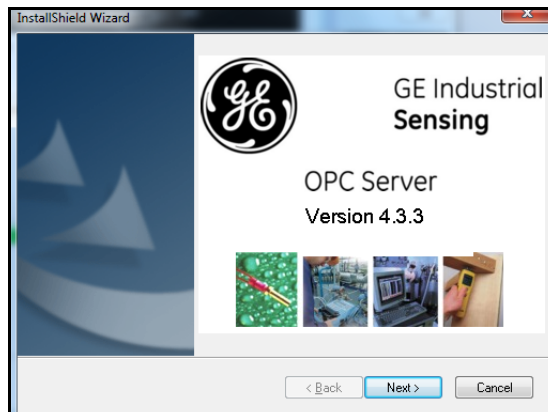


Figure 19: OPC Server Installation

9. Click **Yes** to accept the License Agreement.

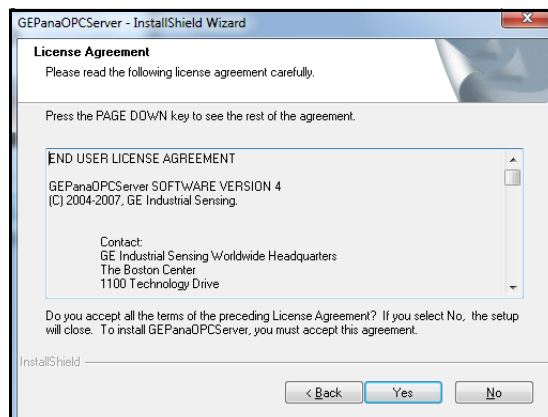


Figure 20: OPC Server License Agreement

1.3 Installing Kaye LabWatch LT (cont.)

10. Keep the XMLDA option unchecked and click **Next**; the setup will start installing OPC Server.

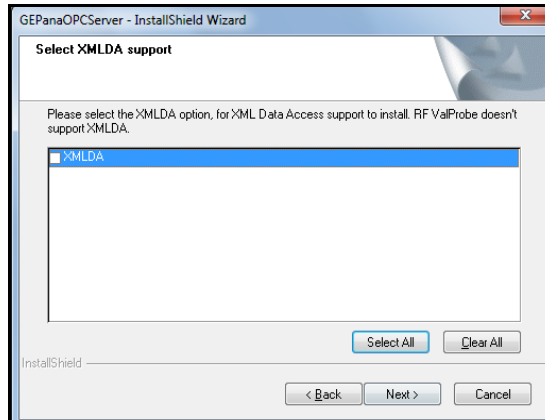


Figure 21: XMLDA Support

Note: *On some machines the following screen may appear. Please click **Next** to proceed.*

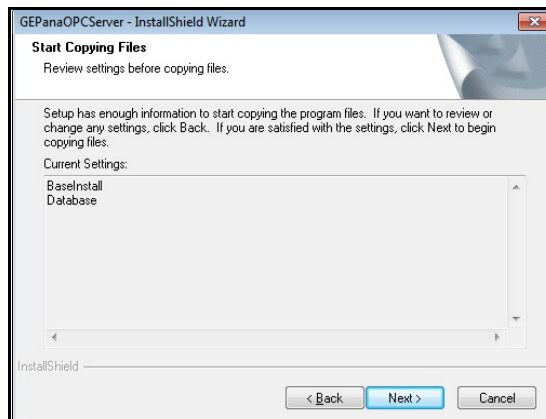


Figure 22: Copying Files

11. Uncheck both the options as shown in Figure 23 on the next page and click **Finish**.

1.3 Installing Kaye LabWatch LT (cont.)

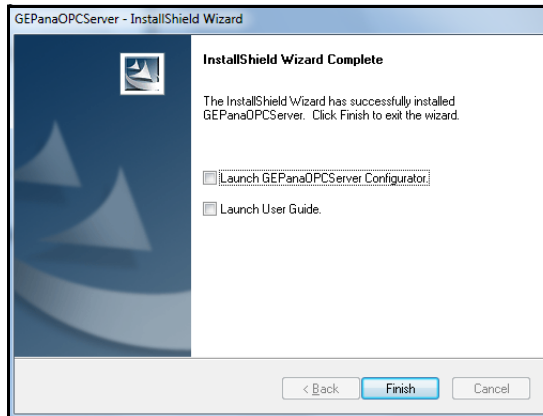


Figure 23: OPC Installation Completion

The system will now load software for the next few minutes. Please wait until a screen with prompts appears.

1.3 Installing Kaye LabWatch LT (cont.)

12. During installation on some machines, the USB Ethernet Adapter Installer may be launched. Click on the **Install** button; otherwise continue with step 13.

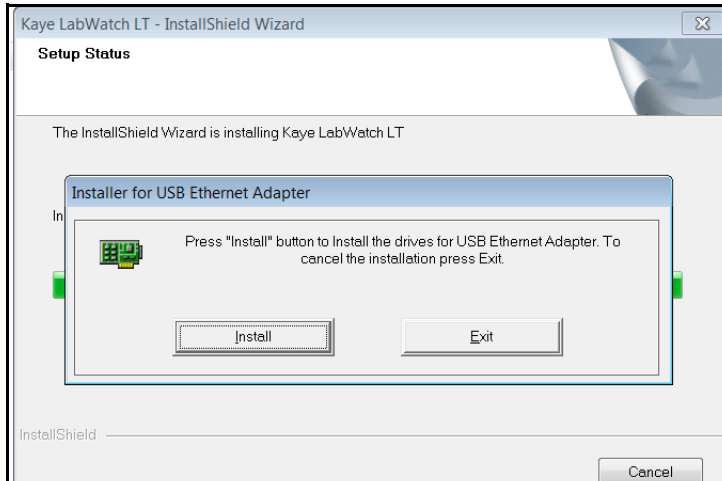


Figure 24: USB Ethernet Adapter Installer

13. If the Windows Logo testing warning appears, then click on the **Continue Anyway** button as shown below.

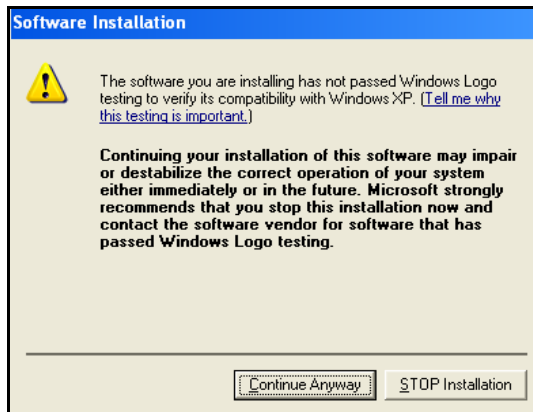


Figure 25: Windows Logo Testing Warning

1.3 Installing Kaye LabWatch LT (cont.)

Note: For Windows 7, the warning dialog below may appear. Select the **Install this driver software anyway** option.

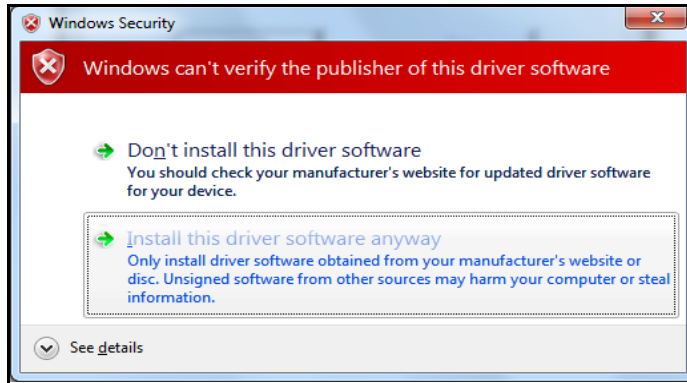


Figure 26: Install Driver Software Anyway Dialog

14. On some machines the following window may appear for USB Ethernet Adapter. Click on the **Exit** button, otherwise continue with step 15.

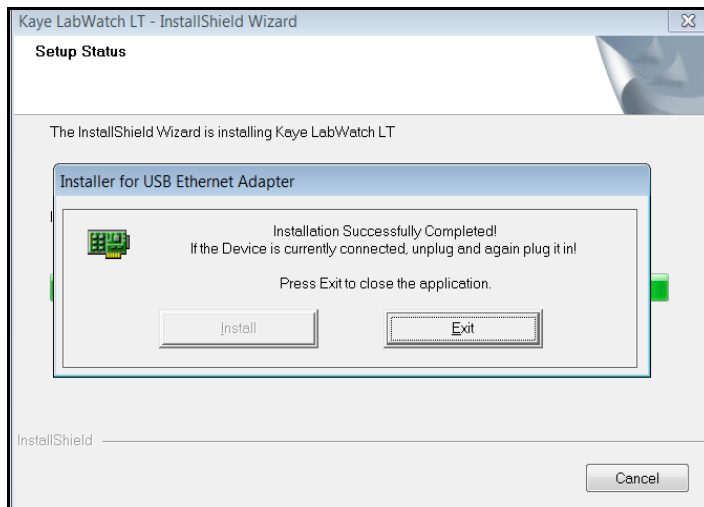


Figure 27: Successful USB Adapter Installation

1.3 Installing Kaye LabWatch LT (cont.)

15. Once the other components are installed, the setup will start installing drivers for the Diva board.

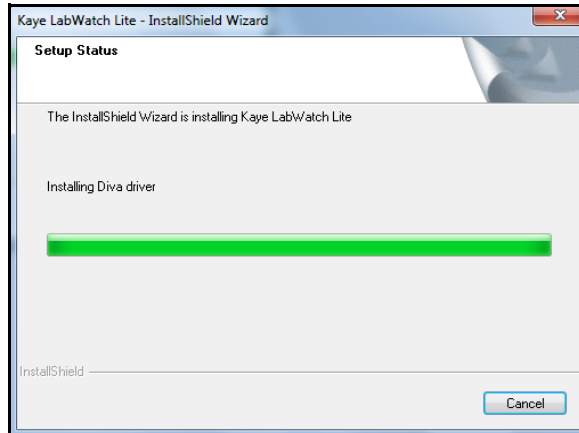


Figure 28: Diva Driver Installation

16. The setup will launch the Dialogic software setup. Click **Next**.



Figure 29: Dialogic Diva Software Installation

17. Select the appropriate country from the list (Figure 30 on the next page) and click **Next**.

1.3 Installing Kaye LabWatch LT (cont.)

IMPORTANT: *This step will not appear if no Diva Analog Card has been installed in the system.*

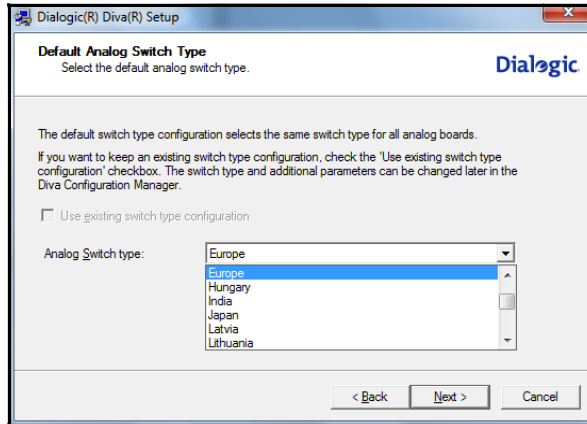


Figure 30: Country and Switch Type

18. Click **Next** for default installation (Figure 31 below).

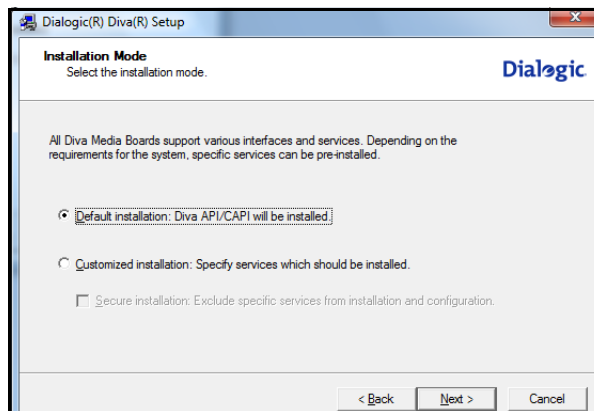


Figure 31: Installation Mode

1.3 Installing Kaye LabWatch LT (cont.)

19. Click **Next** (Figure 32 below).

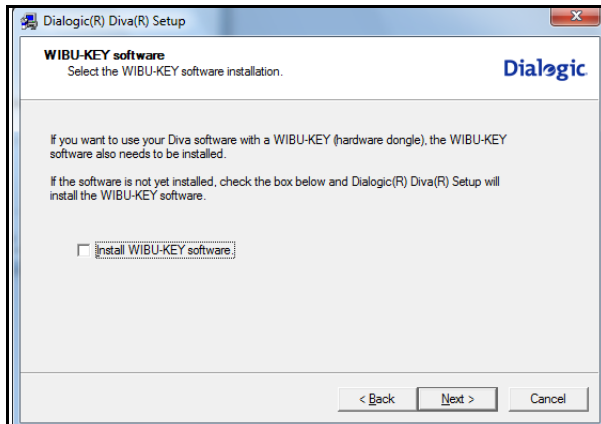


Figure 32: WIBU-KEY Software

20. Click **Install** to start installation.

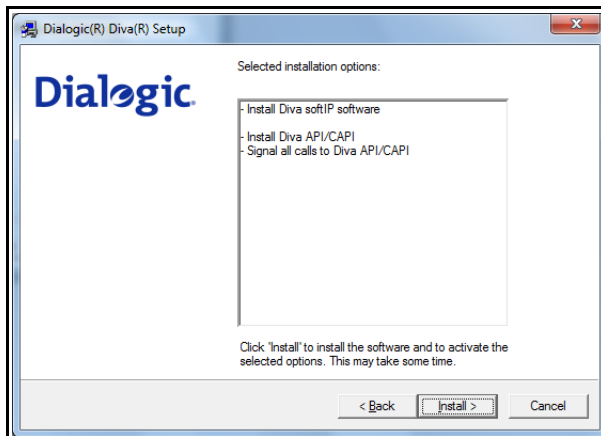


Figure 33: Start Installation

1.3 Installing Kaye LabWatch LT (cont.)

21. Once Diva setup is complete, the window in Figure 34 below will be shown. Deselect the **Restart Your Computer** option and click on **Finish**.

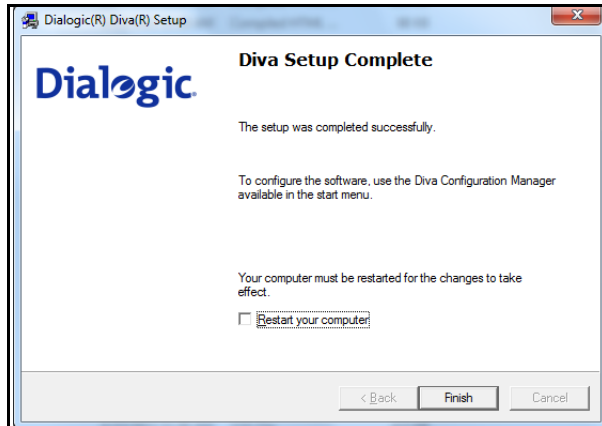


Figure 34: Finish Installation

22. At the InstallShield Wizard Complete screen, click **Finish**.

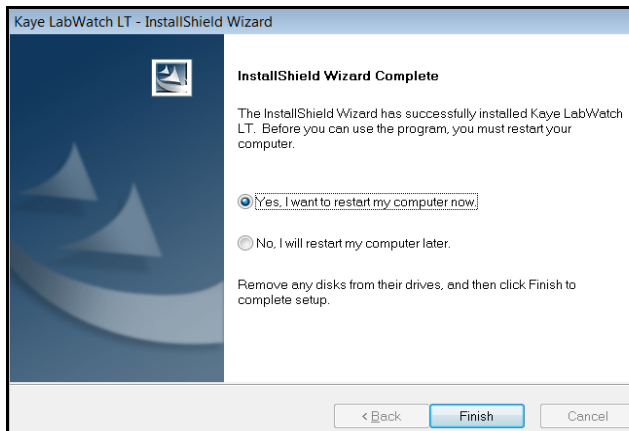


Figure 35: Complete Installation

Chapter 2. Configuring the Hardware and Software

2.1 Setting up RF ValProbe Hardware

After you install LabWatch LT, be sure your RF ValProbe Base Station (s) and Loggers are ready for communication with LabWatch LT. A system can contain up to four Base Stations. A user must obtain separate IP addresses (typically, from the user's IT department) for each Base Station. Before configuration, users need to have a clear understanding of where each Base Station will be installed and which Loggers are associated with each Base Station. They can then set the Loggers to the same RF network ID as the associated Base Station before putting them in their locations.

Note: *Two Base Stations can have 40 loggers per Base Station; overall, you can configure no more than 100 loggers per system.*

2.1.1 Connecting the Base Station

Starting the Base Station requires plugging in the power supply and the USB or Ethernet connections. The rear of the Base Station appears similar to Figure 36 below.



Figure 36: Base Station Connections

- To power the Base Station, insert the round barrel connector into the power input jack of the Base Station (the input at the left shown in Figure 36 above). Attach the power supply to the power cord. Then insert the power cord into a standard 100-240 VAC outlet. A green light next to the power outlet on the Base Station indicates that the station is powered up.
- For USB use, a separate USB-adaptor-cable plugs into a USB socket on the user's PC. The other end of the USB-adaptor-cable fits into the 10bT Ethernet socket on the Base Station. Use only ONE USB-adaptor-cable on a PC.

IMPORTANT: *The external power supply included with your RF ValProbe is fitted with an AC power cord suitable for the country of destination.*

2.1.2 Setting up the Loggers

When you are setting up the Loggers, you must first be sure that they are switched on, and that they have the same network ID (from 0 to 9 or A to F) as the Base Station. (For instance, all Loggers must have the network ID “5” if the Base Station has the ID “5”.)

IMPORTANT: *If you have more than one Base Station, each one must be configured with a unique network ID.*

To switch on the Logger, see the back of the Logger above the battery panel, as shown in Figure 37. Slide the switch below the network ID wheel to the right to turn on the logger.

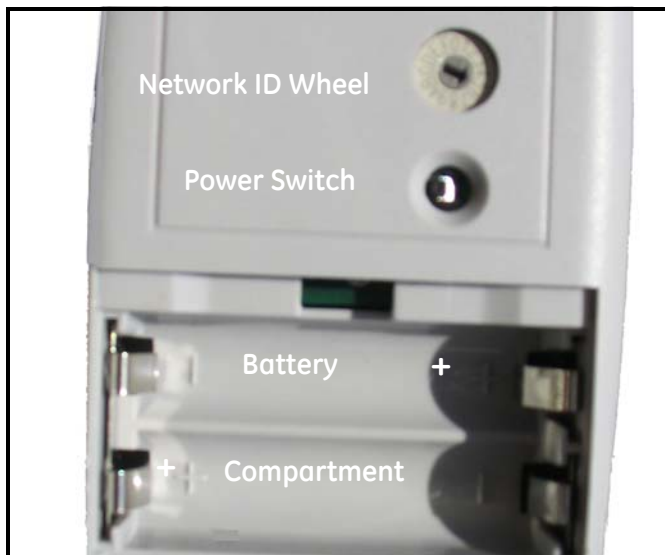


Figure 37: Logger Battery Compartment, Power Switch and Network ID Wheel

Be sure the network ID for both Base Station and Loggers is set up as shown above.

If you need to adjust the Logger’s network ID, use a small screwdriver to turn the arrow in the middle of the network ID wheel in Figure 37 above. Be sure the arrow points to the appropriate ID number. (You can choose from numbers 0 through 9, and letters A through F.)

Note: *You must change the Logger network ID before you switch on the Logger. If you have already switched the Logger on, switch it off and then turn it back on so the Logger can read the correct ID.*

2.1.3 Connecting an External Sensor and Auxiliary Inputs

If any of your Loggers are designed for use with an external sensor, that sensor will have been shipped in the same package as your Logger.

- To connect the sensor to the Logger, simply slide the connection end of the sensor into the hole on the right side of the Logger.
- To disconnect the sensor from the Logger, pull back the connection sleeve (the grooved part visible outside the connection) and you can pull out the sensor.

CAUTION! When handling external sensors, avoid bending the sensor near either the tip or connector ends. Repeated bending will damage the sensor.

You connect auxiliary inputs (4-20 mA, 0-10V or contact closure) via the terminal at the top of the Logger shown in Figure 38 below. Figure 39 below illustrates wiring connections for the auxiliary inputs.



Figure 38: Auxiliary Input Terminal

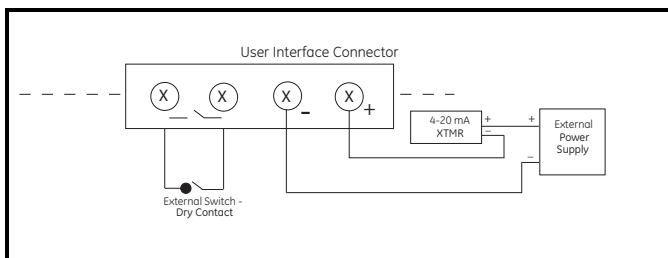


Figure 39: Interface Connector Wiring Diagram

2.2 Configuring Kaye LabWatch LT Software

Once you have installed LabWatch LT, click on **Start >Programs>LabWatch LT** to open the program. The Login window opens.



Figure 40: Login Window

2.2 Configuring Kaye LabWatch LT Software (cont.)

The Configuration Wizard will open before you launch LabWatch LT if the following conditions are met:

1. No users have been created
2. No tags have been defined

Through the Configuration Wizard you can create user accounts, discover Base Stations/Loggers, associate a sensor with a tag, set tag properties, create tag groups, associate users with tag groups, and associate schedules with users.

The following sections describe configuration steps.

2.2.1 User Registration

In a newly installed system, no user accounts exist for LabWatch LT. So when you start LabWatch LT for the first time, a Registration window appears in which you can create new users. For each user, enter the relevant data in the fields.

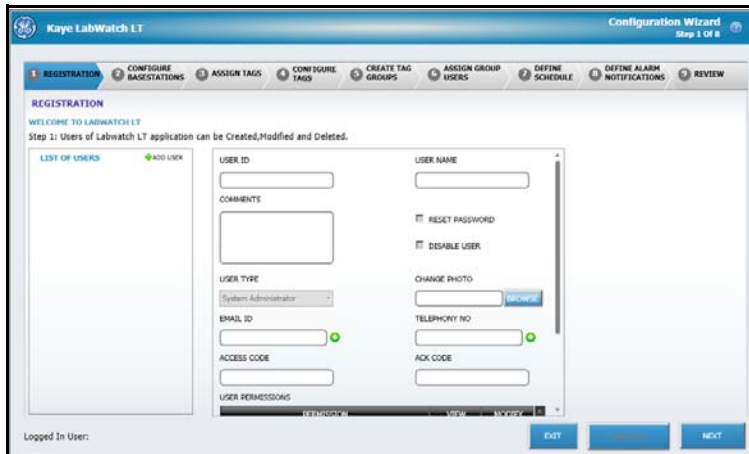


Figure 41: User Creation Screen

Users can be one of three types, each with specific permissions:

System Administrator - Creates and maintains user accounts, locks and unlocks the system, sets site options and system preferences, backs up and restores user information, and views, prints, and maintains the audit trail. The System Administrator also performs Logger calibration.

Operator - Can view screens and create reports, Operators can also have particular permissions if the System Administrator has set them up with specific permissions in this window.

Guest - Can view screens, but cannot change any parameters.

IMPORTANT: *Whenever new users are created, they are assigned default passwords that are the same as their User IDs. A user must change the default password at first log in.*

After creating the required number of user accounts, click **Next** to configure the base station and loggers, as explained on the following pages.

2.2.2 Discovering Base Stations and Loggers

In the next window, click on **Discover Base Stations** to determine what Base Stations are on your network, and click on **Get Loggers** to find the Loggers for each of the selected Base Stations. You can also **Enter an IP Address** to locate a particular Base Station.

Note: *To configure a new Base Station, go to “Configuring a New Base Station” on page 34.*

Note: *If you want one of the Base Stations configured for USB, then it should be added manually using Enter an IP Address (IP 192.168.99.100), only after you have configured and added other Base Stations on Ethernet.*

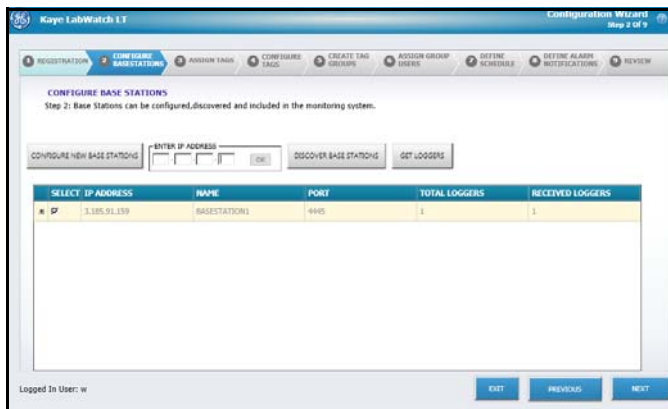


Figure 42: Configure Base Station Window

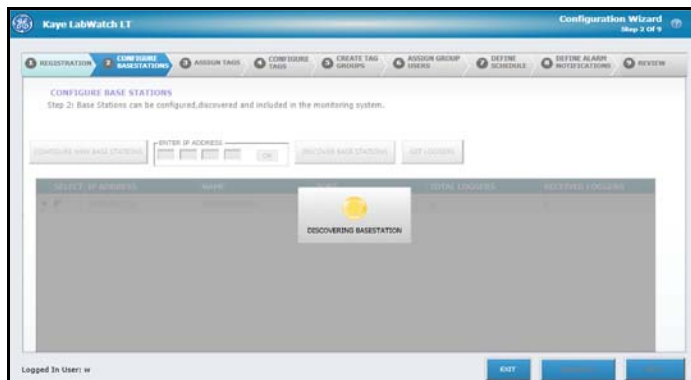


Figure 43: Discovering Base Stations

2.2.2 Discovering Base Stations and Loggers (cont.)

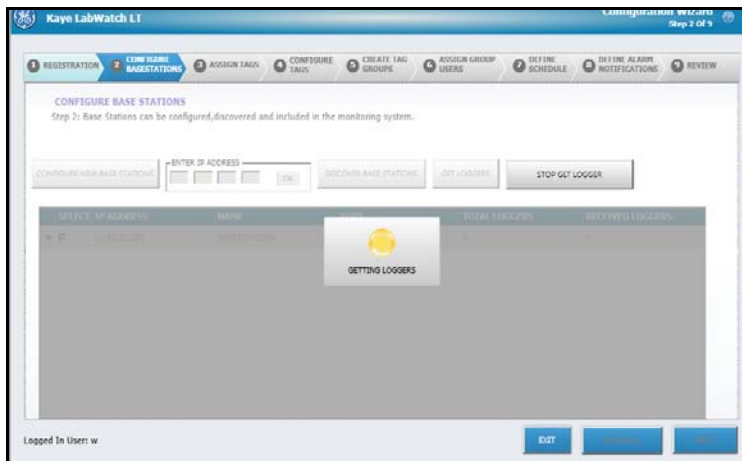


Figure 44: Getting Loggers

When a user clicks on **GET LOGGERS**, it toggles to a **STOP GET LOGGERS** button. Clicking on **STOP GET LOGGERS** will stop LabWatch LT from searching for Loggers from selected Base Stations.

After the Loggers have been received and displayed, a user can select/unselect Base Stations and Loggers by clicking the corresponding check boxes. Click **Next** when you have finished.

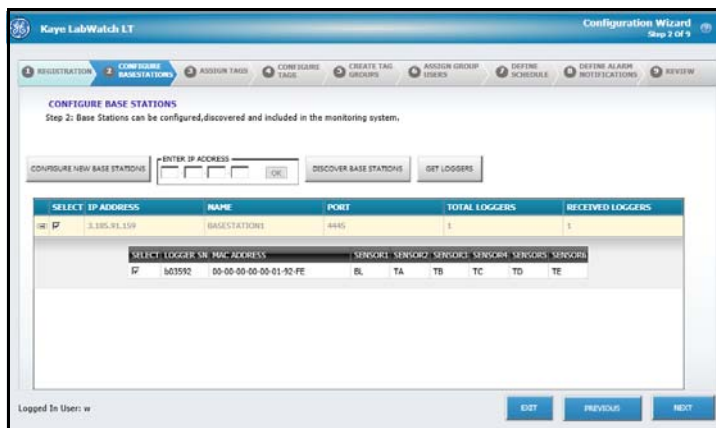


Figure 45: Screen Populated with Base Stations

2.2.2 Discovering Base Stations and Loggers (cont.)

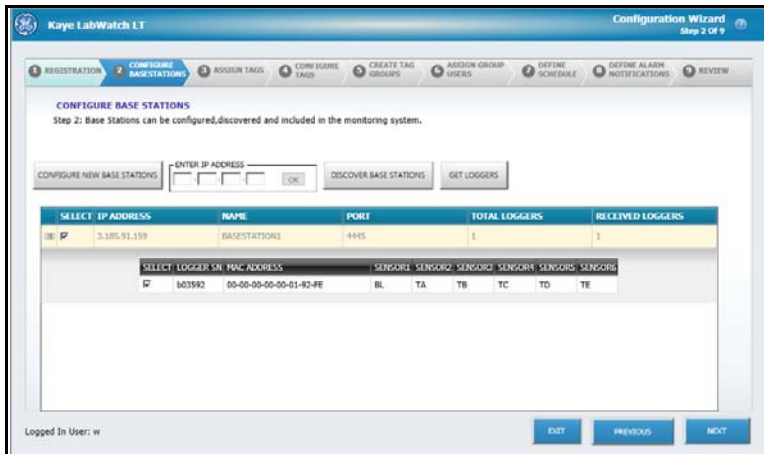


Figure 46: Populated Screen with Selected Loggers

Note: You can configure four (4) Base Stations. Two Base Stations can have 40 loggers per Base Station; overall, you can configure no more than 100 loggers. Note that you can have only one (1) Base Station configured for USB.

2.2.2a Configuring a New Base Station

Setting up a New Base Station for the Configuration on PC

- a. Use CTA5 Crossover cable to connect the USB-Adapter and Base Station. Put one end of the crossover cable into the Base Station's Ethernet port and the other end into the USB-Adapter's Ethernet port.
- b. Plug-in the USB-Adapter into the PC's USB Port.
- c. The USB Adapter will be detected and Network properties will show a new connection as shown in Figure 47 below.

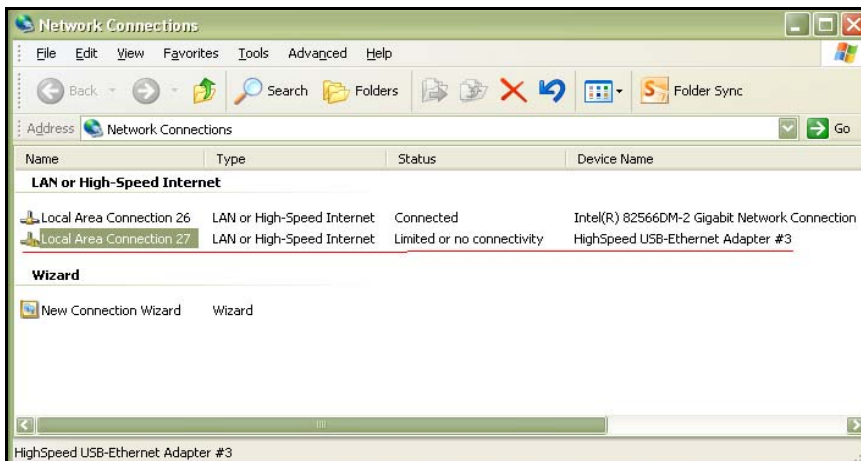


Figure 47: Network Properties with New Base Station

A new Base Station needs configuring before it is added to the LabWatch LT system. By default, Base Stations are in USB mode but must be switched to Ethernet. Configuration involves the following steps on Ethernet and USB.

Note: Please skip Step 1, 2 and 6 for configuring Base Station on USB.

1. Switch the Base Station from USB to Ethernet mode.
2. Put the Base Station on the Ethernet and make sure it is online and that the LabWatch LT PC is able to ping it.

2.2.2a Configuring a New Base Station (cont.)

3. Assign an RF network ID to Base Station. All Loggers intended for the Base Station should also be set with same Network ID manually; all loggers will communicate with the Base Station on that Network ID. However, be sure no two Base Stations have the same network ID.
4. Perform the Base Station's Time Synchronization against the PC Time on which Lab watch Lite Software is running.

Note: While performing this step, make sure the "Windows Time" service is running on the PC.

5. Use the link **Click Here to find Base Station on USB** to detect the Base Station on the USB-Ethernet Adapter.

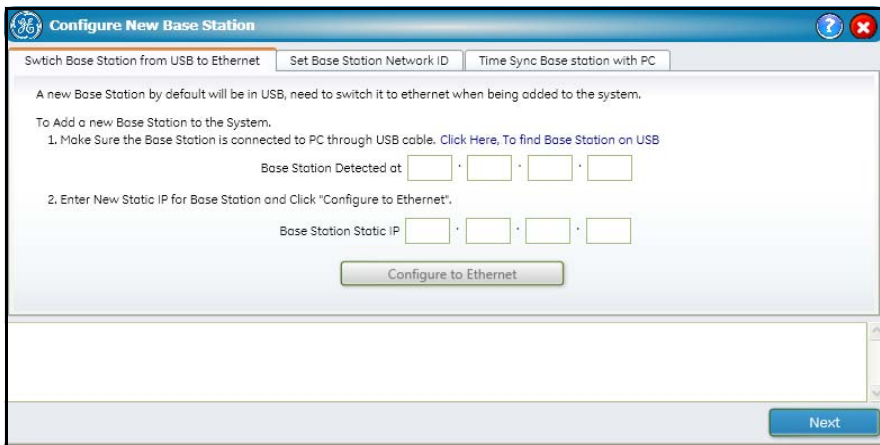


Figure 48: Switch Base Station Tab

2.2.2a Configuring a New Base Station (cont.)

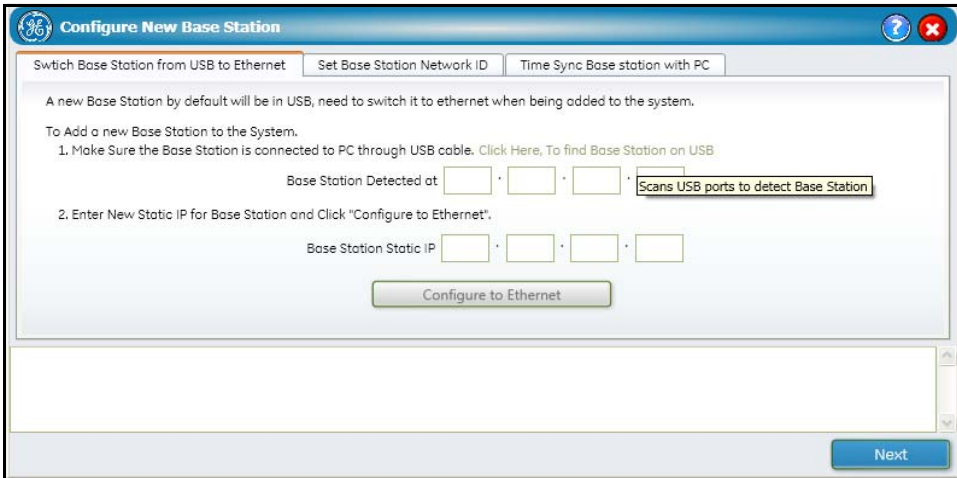


Figure 49: Scanning USB Ports

If a Base Station is connected through the USB port, then the Base Station IP address will appear in the “Detected at” text box after **Click Here to find Base Station on USB** is clicked.

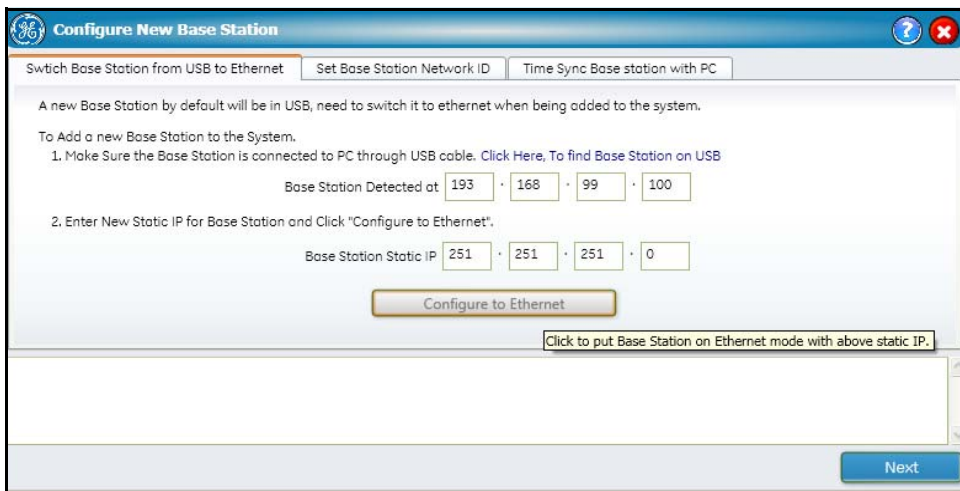


Figure 50: Detected Base Station

2.2.2a Configuring a New Base Station (cont.)

6. Enter the new “Base Station Static IP” which has to be assigned to the Base Station. Your business IT department may need to assign this unique Static/Fixed-address/Reservation IP address using their network configuration tools. Click **Configure to Ethernet**. Once successful, the “IP Address Switched Successfully” message will appear.
7. Click **Next** to configure the Base Station’s RF Network ID.

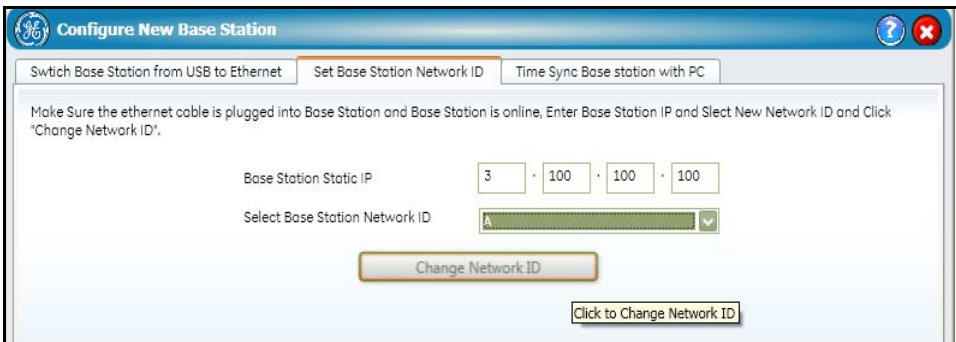


Figure 51: Network ID Configuration

8. Enter the Base Station's Static IP. Enter the new RF Network ID, and click **Change Network ID**. Current Network ID of the Base station is detected and a confirmation message is prompted, For easy identification and future use, please affix a tag to the Base Station noting the selected Base Station IP address and the RF Network ID.

2.2.2a Configuring a New Base Station (cont.)

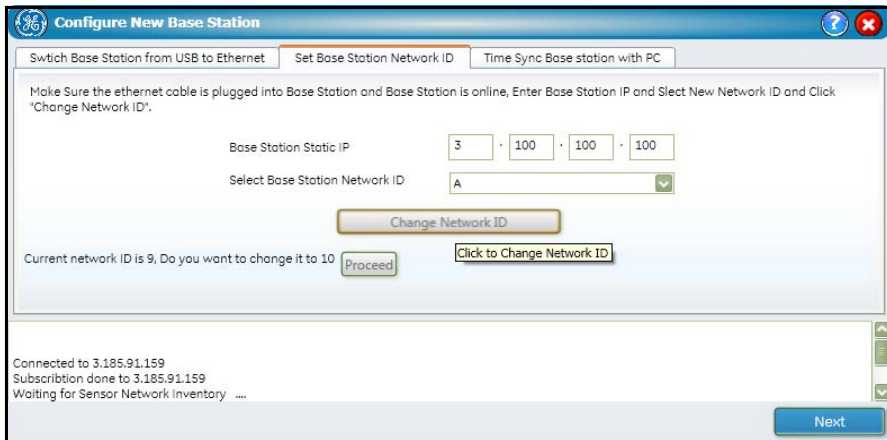


Figure 52: Confirmation Message

9. Click **Proceed** to confirm you want to change the ID. Once done, the “Network ID Changed Successfully” message appears.
10. Click **Next** to proceed to Time Synchronization of the Base Station with the LabWatch LT PC.

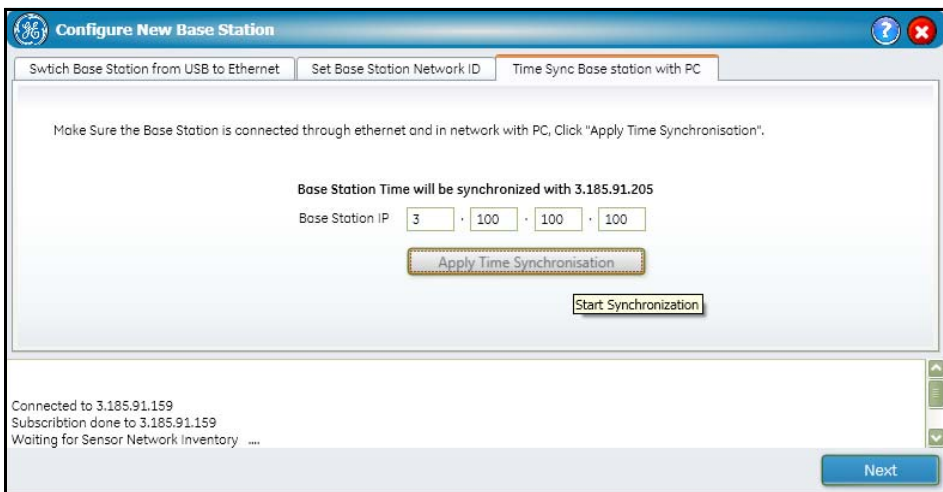


Figure 53: Time Synchronization

2.2.2a Configuring a New Base Station (cont.)

Now you must synchronize the Base Station's time with that of the PC on which LabWatch LT is running. The IP address of the PC is displayed; a user needs to enter the Base Station IP address.

Make sure the "Windows Time" is running on the PC and then click Apply Time Synchronization. Once done, the message "Base Station Time Synchronization is Successful" appears.

Loggers on the Base Station also need their times synchronized with that of the Base Station; do this manually by power resetting all the loggers.

Please follow the steps below to Sync the logger time with Base Station Time:

1. Power OFF the logger, Change the Base Station ID, anything other than the Original.
2. Power ON the Logger.
3. Power OFF the logger, Change the Base Station ID back to the Original.
4. Power ON the Logger.

Once you have added the Base Station to the network and synchronized the time, continue with setting up the LabWatch LT system as shown on page 31.

2.2.3 Associate Sensors with Tags

IMPORTANT: *Tags cannot be generated without license info, so to generate the license key, click on the **License Key** button and enter a valid license key as shown below. Once a valid key is entered, tags can be generated, otherwise a message will pop up if it exceeds the limit. Even if the number of tags exceeds the limit, a user can still generate the tags but can only generate up to the license key provided.*

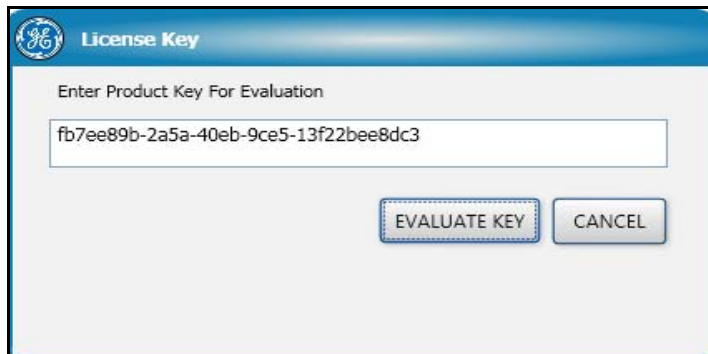


Figure 54: License Key Evaluation

Once the license key is entered, clicking on the **Evaluate** key will connect to the product key evaluation server to generate the license information. On receiving the license info, the license to number of tags will be listed and a user can proceed further for tag generation; otherwise appropriate messages will be displayed on unsuccessful product key entry.

When you have populated the list, click on the **Next** button to proceed to the Assign Tags tab (Figure 55 on the next page). In the Enabled column, clear the checkbox for any tag you do not want to enable. In the Tag and Tag Description columns, you can enter your own tag IDs and descriptions. To create automatic tags, click the **Generate Tag** button. If you need to reassign a tag, click the **REASSIGN Tag** button. By default, "Group By" will list all the base stations. Selecting a particular base station will list sensors related to that selected base station.

2.2.3 Associate Sensors with Tags (cont.)

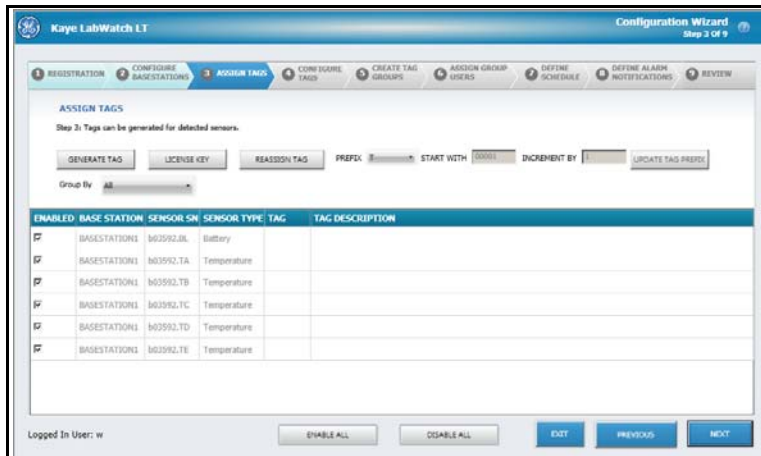


Figure 55: Assign Tags Tab

By default, tags are generated with prefix “T”, but you can change tag prefix by selecting the required letter from the Prefix drop-down box. Then click on **Update Tag Prefix** to update the tag prefix for all tags. Remember that the option to change tag prefixes is a one-time activity, and that clicking **Next** will save tags into the database. Once a tag is saved into the database, the option to change tag prefix becomes invisible, so users will not be able to change the tag prefix anymore.

Clicking **ENABLE ALL** will enable all sensors.

Clicking **DISABLE ALL** will disable all sensors.

When you have completed sensor and tag association, click **Next** to configure tags.

2.2.4 Configure Tags

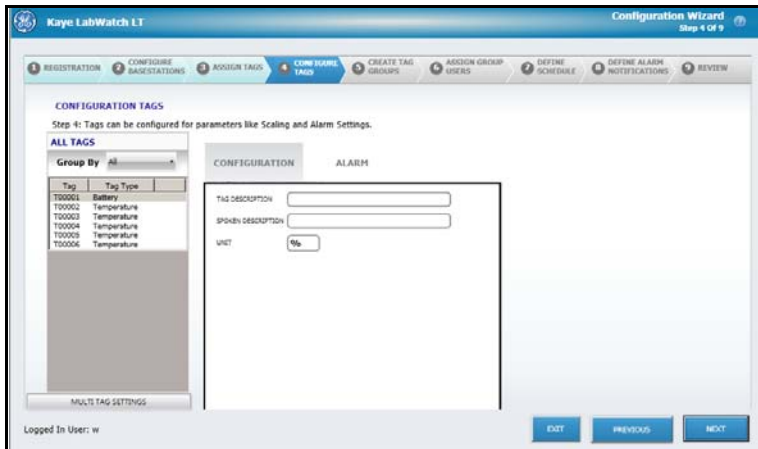


Figure 56: Configure Tags Tab

Click on any single tag, and the window for that tag opens at the **Configuration** tab. It includes text boxes for the **Tag Description**, **Spoken Description** (for telephone contacts) and **Measurement Unit** (C or F for temperature, % for relative humidity)

Click the **Alarm** tab, and you can enter alarm limits and delay times. Click the **Enable** box to apply the values you have entered for alarm limits.

2.2.4 Configure Tags (cont.)

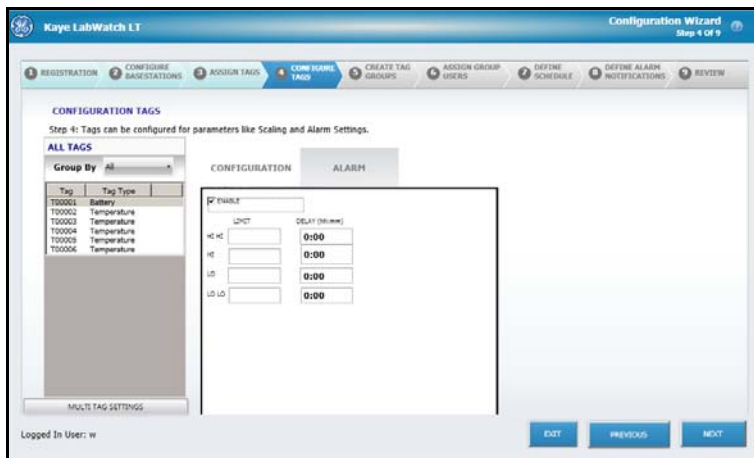


Figure 57: Alarm Tab

The tag window differs slightly for analog and digital auxiliary inputs. For analog inputs, a third tab, **Scaling**, appears.

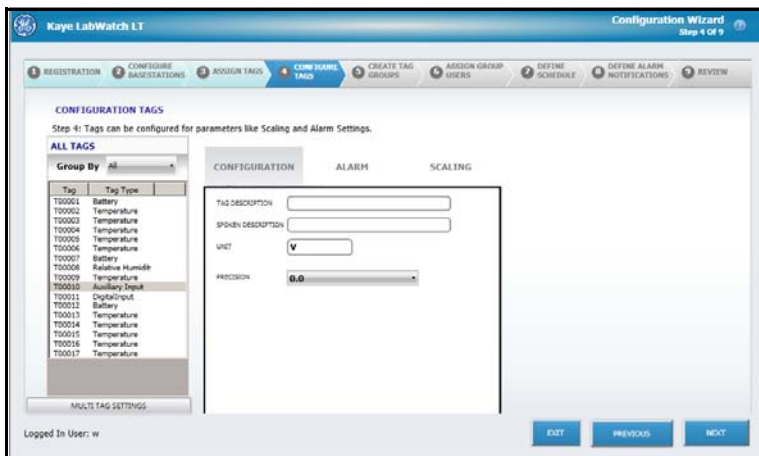


Figure 58: Configure Tags Tab (for Analog Inputs)

2.2.4 Configure Tags (cont.)

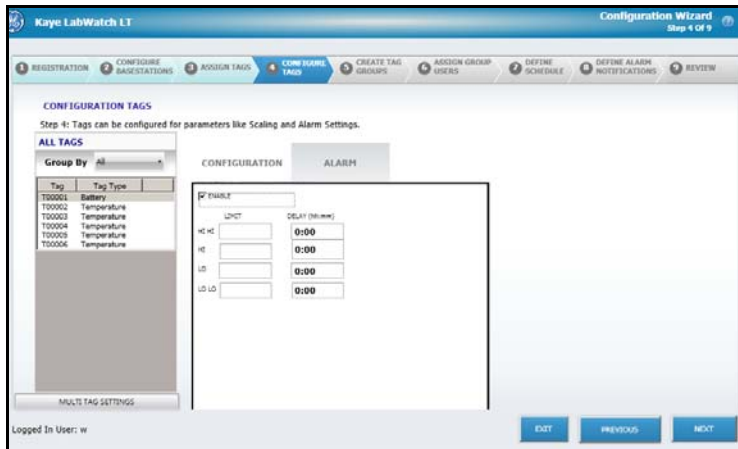


Figure 59: Configure Tags (Analog Inputs)—Alarm Tab

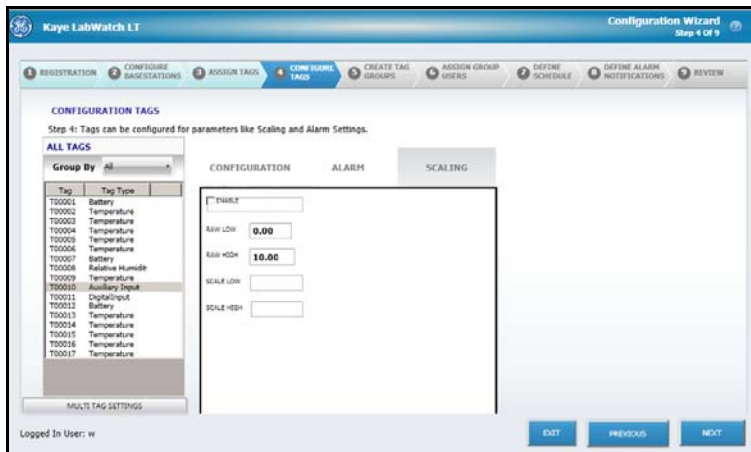


Figure 60: Configure Tags —Scaling Tab

On the Scaling tab, click **Enable** to enable scaling. Two windows display the current raw low and raw high values. Enter the **Scale Low** and **Scale High** values in the text boxes.

The tag window for a digital input has two tabs, but the inputs differ.

2.2.4 Configure Tags (cont.)

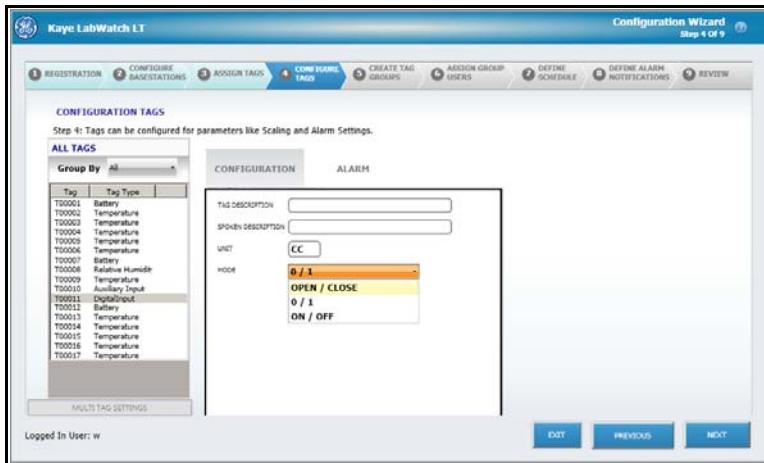


Figure 61: Configure Tags—Digital Inputs

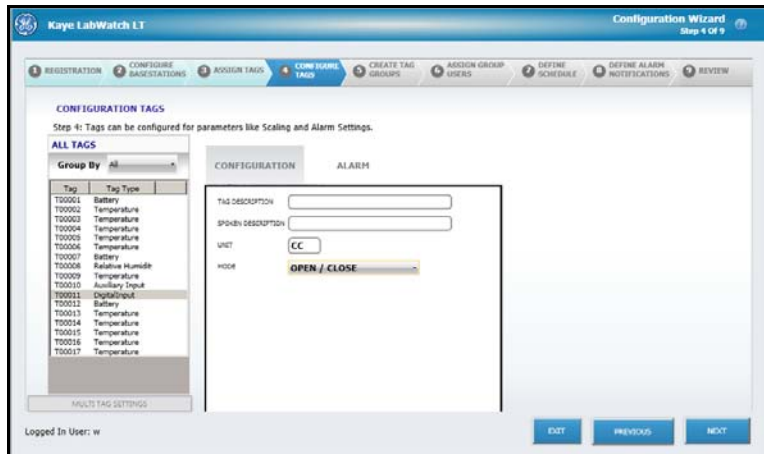


Figure 62: Mode Selection

On the Configuration tab, three modes are available in the drop-down list: **Open/Close**, **I/O** and **On/Off**. Click on the desired mode. On the Alarm tab, besides enabling alarms and setting a delay time, you can select an Alarm Mode of **Open** or **Close** from the drop-down list.

2.2.4 Configure Tags (cont.)

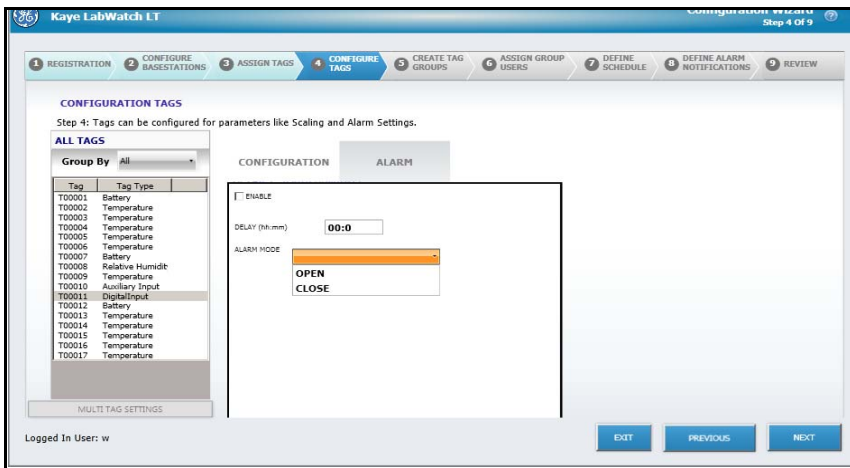


Figure 63: Alarm Mode Selection

If you select one/more tag (of type Temperature, Humidity, Auxiliary), the **Multi Tag Settings** button is enabled. Click this button, and you can apply common Lo, LoLo, Hi, and HiHi alarm limits and delays to the selected tags.

IMPORTANT: For *Multi Tag Settings* to work, a user should uncheck any DI tag within the list.



Figure 64: Multi Tag Settings Window

2.2.4 Configure Tags (cont.)

Click **Enable** to enable these limits, and then click **OK** to apply the limits and delays to the selected alarms.

2.2.5 Create Tag Groups

Clicking **Next** opens the **Create Tag Groups** tab in which a user can create/modify tag groups; by default, the battery group opens, as shown below.

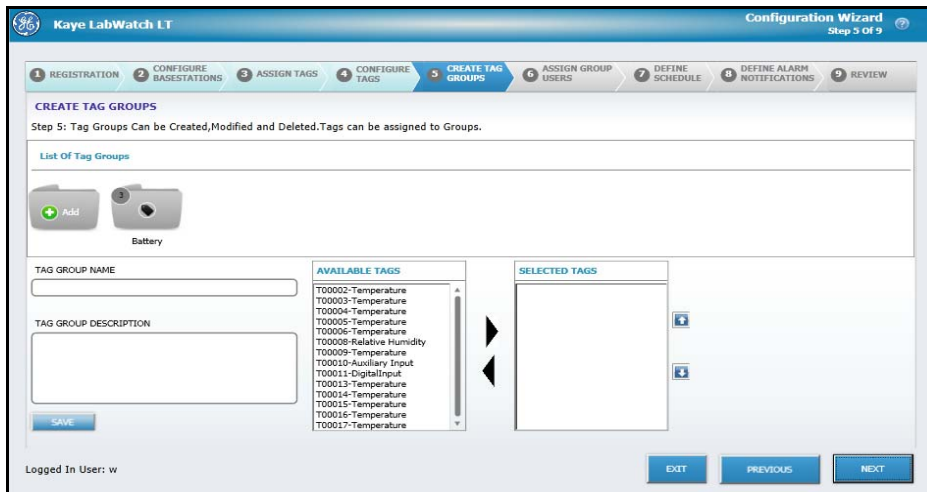


Figure 65: Create Tag Groups

The left pane of this tab lists the currently available groups. Click on the arrow button beside any group, and a list of associated sensors appears below the group name. (The same list appears in the “Selected” pane at the right.) When you select a group, the Available Tags list and Selected Tags list are updated to show the specific group. You can move tags between the Available and Selected lists.

To create a new group, click the **Add Group** folder icon in the upper list of tag groups. You can then create the group by entering the group name and description, and selecting tags. Then click **Save** to save group information. Clicking on the arrow (up/down) buttons allows you to set the order of tags.

2.2.5 Create Tag Groups (cont.)

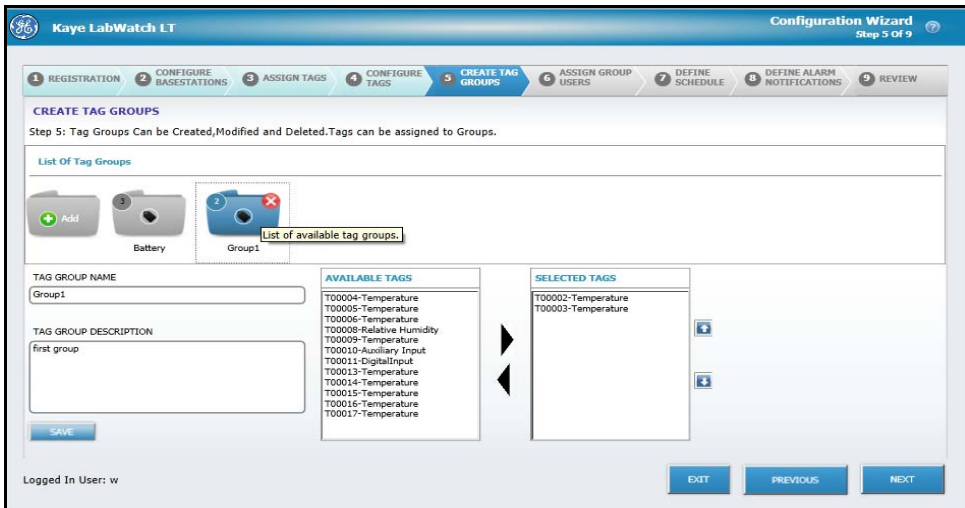


Figure 66: Adding a Group

To delete a group, select the group and click on the cross icon appearing on top right corner of the group folder icon.

Click **Next** to proceed to the **Assign Users** tab, where you can associate users with groups.

2.2.6 Associating Users with Tag Groups

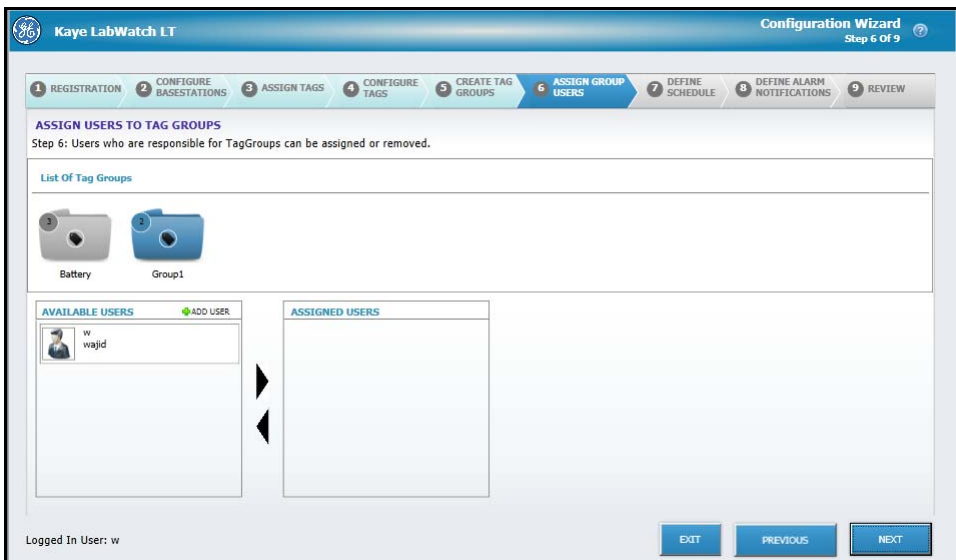


Figure 67: Assign Users Tab

Upon selecting a group, the Assigned User list is updated appropriately. You can also move users between the **Available** and **Assigned Users** lists. Clicking on the arrow (up/down) buttons allows you to set priority of users in a group.

To create a user, click on the **Add User** icon located on top right corner of the Available Users listbox. Clicking **Next** will display the **Define Schedule** tab, where you can associate schedules with a specific user of a group.

2.2.6 Define Schedules

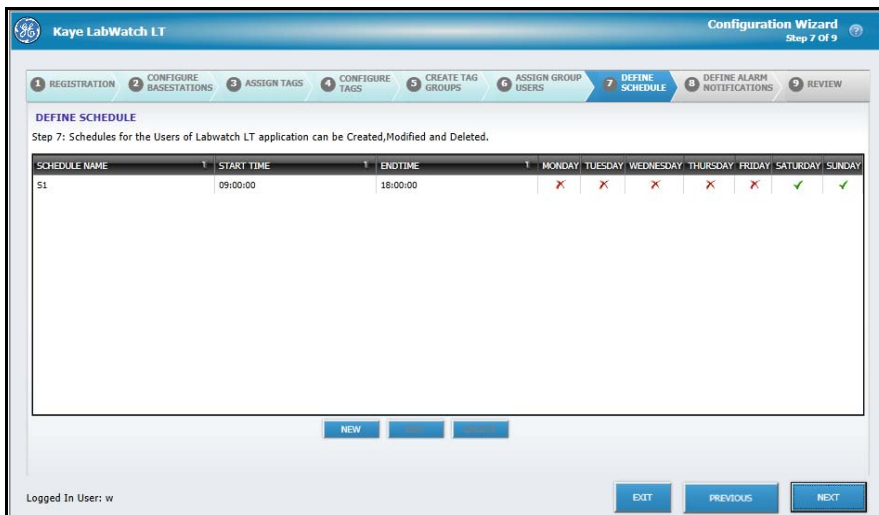


Figure 68: Define Schedules Tab

The Define Schedule tab displays all the available schedules. You can also create a new schedule or modify existing schedules here:

1. To create a schedule, click on the **NEW** button.

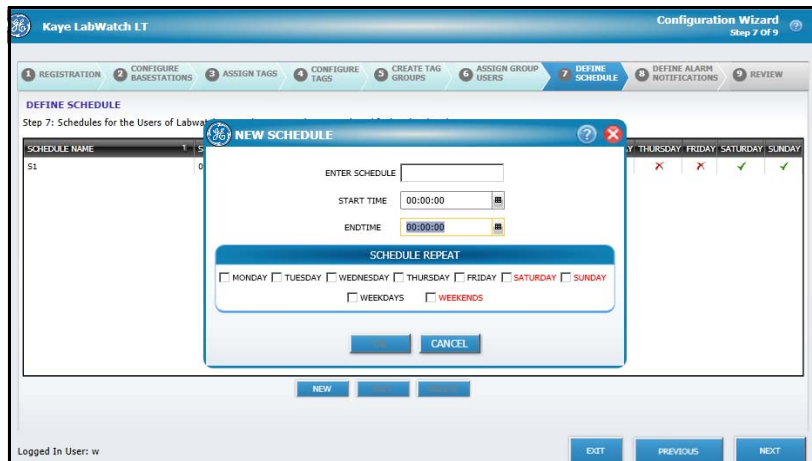


Figure 69: New Schedules Window

2.2.7 Defining and Modifying User Schedules (cont.)

- To edit a schedule, select the required schedule and click on the **EDIT** button.

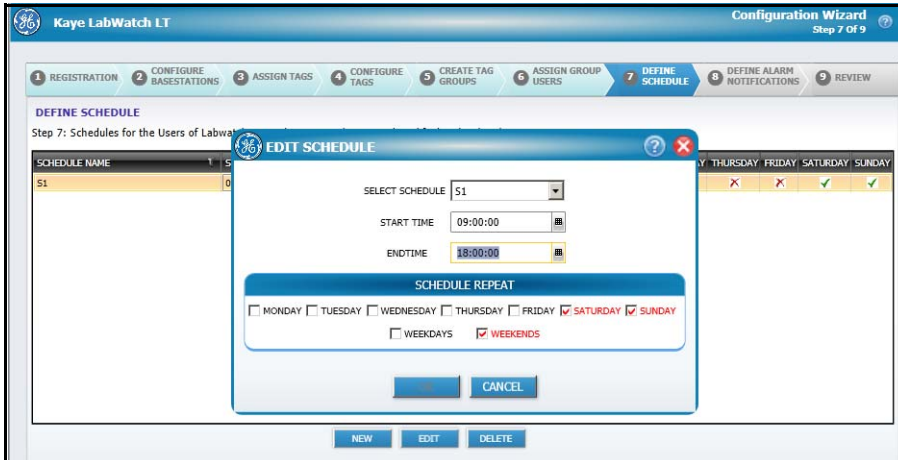


Figure 70: Edit Schedules Window

- To delete a schedule, select the required schedule and click on the **DELETE** button.

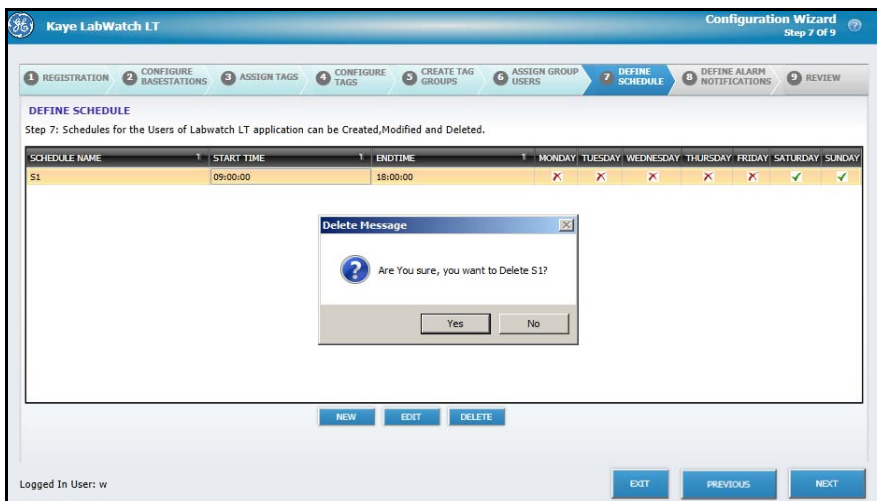


Figure 71: Delete Schedules Window

Clicking on the **Yes** button deletes the selected schedule.

2.2.8 Defining Alarm Notifications

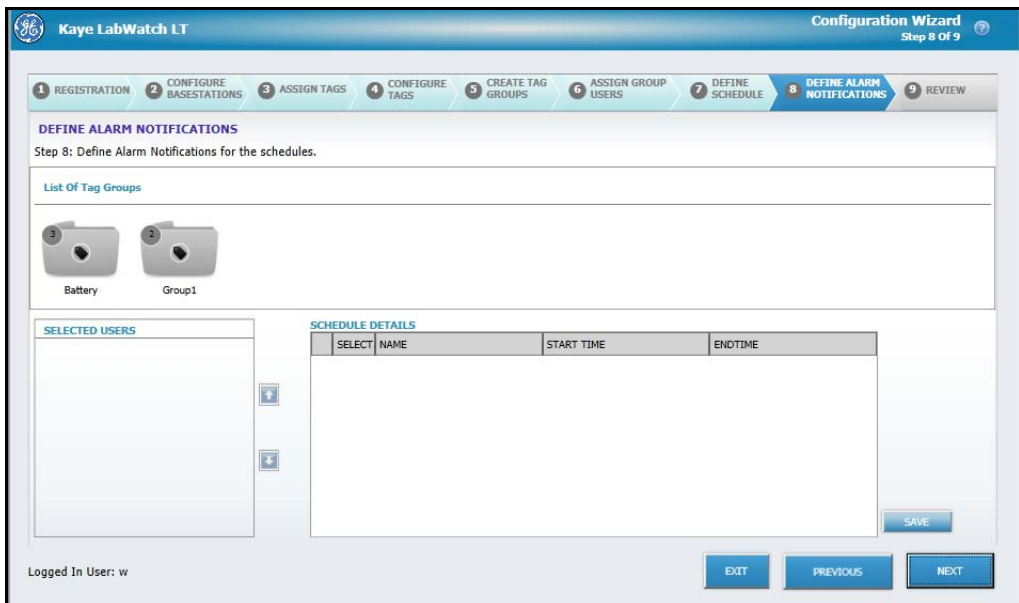


Figure 72: Defining Alarm Notifications

To associate a schedule with a user of a particular group:

1. Select a group.
2. Select a user from the selected users list.
3. Select a schedule. You can also create a new schedule by clicking on the Add icon located at the top left corner of the Schedule Details grid.
4. Select the notification type as needed.

You can also change the priority of users by clicking on the arrow (up/down) buttons. These up/down buttons allow you to set the priority of users in a group.

2.2.8 Defining and Modifying User Schedules (cont.)

Click **Next** to display the **Review** tab, where you can see a detailed report of activities performed in the last seven tabs.

The screenshot shows the 'Review' tab of the Configuration Wizard. The main content area is titled 'CURRENT CONFIGURATION' and includes a 'Printed By w On 07/Nov/2012 12:00' timestamp. Below this, there are two tables:

Base Station				
IP ADDRESS	NAME	PORT	TOTAL LOGGERS	RECEIVED LOGGERS
3.185.91.159	BASESTATION1	4445	1	1
3.185.91.28	BASESTATION2	4445	2	2

Assign Base Station					
Enabled	Base Station	Sensor SN	Sensor Type	Tag	Tag Description
True	BASESTATION1	b03592.BL	Battery	T00001	
True	BASESTATION1	b03592.TA	Temperature	T00002	
True	BASESTATION1	b03592.TB	Temperature	T00003	
True	BASESTATION1	b03592.TC	Temperature	T00004	
True	BASESTATION1	b03592.TD	Temperature	T00005	
True	BASESTATION1	b03592.TE	Temperature	T00006	

At the bottom of the screen, there are three buttons: 'EXIT', 'PREVIOUS', and 'FINISH'. The 'FINISH' button is highlighted in blue. The status bar at the bottom left indicates 'Logged In User: w'.

Figure 73: Review Tab

Click **Finish** to exit the Configuration Wizard and launch LabWatch LT.

For more information on LabWatch LT operation and functions, please refer to the *LabWatch LT User's Manual*.

2.3 Logger Positioning Guidelines

The final step in setting up your LabWatch LT system is to position the Loggers. Each Logger must be no more than 300 ft. distant from the Base Station and the other Loggers. GE offers several recommendations for logger placement:

- Install the Loggers at least one to two feet above the ground or floor. For better RF transmission, place them as high as possible. If possible, raise or lower the Base Station and Loggers above or below walls or any obstruction.
- Point the Logger antenna upwards for best results.
- Do not position the Loggers directly above or below each other. Stagger their positions for better transmission.
- If Loggers are placed at different heights, make sure that they are within antenna range (within 300 ft. from the Base Station or another logger). The RF signal is transmitted in an arc, with maximum signal strength occurring in the area 45° above and below the tip of the antenna.
- Be aware that metal surroundings can interfere with RF transmission; the Logger may transmit, but the signal will be weaker. Shorten the transmission distance accordingly.
- Do not install Loggers next to a cordless phone base or other 2.4 GHz transmission device.
- Do not install Loggers on a vibrating surface.
- Do not place Loggers where the temperature is outside their rated operating range.

IMPORTANT: *If you are using Loggers with internal sensors, be sure the vents on the side remain uncovered. If the vents are covered, the sensors cannot provide correct readings.*

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