



***AXIOMTEK***

## **AXView 2.0**

**(Ver. 1.4.2)**

**Remote Management Software**

**User's Manual**



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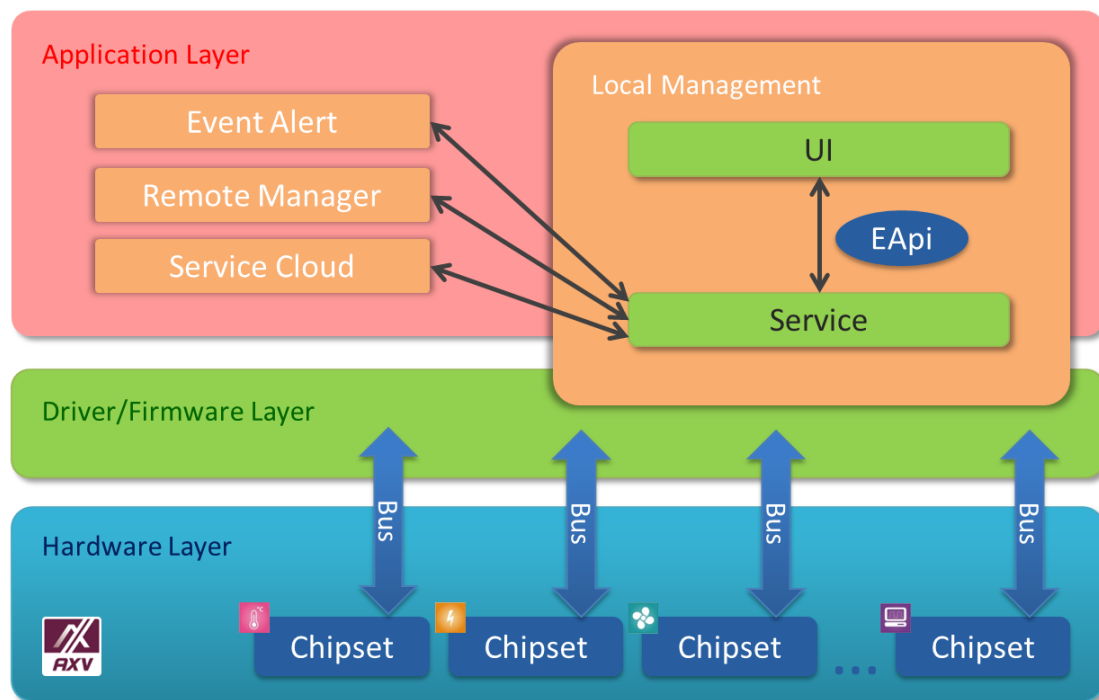
# Chapter 1

## Introduction

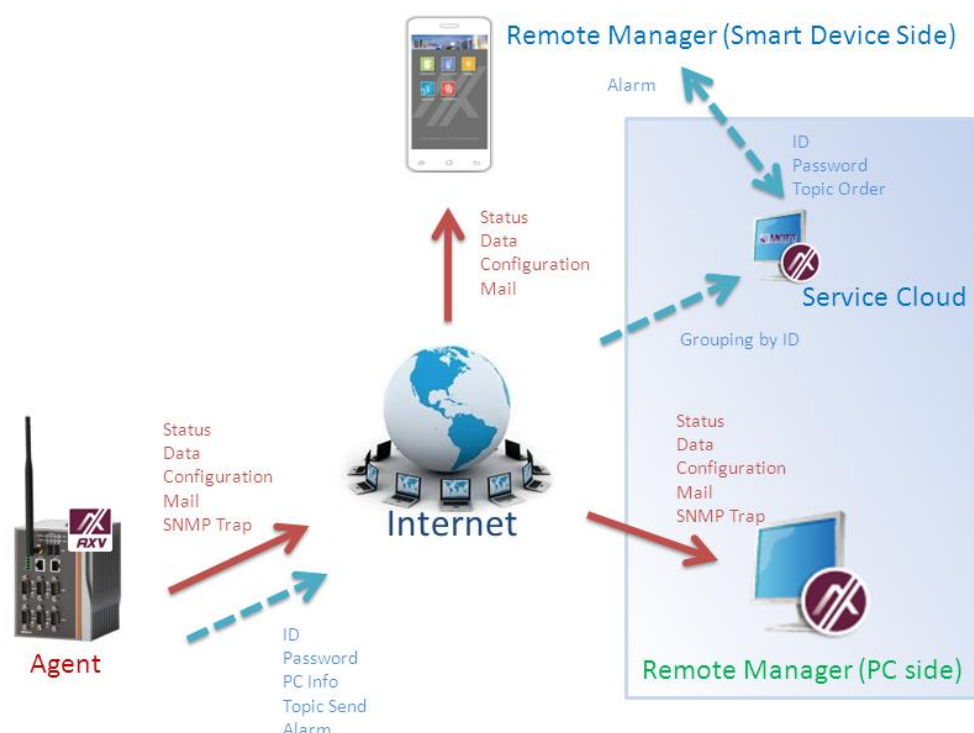
Through continuous research and development, AXView has evolved into AXView 2.0 employing advanced technologies including cloud service and M2M protocols. AXView 2.0 is a highly integrated software management system that provides an entire suite of remote management architecture and an easy-to-use application programming interface.

### Software Structure

Intelligent AXView 2.0 suite is designed to meet the needs of applications for IoT/M2M. Ranging from physical layer connectivity, communication layer protocol, middleware API, high level software for remote management, store Apps and service cloud are covered. Solution integration with specific embedded systems and AXView 2.0 will become very powerful and useful for various vertical markets and applications.



Key features of AXView 2.0 include: Local Hardware Monitoring and Agent, Remote Management, Service Cloud, and Embedded Application Programming Interface (EAPI).



### Local Hardware Monitoring and Agent

Agent is a software service that monitors local hardware behaviors, triggers event alerts when abnormalities happen and shares machine information with remote management systems and the AXView 2.0 service cloud. Local hardware behaviors such as system working temperatures, working voltages and fan speed if it exists are the basic entities to be watched. Once touching a predefined or user-defined threshold, the event alert system will be triggered immediately.

### Remote Management

AXView 2.0 offers software for remote management platforms and Microsoft Windows® platform and phablet family. In addition to hardware monitoring, AXView 2.0 provides remote management system support functions for DISCOVER, SNMP and Modbus, which helps administrators to locate, identify and manage machines with standard protocols on its network.

### Service Cloud

Service Cloud is a new feature of AXView 2.0 suite comparing to version 1.0. It's designed to store, forward and review machine data for behavior analysis. AXView also provides software packages to assist users in constructing their own cloud. Software services developed by AXView will also be available for sharing in the future.

### Embedded Application Programming Interface (EAPI)

AXView 2.0 supports EAPI compliance with PICMG EAPI standards and extends its features to support access to special system information, hardware health status, system behavior and unique system designs such as battery backup memory area, panel backlight, DIO and dual hardware watchdogs.

## 1.1 Features

- Monitoring: Monitor the health status of system.
- Notification: Trigger alert when system fails in some monitored item.
- Remote diagnosis: By screen capturing.
- System recovery when system crashes by virus or malware attacks.
- Connectivity: Exchange data locally/remotely, wired/wireless, multi-protocol.
- Cloud Service: Data storing, forwarding.
- EAPI to ease integrating into custom application software.

## 1.2 Specifications

- **Manageability**
  - Monitoring:
    - Device monitoring for CPU voltage, temperature, Digital I/O, fan speed, HDD status, power consumption.
    - System monitoring via digital input (DI).
  - Alarm:
    - Alert by email/SNMP trap (e.g. USB device, LAN drop).
    - Hardware event log.
  - Remote Management:
    - Remote management by SNMP.
    - Special-purpose backup in flash.
    - Inventory management (device H/W, S/W resource).
    - Diagnosis by screen capturing.
    - 
    - System recovery.
    - App (smart phone) remote management.
- **Connectivity**
  - Communication interface supporting RS232/485, WiFi, 3G.
  - Protocol support - SNMP, Modbus TCP, SMTP, MQTT.
  - Application framework – EAPI.
- **Security**
  - Watchdog timer to ensure normal operation.
  - Operating per user ID authentication.
  - 
  -

- **Cloud Service**
  - Device grouping.
  - Storing device information.
  - Storing system information.
  - Storing sensor status.
  - Public/Private cloud.
  - MQTT for data exchange between PC and smart phone.
- **EAPI (Embedded API)**
  - Windows library of API supporting CPU voltage, temperature, WDT, I<sup>2</sup>C/SMBus, GPIO, fan speed, backup in flash, HDD (S.M.A.R.T).
- **System Requirement**
  - OS:
    - Windows<sup>®</sup> 7 for Agent and Remote Manager on PC.
    - Android for Remote Manager on smart phone, Pad.
  - CPU:
    - Atom E3815 or above for Agent on device.
    - Atom E3815 or above for Remote Manager on PC.
  - Storage:
    - 16GB for Agent on device.
    - 16GB for Remote Manager on PC.
    - 2GB for Remote Manager on Android phone/Pad.
  - Memory:
    - 4GB for Agent on device.
    - 8GB for Remote Manager on PC.
- **Supported Platform**
  - rBox510



**Note**

*All specifications and images are subject to change without notice.*



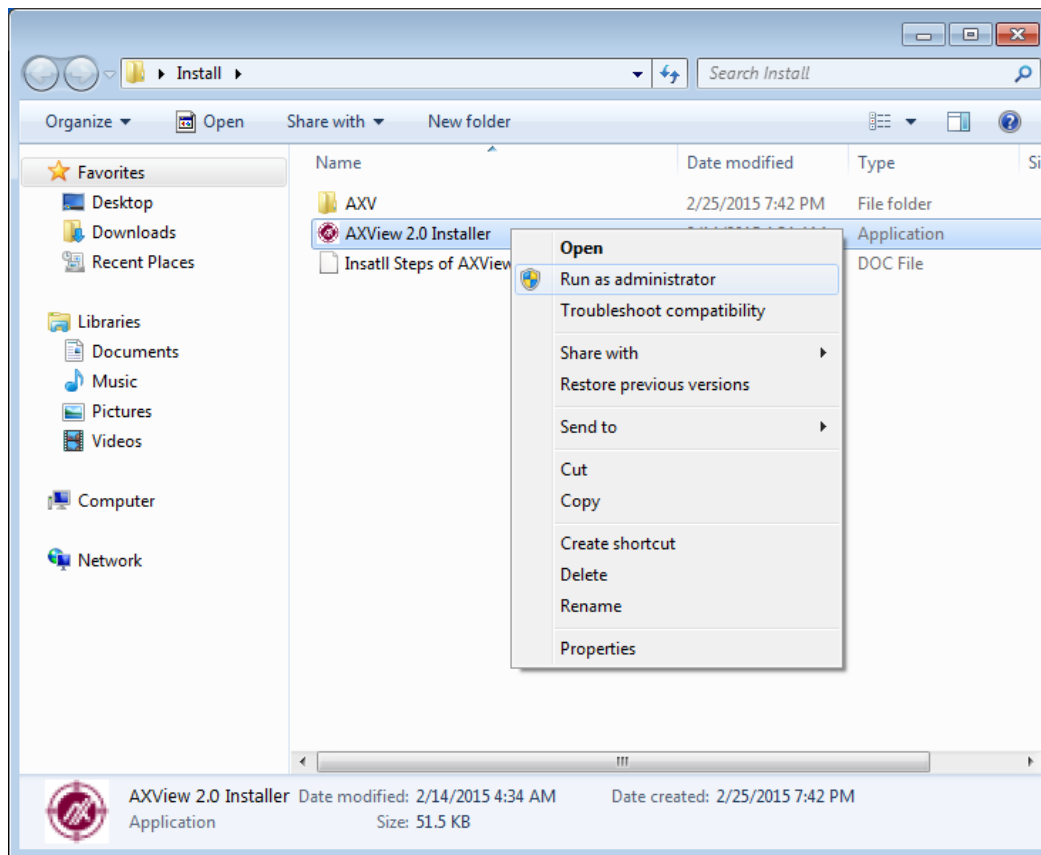
## Chapter 2

# Getting Started

This section will guide you to install the AXVIEW package. You can follow the onscreen instructions to install these programs:

- Agent
- Service Cloud
- Remote Manager

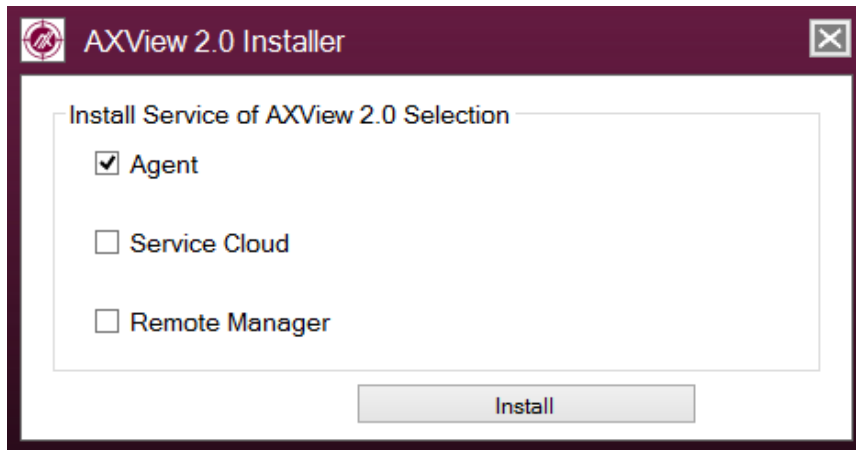
Before you start, please be reminded to run the application package as administrator. Here's how to do it: right click on "AXView 2.0 Installer.exe" and select "Run as administrator".



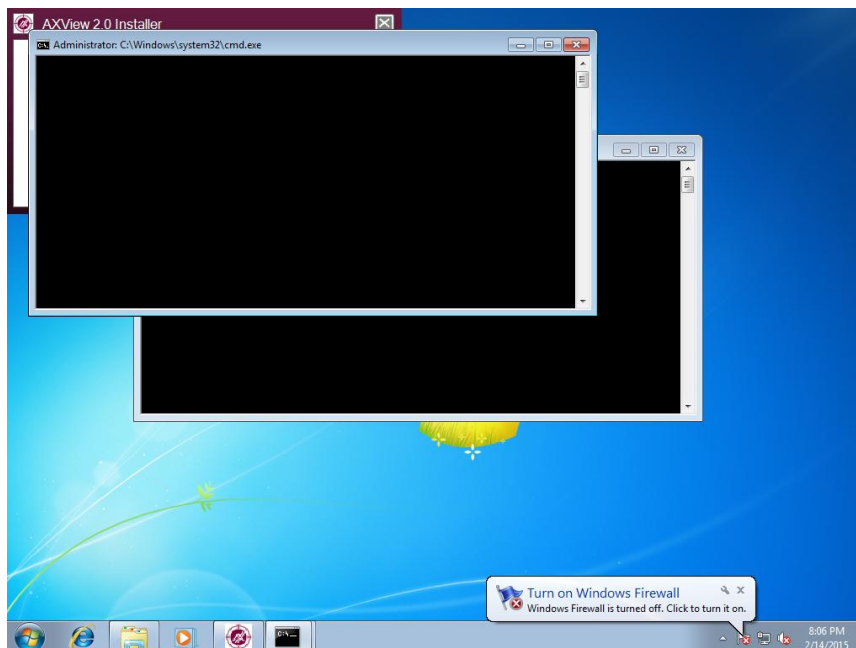
## 2.1 Install AXView - Agent

Follow steps below to install the Agent.

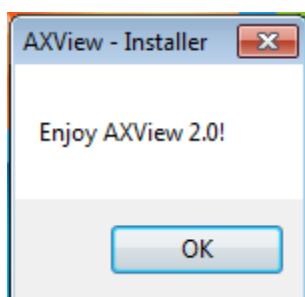
1. Run "AXView 2.0 Installer.exe". When you see the following screen, select "Agent" and click "Install".



2. Please wait while installer program processes the following operations.



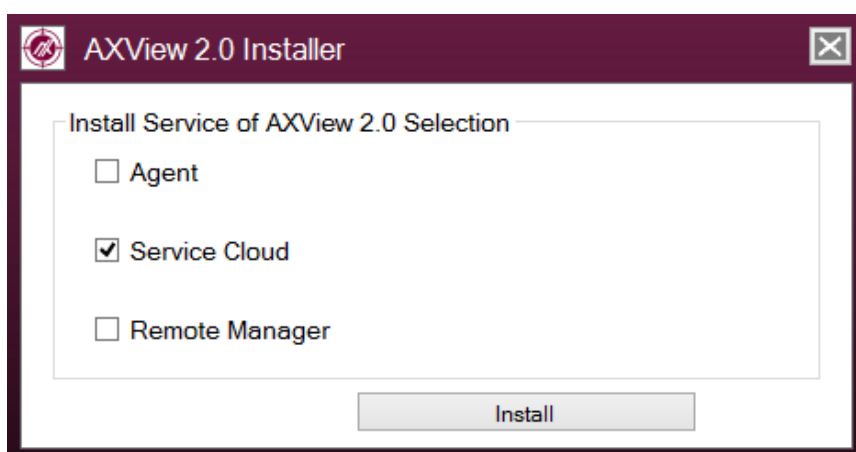
3. When the installation is complete, the following message appears. Click “OK” to exit.



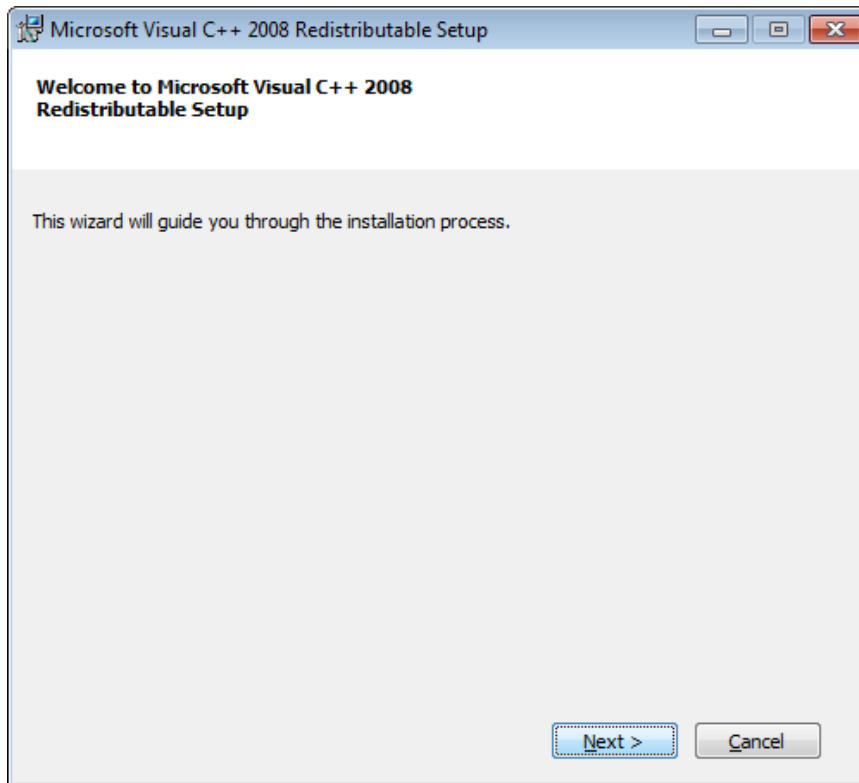
## 2.2 Install AXView - Service Cloud

Follow steps below to install Service Cloud.

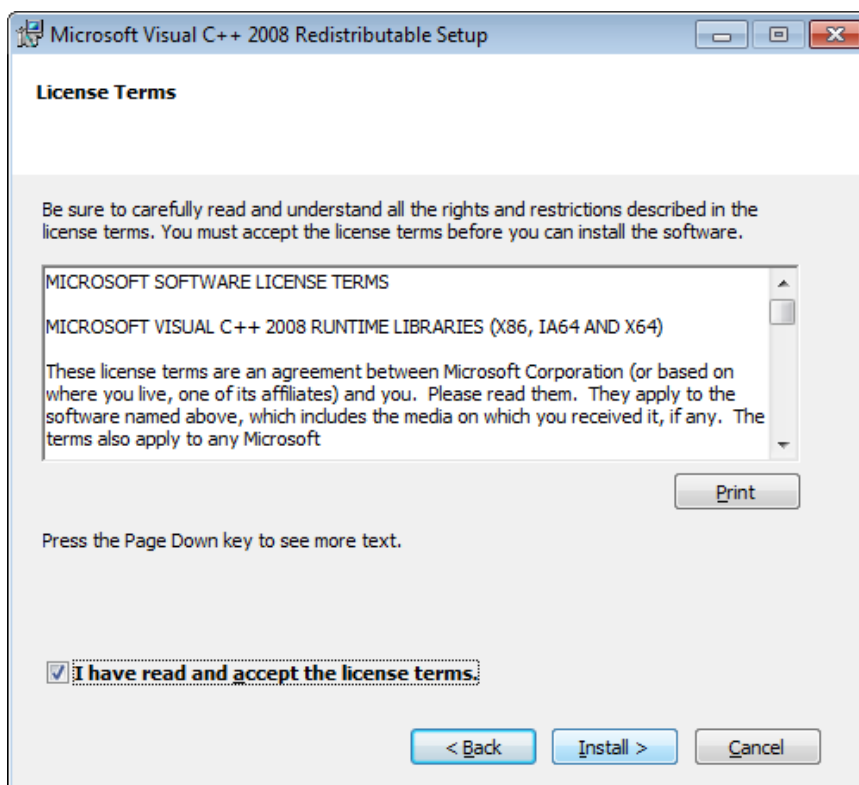
1. Run “AXView 2.0 Installer.exe”. When you see the following screen, select “Service Cloud” and click “Install”.



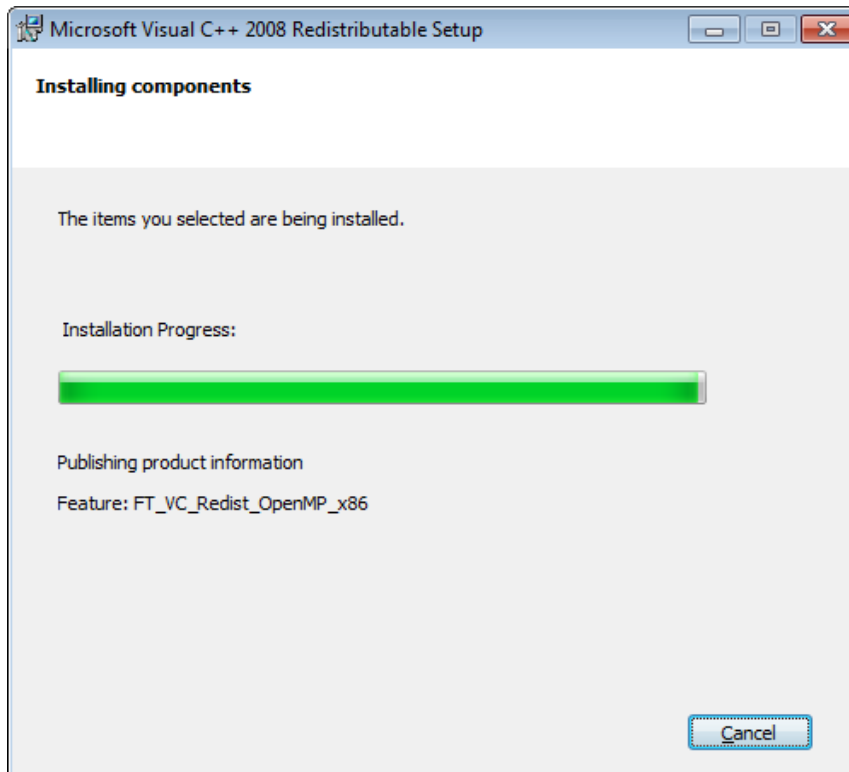
2. When you see the following screen, click “Next” to continue.



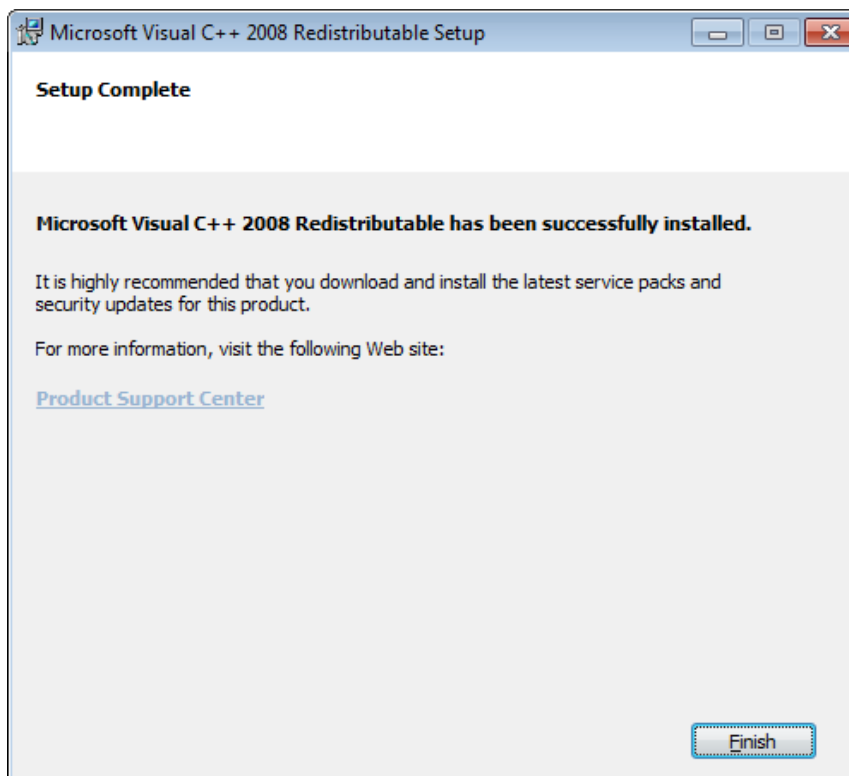
3. A License Terms screen appears, read it carefully. Select “I have read and accept the license terms” and click “Install” to continue.



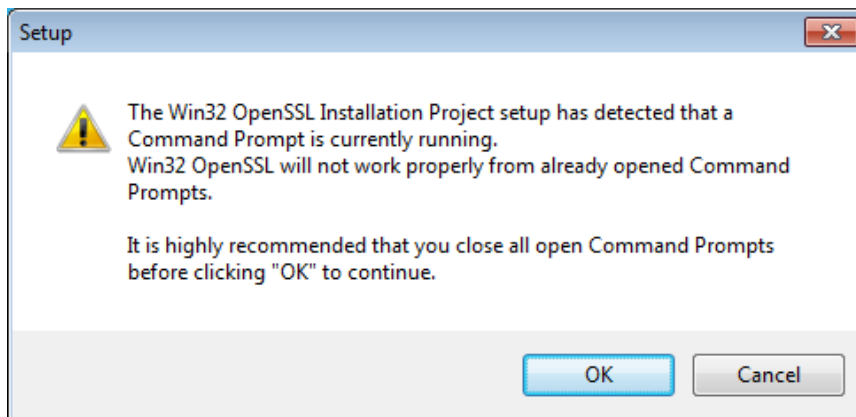
- Please wait while setup installs the selected components.



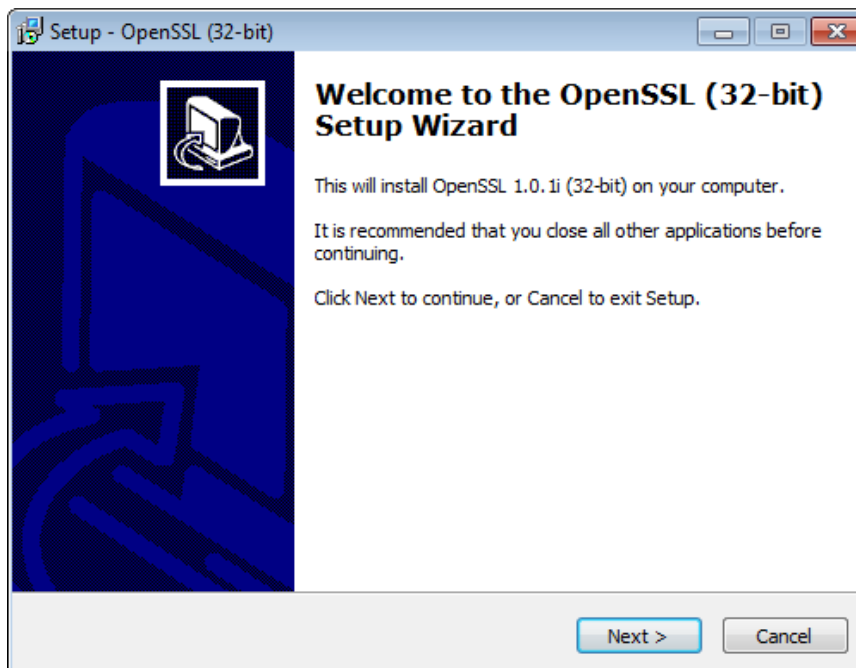
- When the following screen appears, click "Finish" and wait.



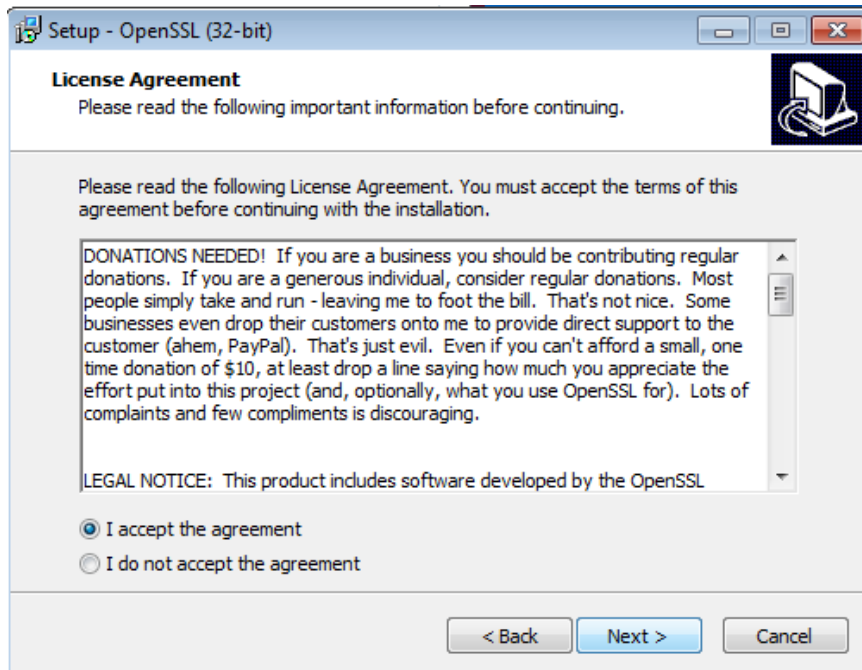
6. If there is any Command Prompt running, please close it before installing OpenSSL. Then click "OK" to continue.



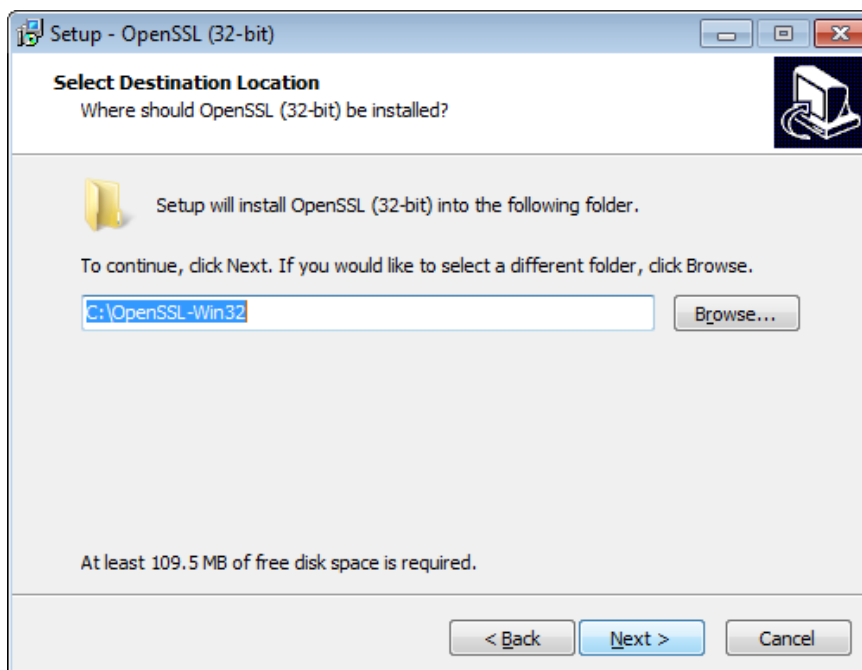
7. When the following screen appears, click "Next" to continue.



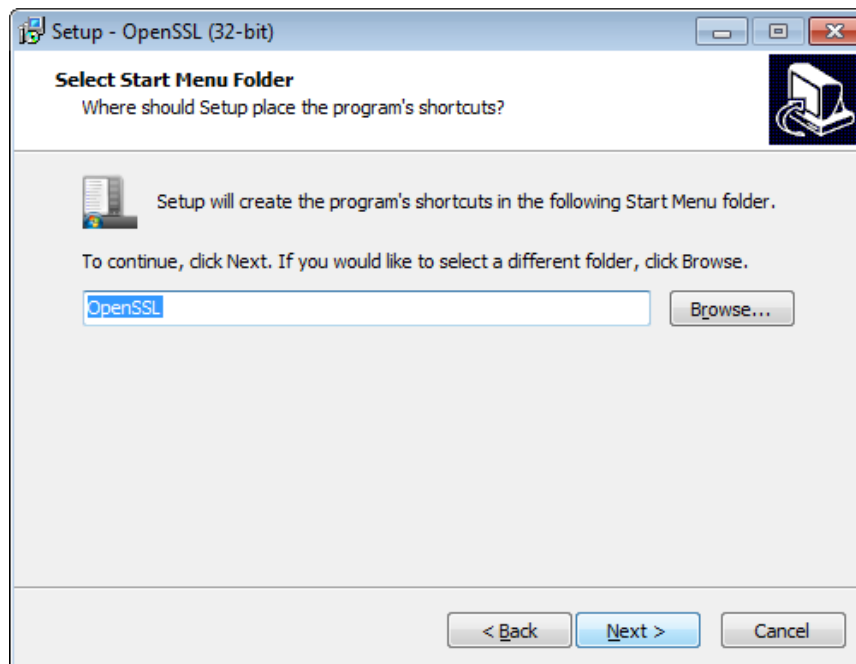
8. Read the License Agreement carefully. Select "I accept the agreement" and click "Next" to continue



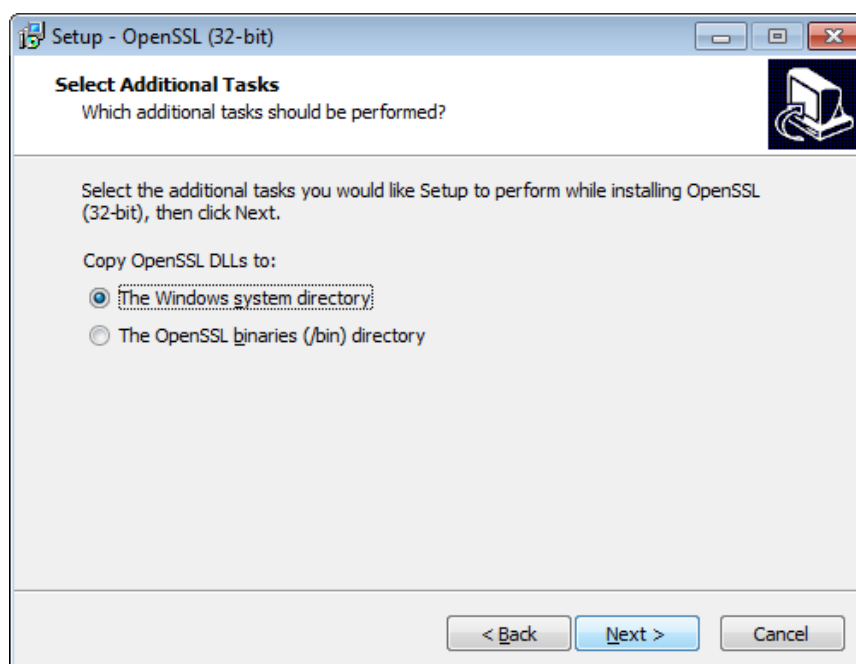
9. Select destination folder where OpenSSL (32-bit) should be installed. Click "Next" to continue.



10. Create program's shortcuts in Start Menu folder. Click "Next" to continue.

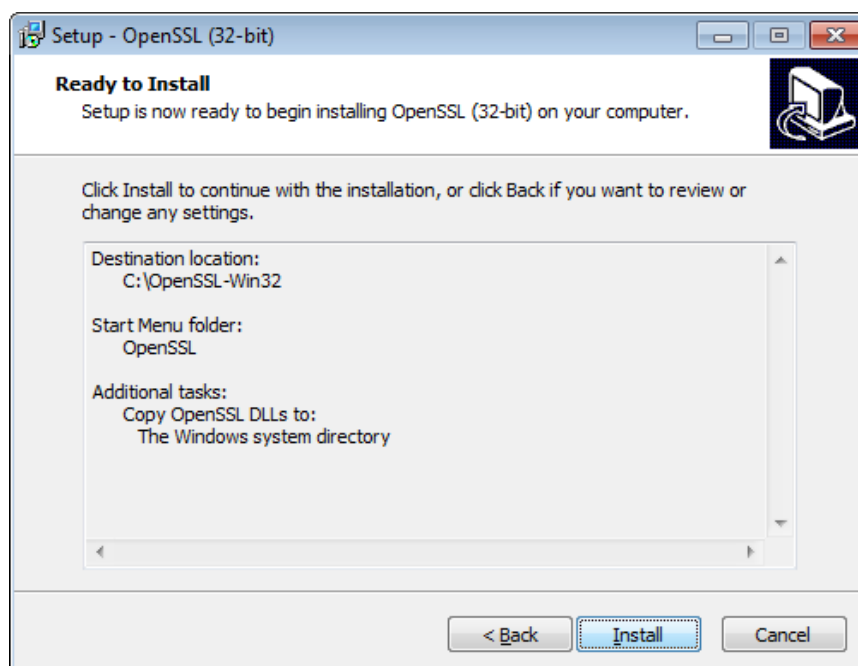


11. Select "The Windows system directory" and click "Next" to continue.

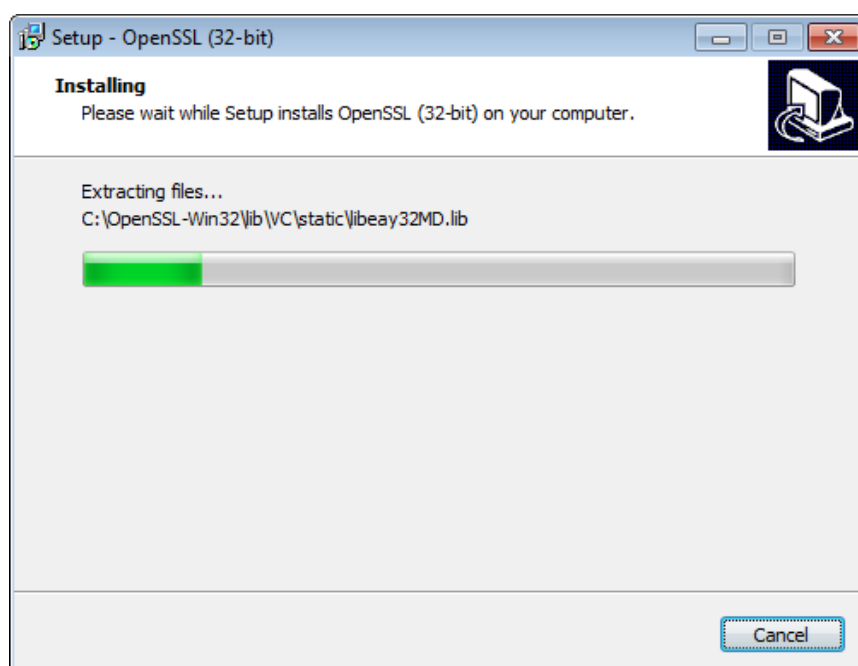




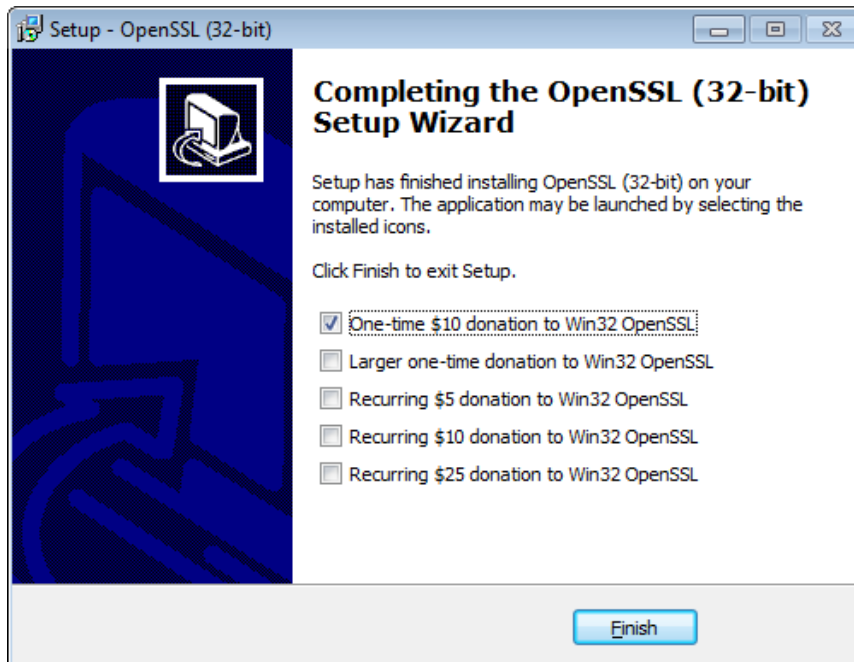
12. Setup is now ready, click “Install” to begin installing OpenSSL (32-bit) on your computer.



13. Please wait while setup processes the installation operations.



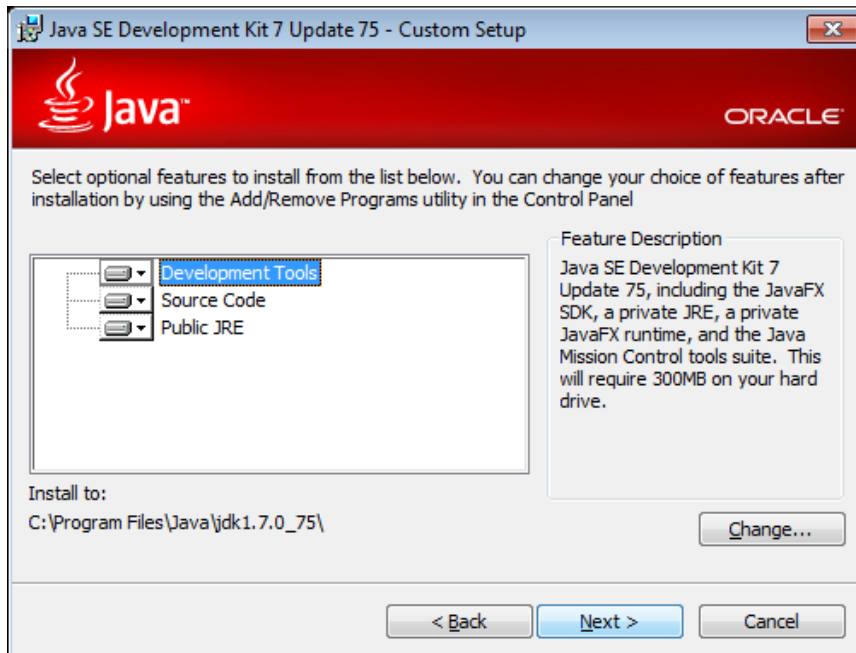
14. When you see this screen, click “Finish” and wait.



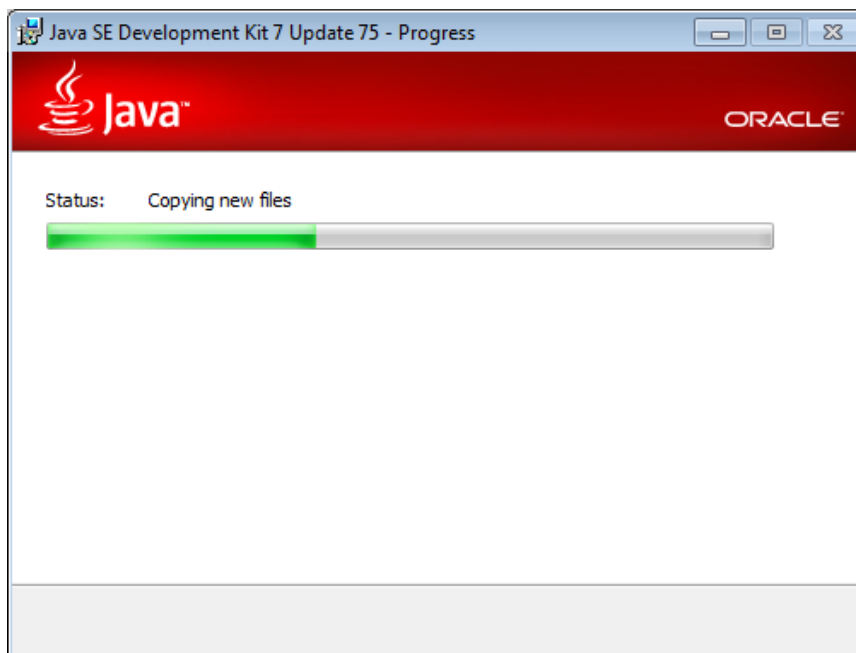
15. When you see this screen, click “Next” to continue.



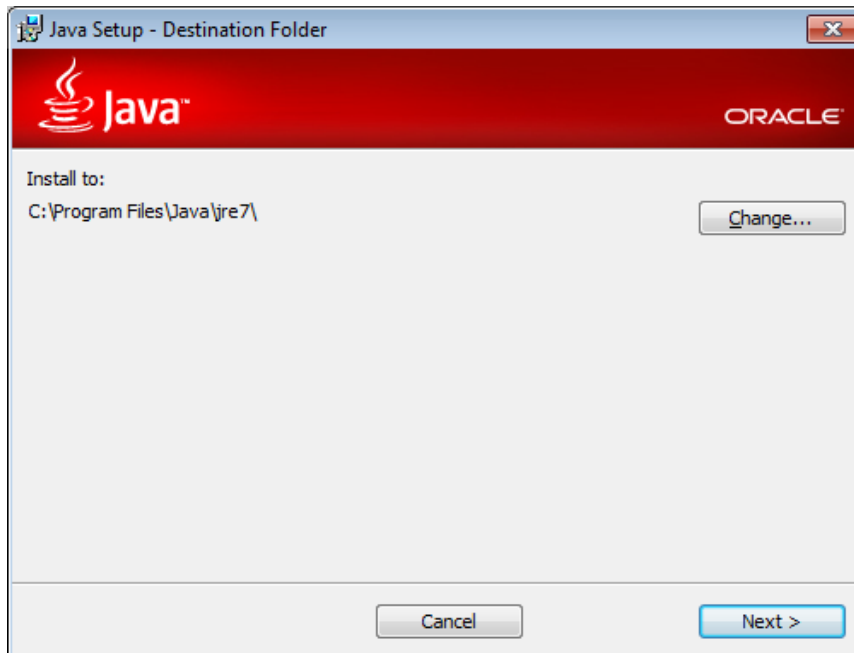
16. Click “Next” to continue.



17. Wait while setup copies new files.



18. Select destination folder. Then click "Next" to continue



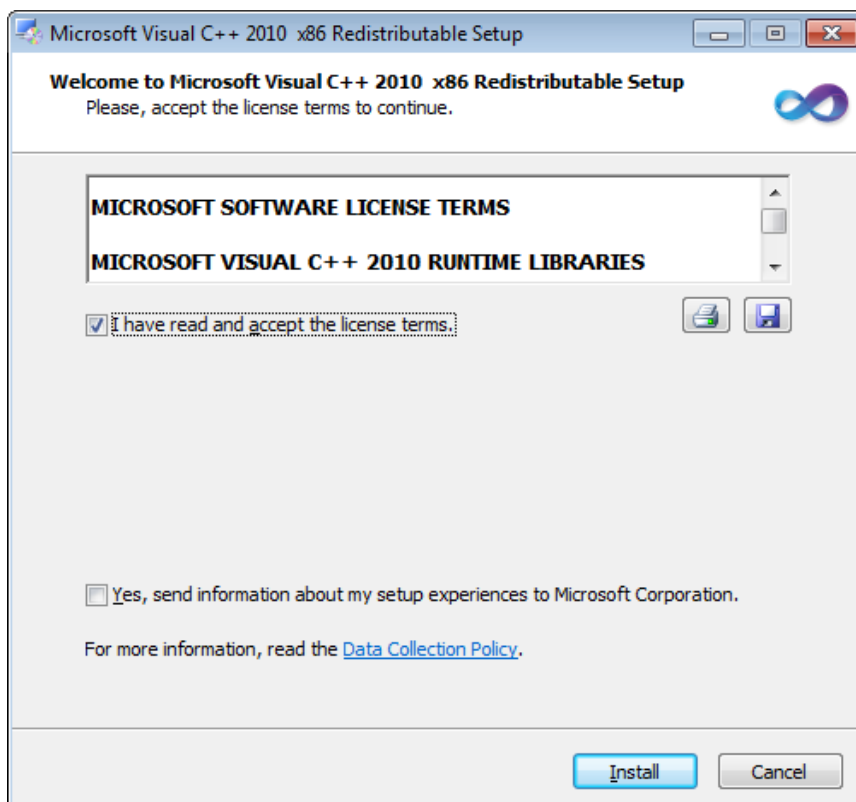
19. Wait while setup processes the following operations.



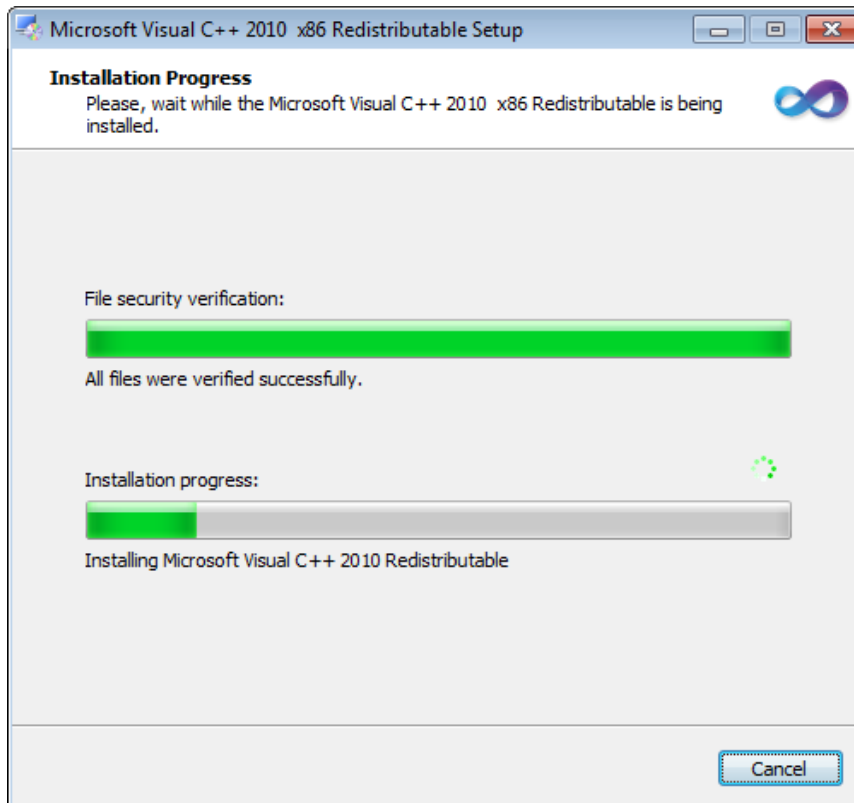
20. The installation is complete, click “Close” and wait.



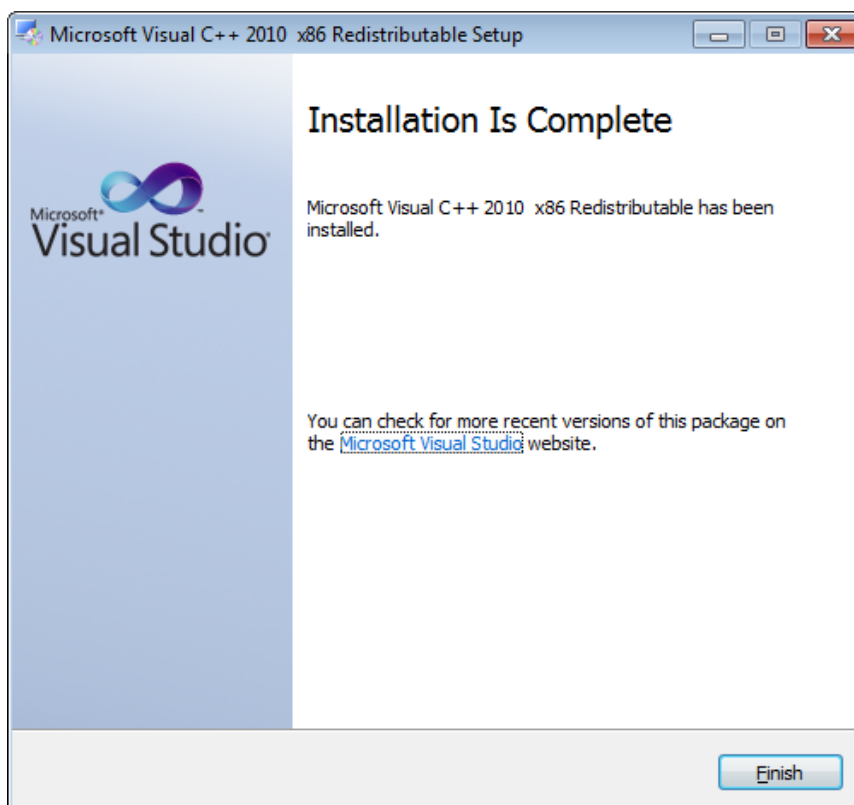
21. When you see this screen, read the License Terms carefully. Select “I have read and accept the license terms” and click “Install” to continue.



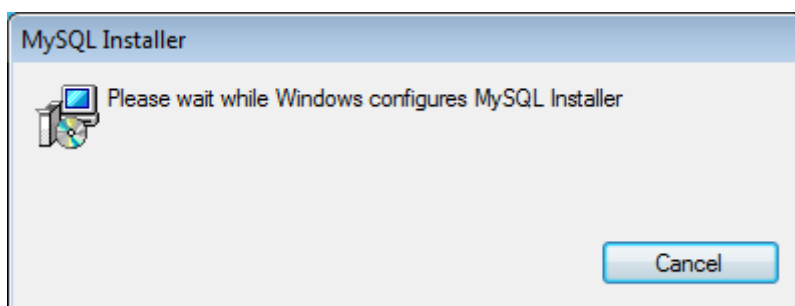
22. Wait while components are being installed.



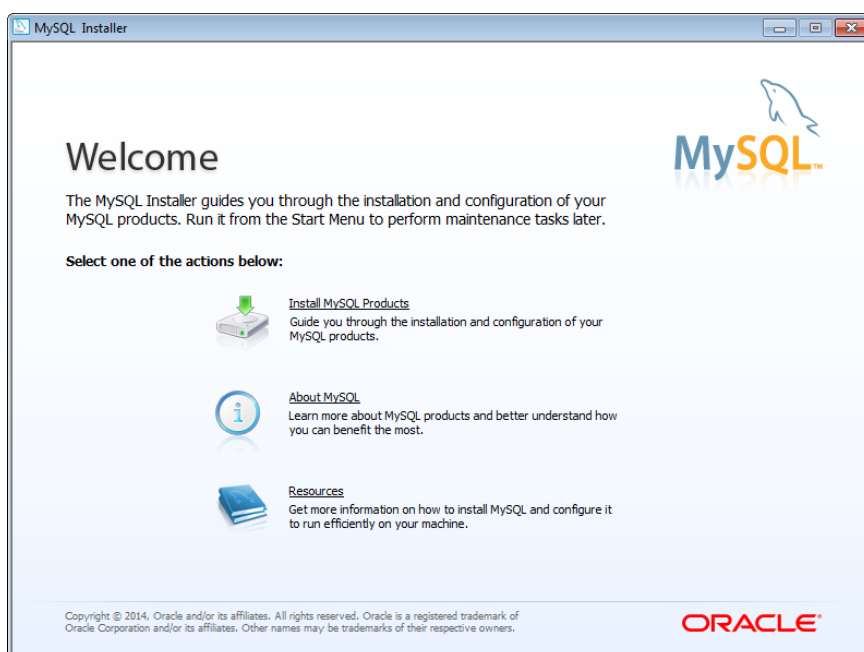
23. The installation is complete, click "Finish" and wait.



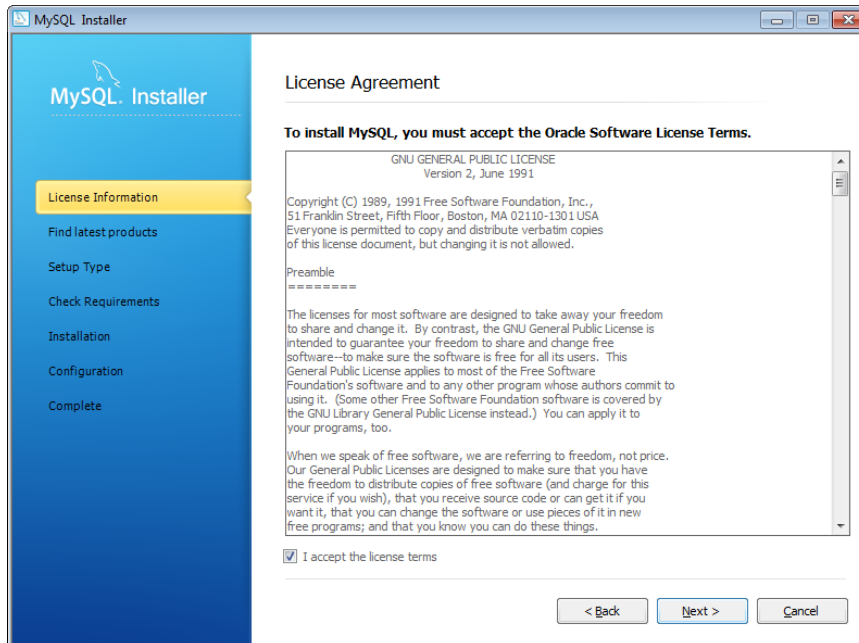
24. Wait while MySQL Installer is preparing.



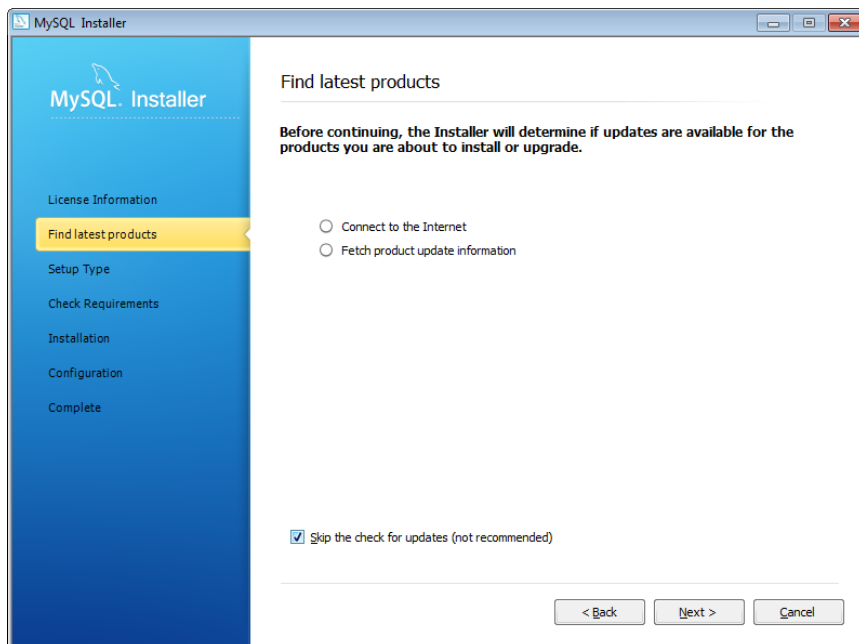
25. When you see this screen, click “Install MySQL Products” to continue. And you are recommended to disconnect from the Internet.



26. Read the License Terms carefully. Select “I accept the license terms” and click “Next” to continue.

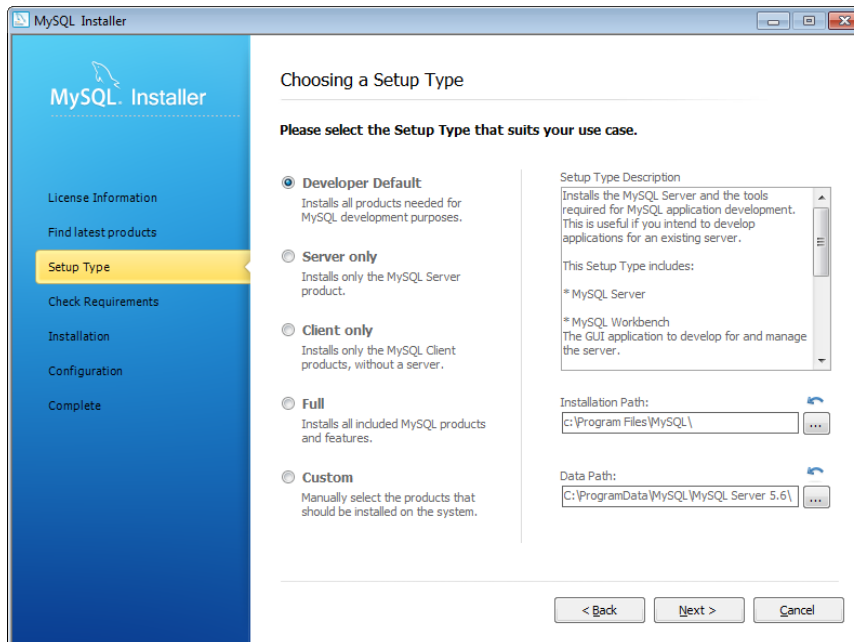


27. Select “Skip the check for updates (not recommended)” first, then click “Next” to continue.

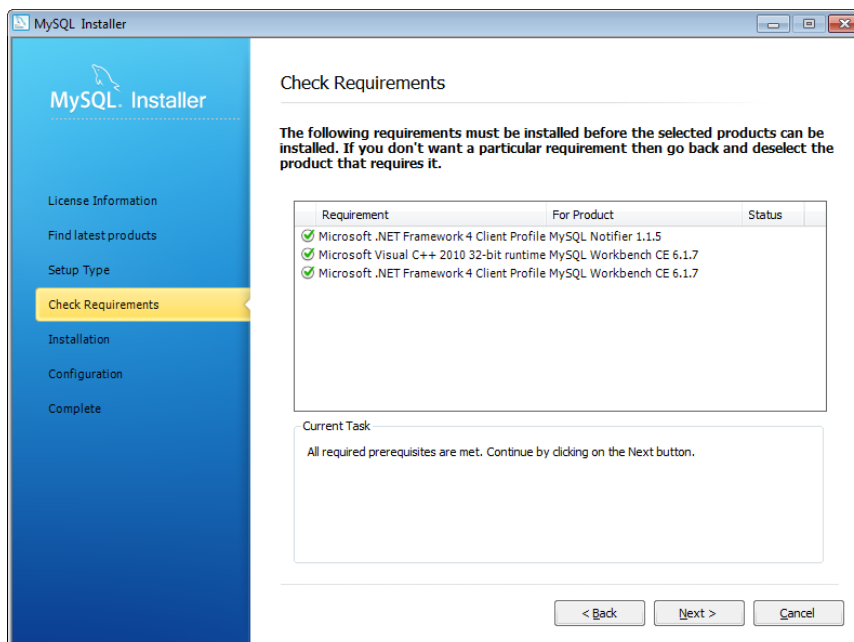




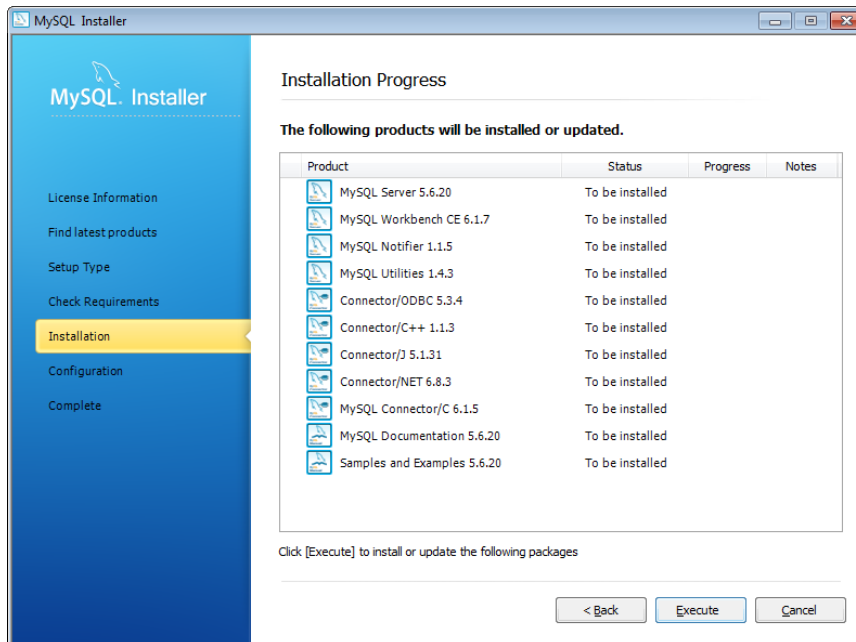
28. Choose “Server only” (recommended). Then click “Next” to continue.



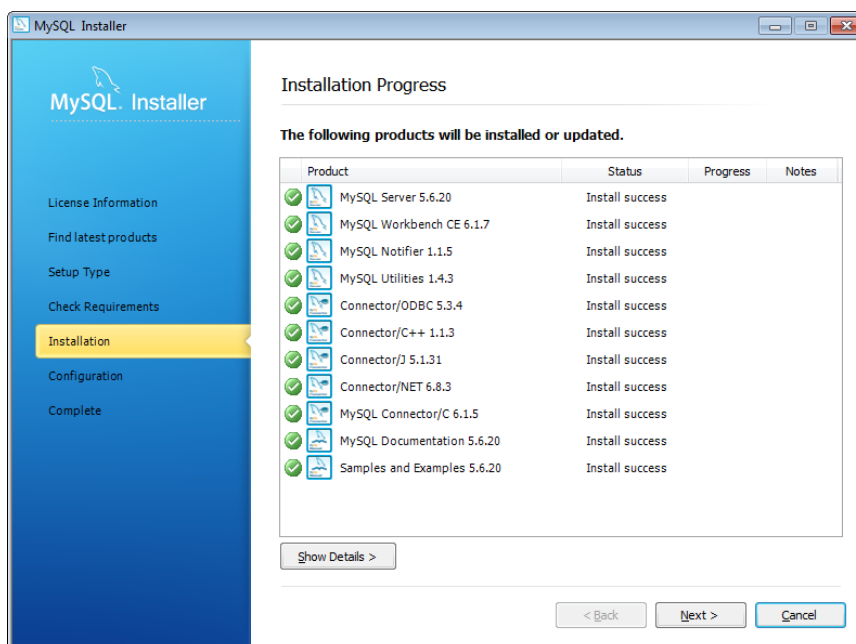
29. Choose requirements. Then click “Next” to continue.



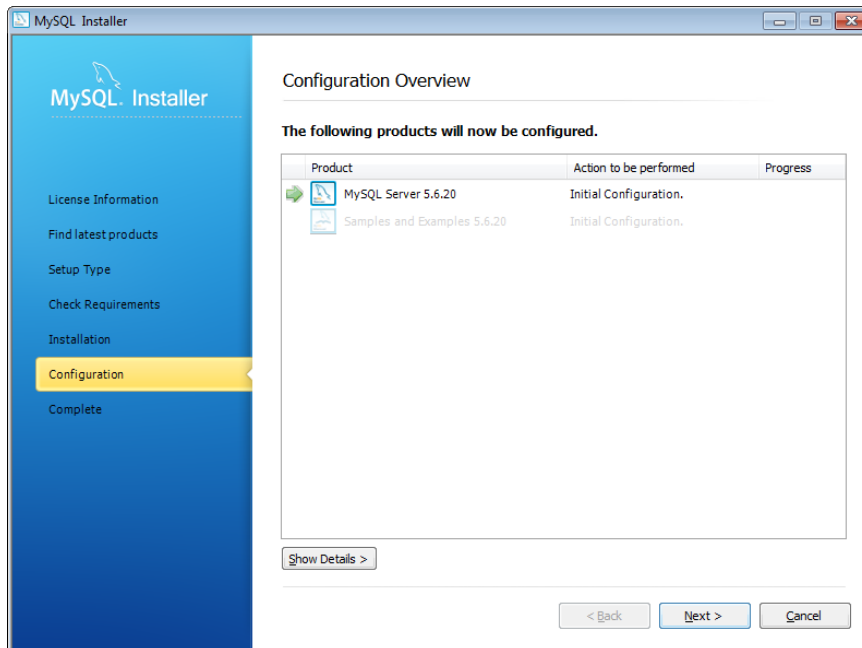
30. Click “Execute” to install or update the following components.



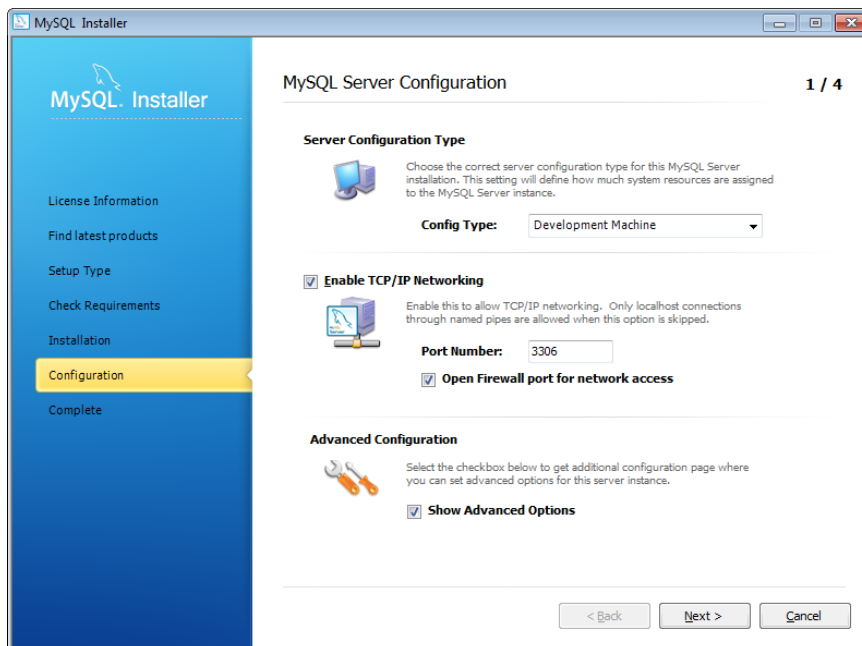
31. The following screen indicates that components are installed successfully. Click “Next” to continue.



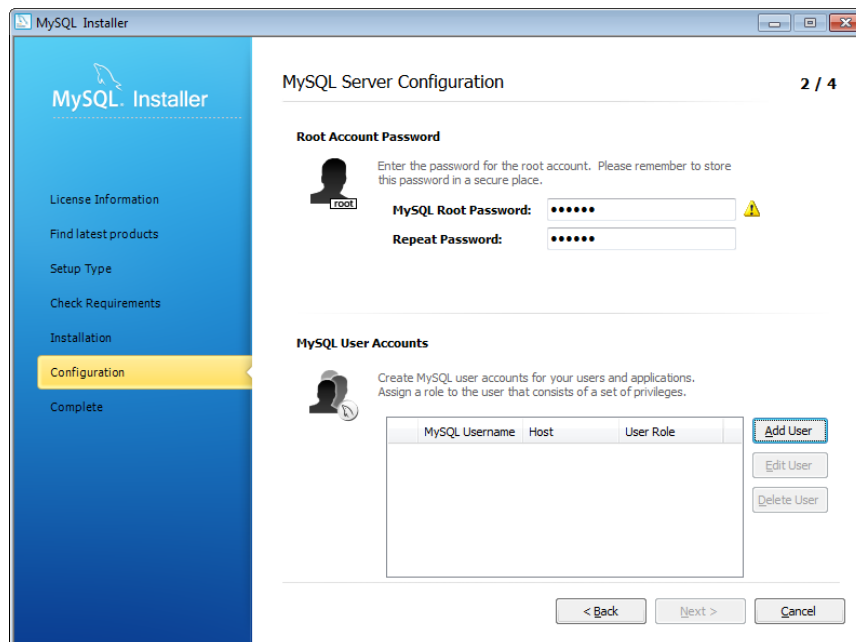
32. Click “Next” to begin MySQL Server initial configuration.



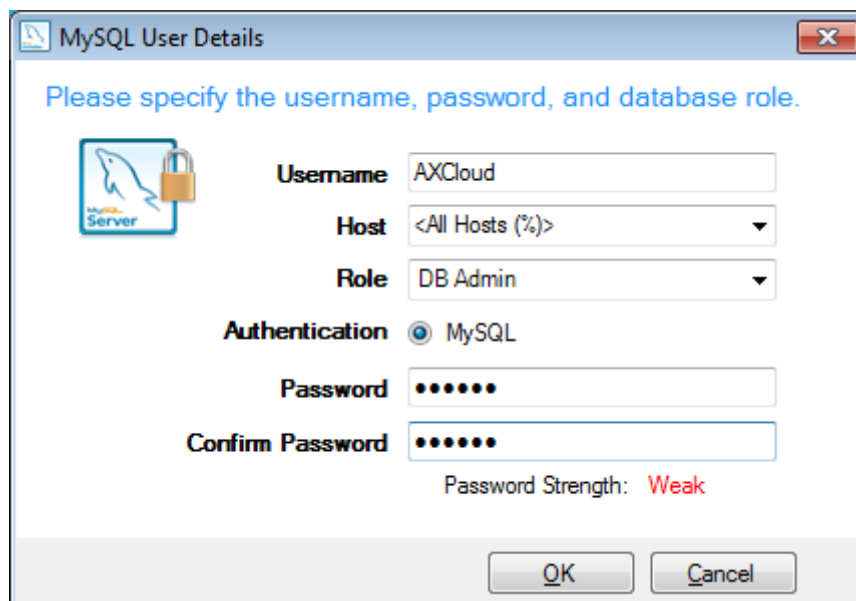
33. For Config Type, please select “Server Machine” (recommended). In Advanced Configuration, select “Show Advanced Options” and click “Next” to continue.



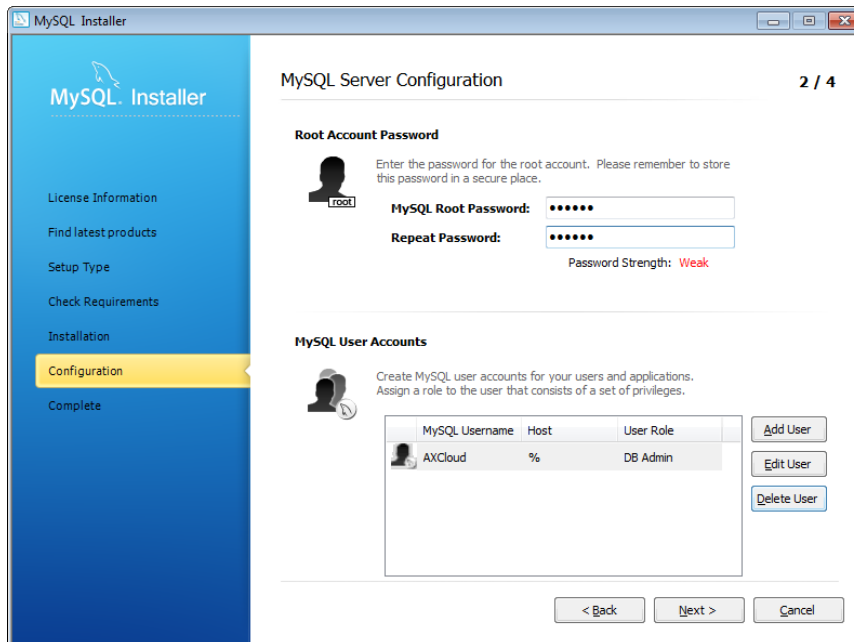
34. Key in root account password at “MySQL Root Password” and “Repeat Password”. Then click “Add User”.



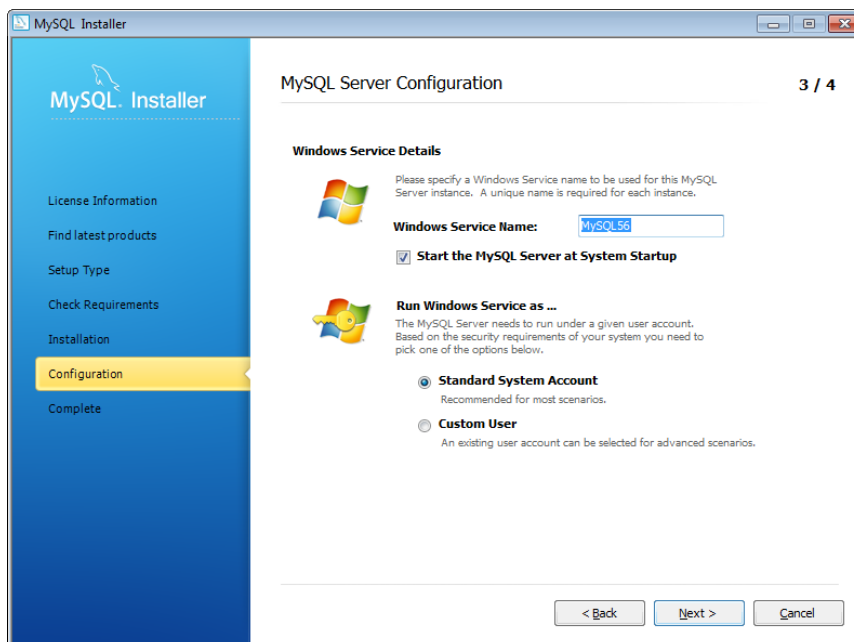
35. In the next screen, specify username, password, database role and confirm password. Then click “OK” to continue.



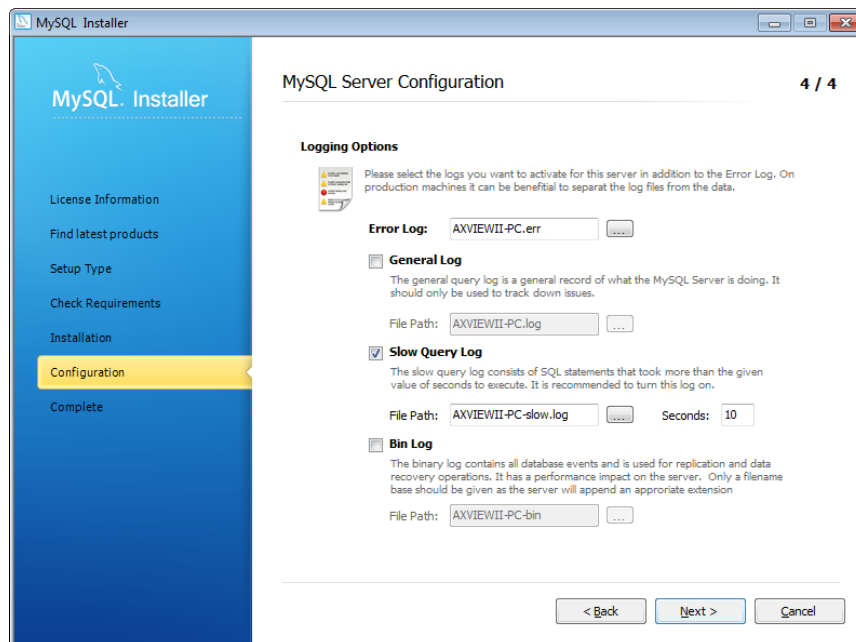
36. A new user account is created and added to list. Click “Next” to continue.



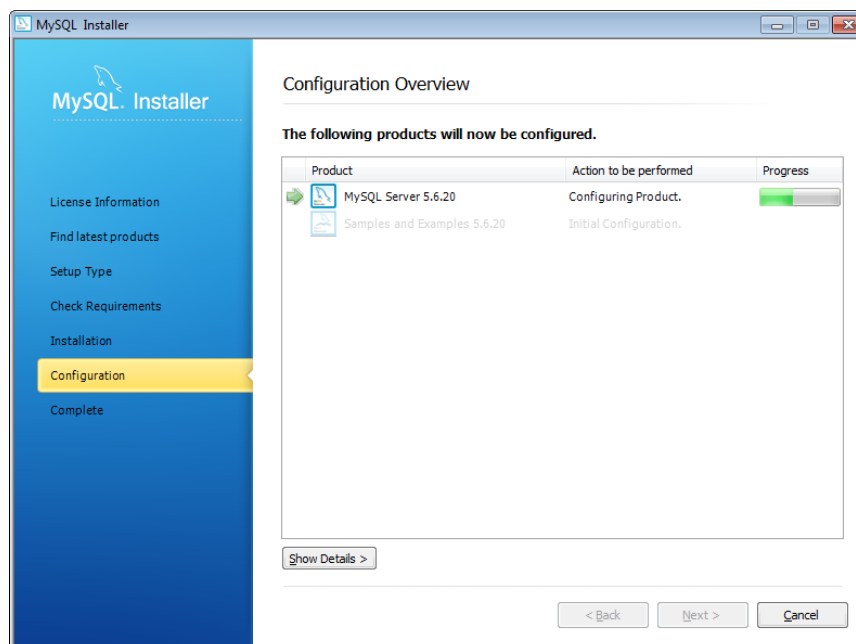
37. Specify a Windows Service name for this MySQL Server instance. Click “Next” to continue.



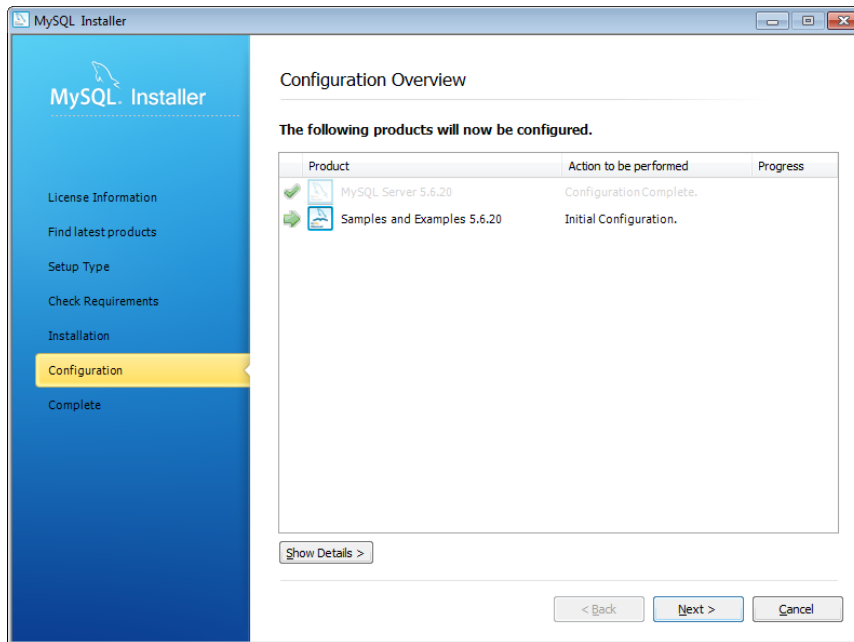
38. Specify error log and select “Slow Query Log” as recommended. Then click “Next” to continue.



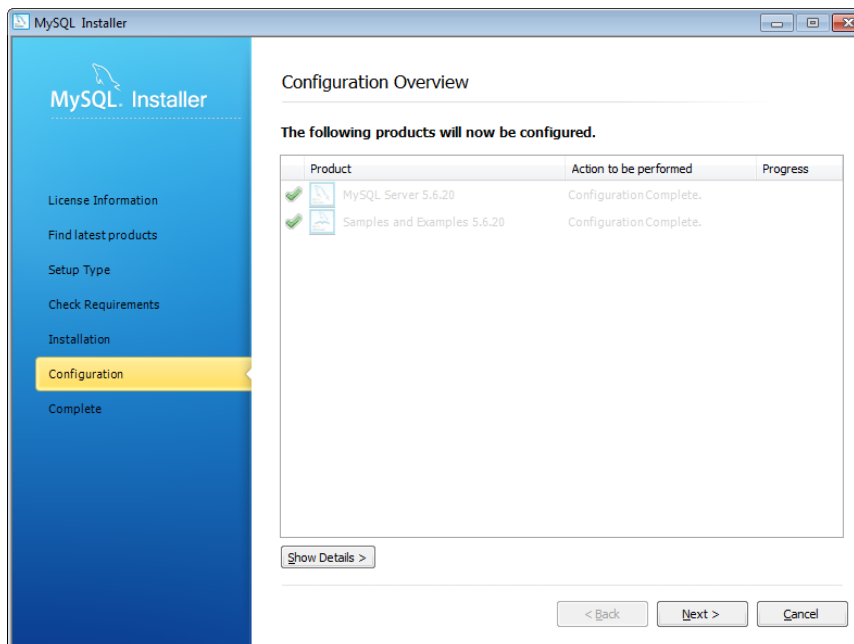
39. Please wait while setup configures MySQL Server.



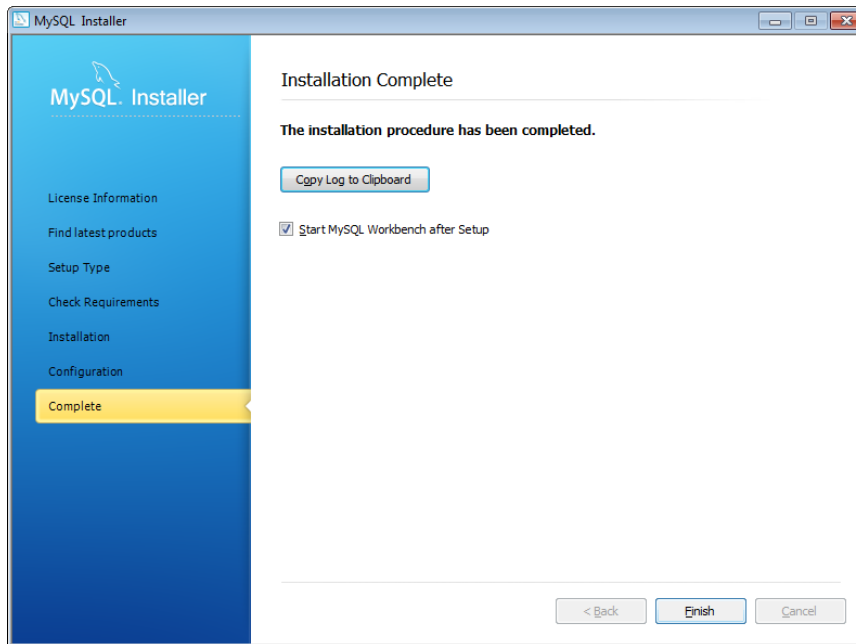
40. Click “Next” to begin initial configuration for the following item.



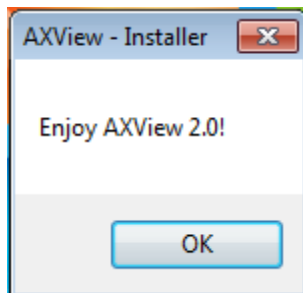
41. The configuration is complete, click “Next” to continue.



42. MySQL installation is complete, click “Finish” to continue.



43. Now the installation of AXView – Service Cloud is complete. Click “OK” to exit.

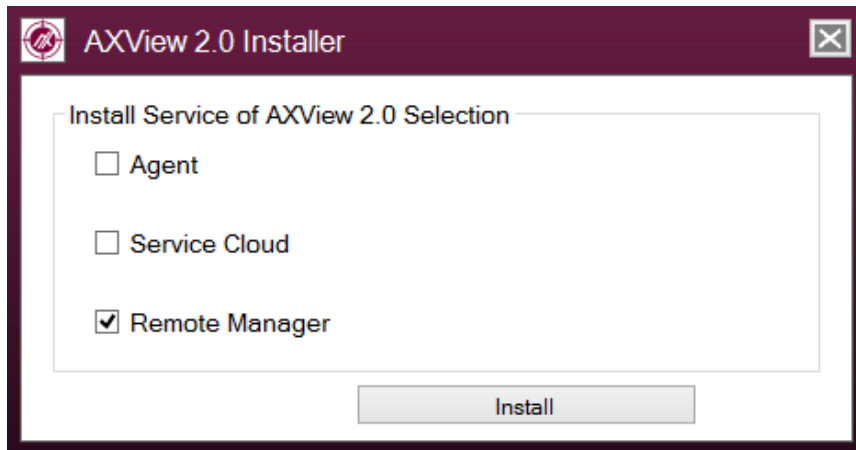




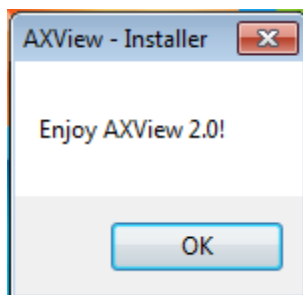
## 2.3 Install AXView – Remote Manager

Follow steps below to install Remote Manager.

1. Run “AXView 2.0 Installer.exe”. When you see the following screen, select “Remote Manager” and click “Install”.

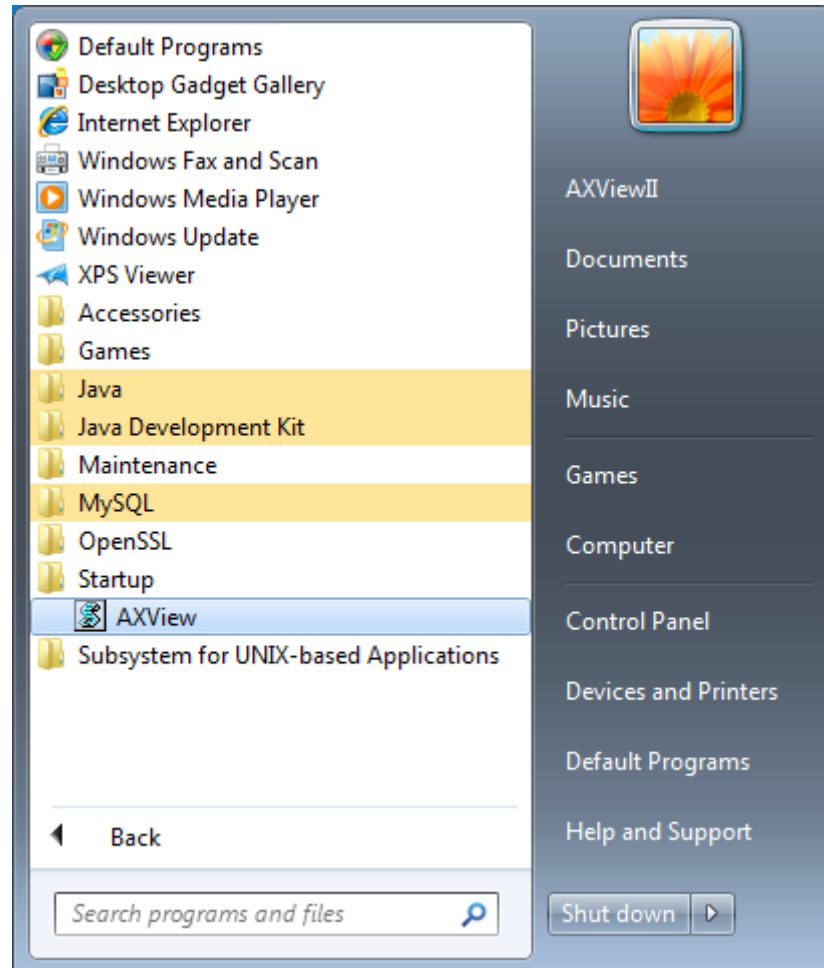


2. When the installation is complete, the following message appears. Click “OK” to exit.

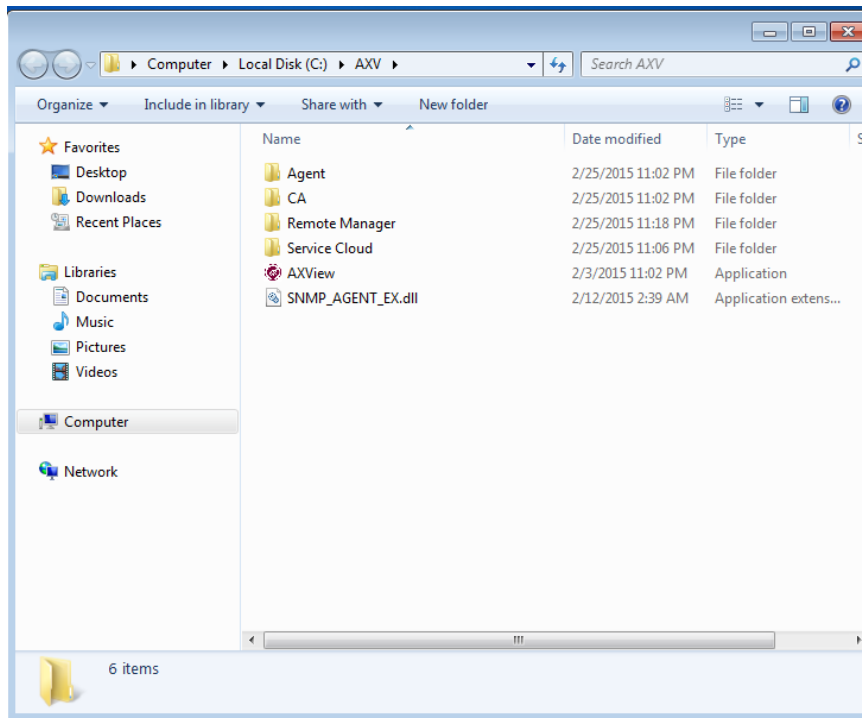


## 2.4 After Installation

After installation, you can find AXVIEW execution file at *Desktop > Startup* (see figure below). You must run AXView as administrator.

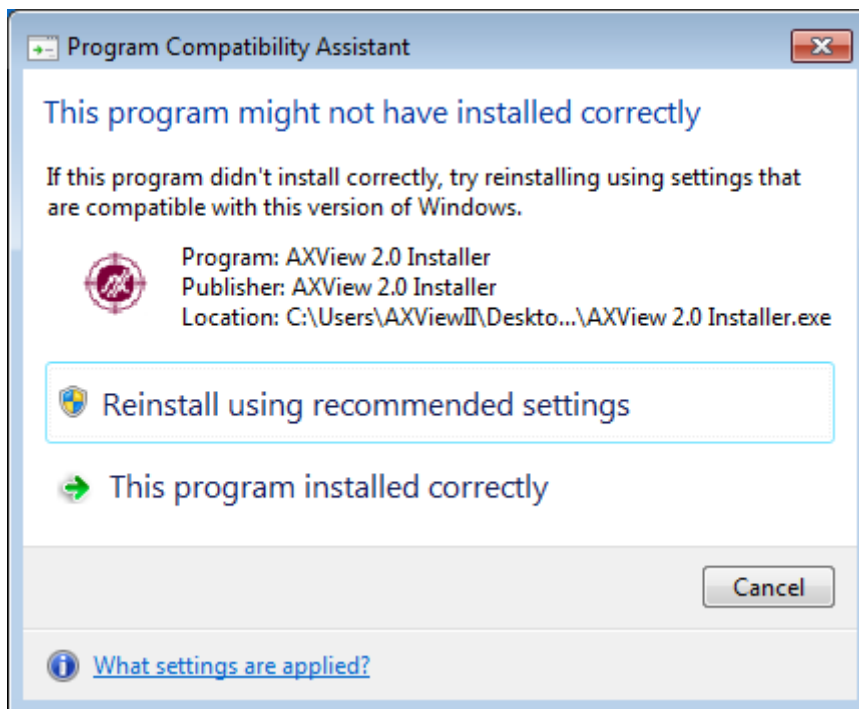


Here is the path where AXView package files are installed to:



## 2.5 Other Messages

If the system pops up the message screen below, please click “This program installed correctly”.



**This page is intentionally left blank.**

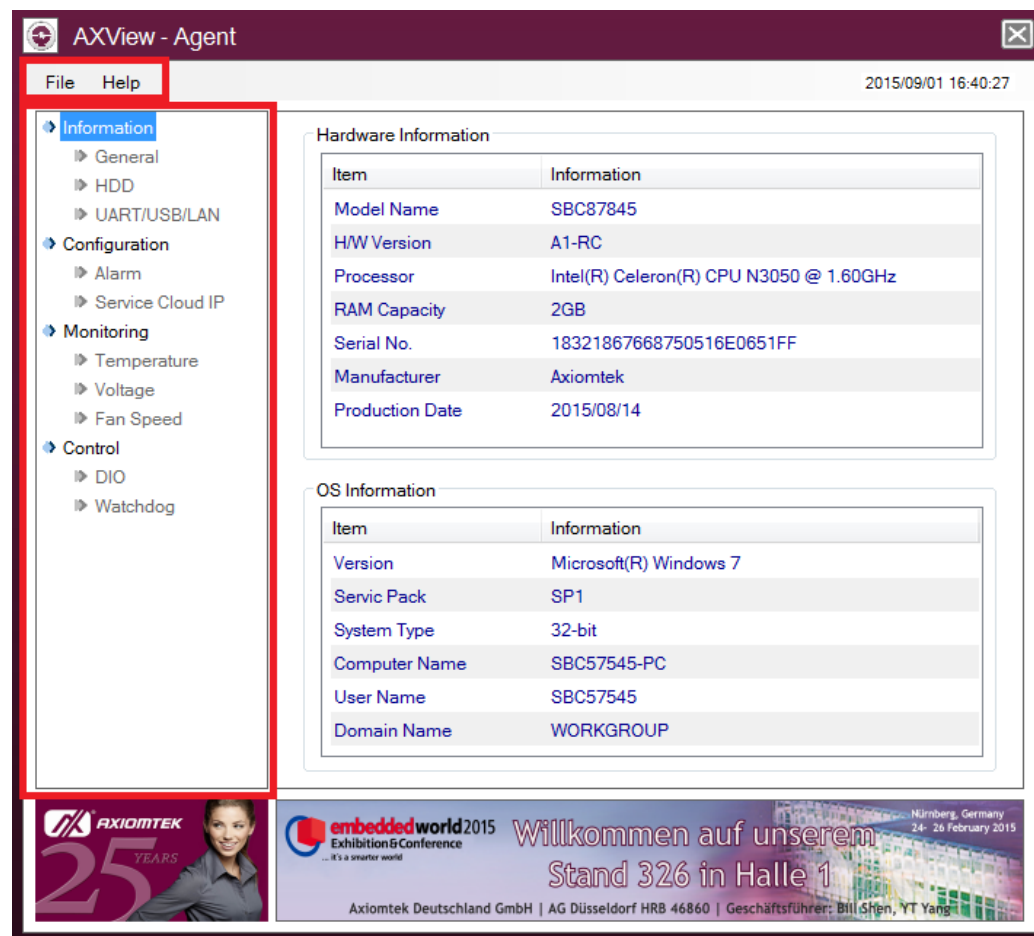
# Chapter 3

## AXView - Agent

Agent is a member of AXView 2.0 suite; it works only on Axiomtek's device. One of the major tasks of Agent is to routinely provide OS information and monitor hardware status of system including temperature, voltage, fan speed, digital I/O, power consumption, hardware and operating system information. If the device with Agent installed is able to connect to Internet, Agent can transfer the information mentioned above to another program of AXView 2.0 – Remote Manager which comes in PC (for Windows) and Android device version. Besides, the Agent also has functions for controlling digital output, watchdog, PWM and writing backup data into backup area on local side system.

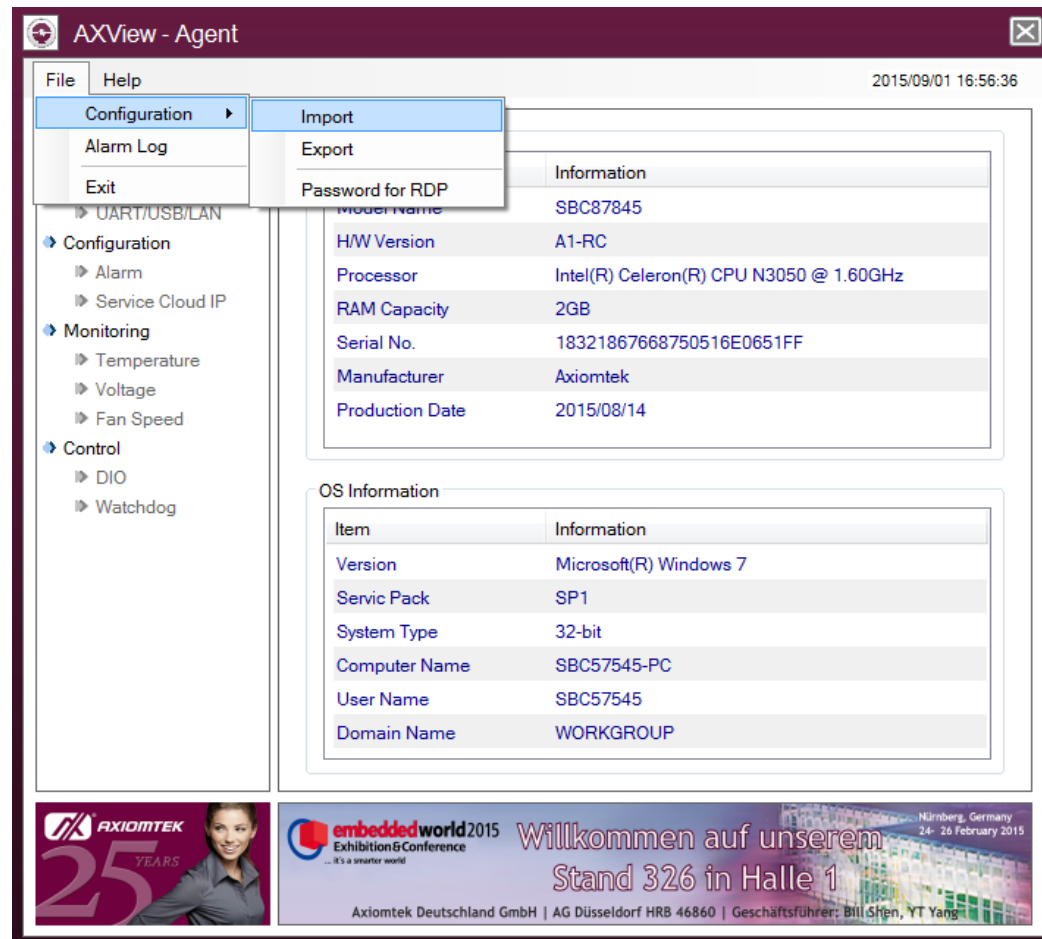
The other major task of Agent is to act as threshold filter. It has the capability to set up upper bound and lower bound of threshold values for temperature, voltage and fan speed. Also able to select some events that we want to know, like digital I/O signal state change or detecting USB device insertion or removal. When detected value exceeds threshold limit or exceptional event occurs, Agent will inform you through email, SNMP trap or Service Cloud about what's happening with the system. For long distance application, the Agent allows Remote Manager to login from remote side to view screen of local system.

Start the Agent software and you should see the main screen as given below. This screen contains two main function areas: Menu Bar and Menu List.



## 3.1 Menu Bar

On top of the main screen, you can see menu bar. Select any of the items in this bar to go to the sub menus. All of the configurations information is kept in a file named SHM.data.



### 3.1.1 File

Select *File > Configuration*, see figure above.

#### Import

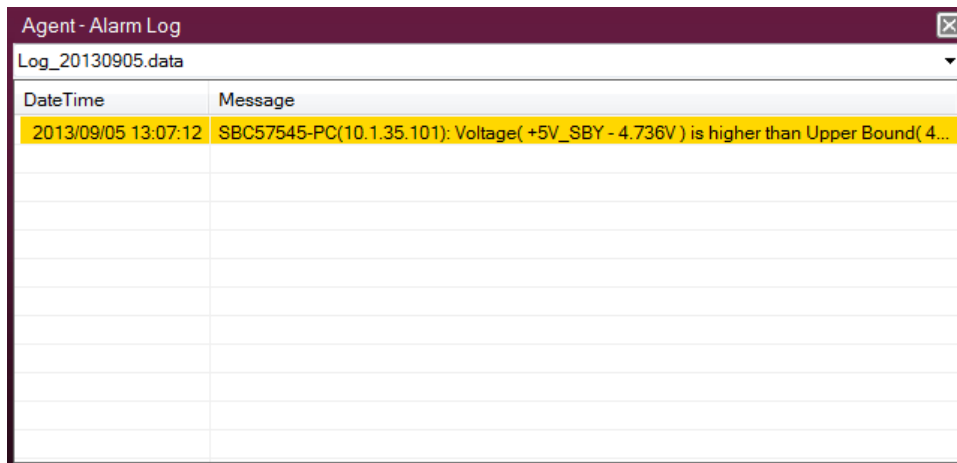
Import the configuration file. This file may be exported by other Agent from the same hardware model.

#### Export

Export the configuration file for other Agent to use on the same hardware model.

#### Password for RDP

Set up remote login password for Remote Manager.



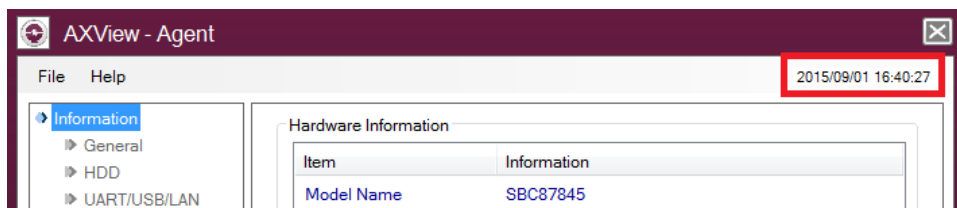
DateTime	Message
2013/09/05 13:07:12	SBC57545-PC(10.1.35.101): Voltage( +5V_SBY - 4.736V ) is higher than Upper Bound( 4...

### Alarm Log

It records and shows what kinds of exceptional event occurred and the time when it happened. Thus facilitate you for reviewing the old logs at any time.

### Exit

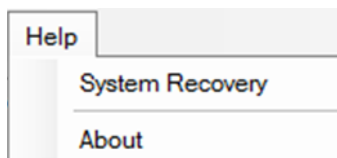
Close the Agent.



### Date and Time

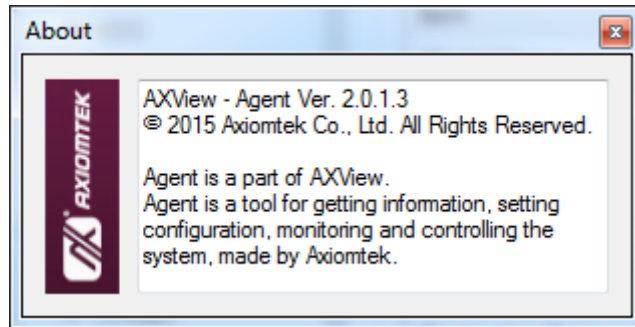
Show date and time of the system.

### 3.1.2 Help



### System Recovery

If there is a recovery section in the disk, select this option will trigger system to start the recovery process.



### About

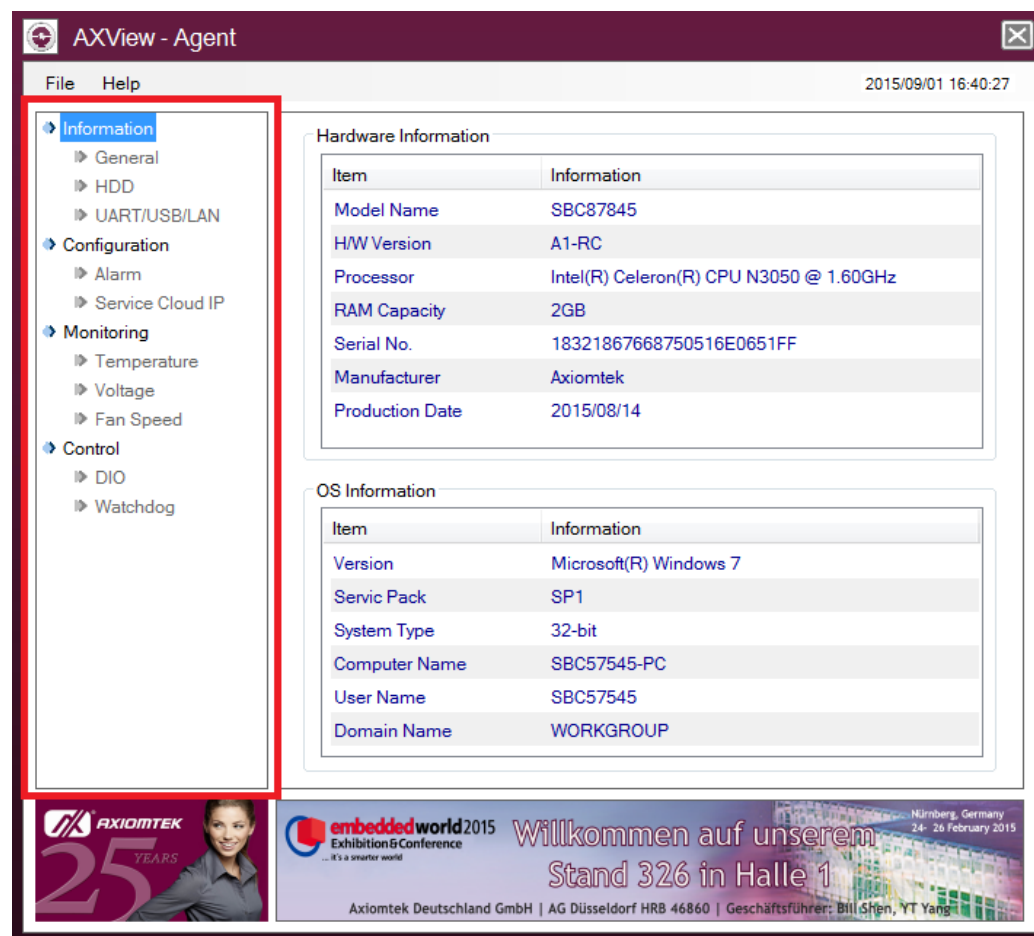
Show the version number, copyright and description of the Agent.



Click this icon box to minimize and hide the Agent instead of closing it.

## 3.2 Menu List

The menu list, on the left frame of the screen, contains all monitoring and controlling functions.





Meanwhile the data and control frame shows all monitoring and controlling items and data, see figure below.

The screenshot displays the AXView - Agent software interface. The main window has a menu bar (File, Help) and a sidebar with a tree view containing categories like Information, Configuration, Monitoring, and Control. The central area shows several overlapping panels:

- Hardware Information**: A table with columns for Item, Information, and Value.
- Event and Trigger**: A panel with tabs for Event and Trigger, E-mail Configuration, and SNMP Trap & Service.
- E-mail Alarm**: A panel with a table for Alarm items.
- Temperature**: A panel showing a temperature scale from 0 to 60 degrees Celsius.
- DIO Control**: A panel showing a table for DIO items with columns for Name, DO Status, Alarm, DI Status, and Alarm.

The DIO Control panel is the most prominent, showing a table with 10 rows of DIO items (DIO24 to DIO31) and their corresponding status and alarm settings.

Name	DO Status	Alarm	DI Status	Alarm
DIO24		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L
DIO25		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L
DIO26		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L
DIO27		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L
DIO28		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L
DIO29		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L
DIO30		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L
DIO31		<input type="checkbox"/> Opposite		<input type="checkbox"/> H2L <input type="checkbox"/> H2L

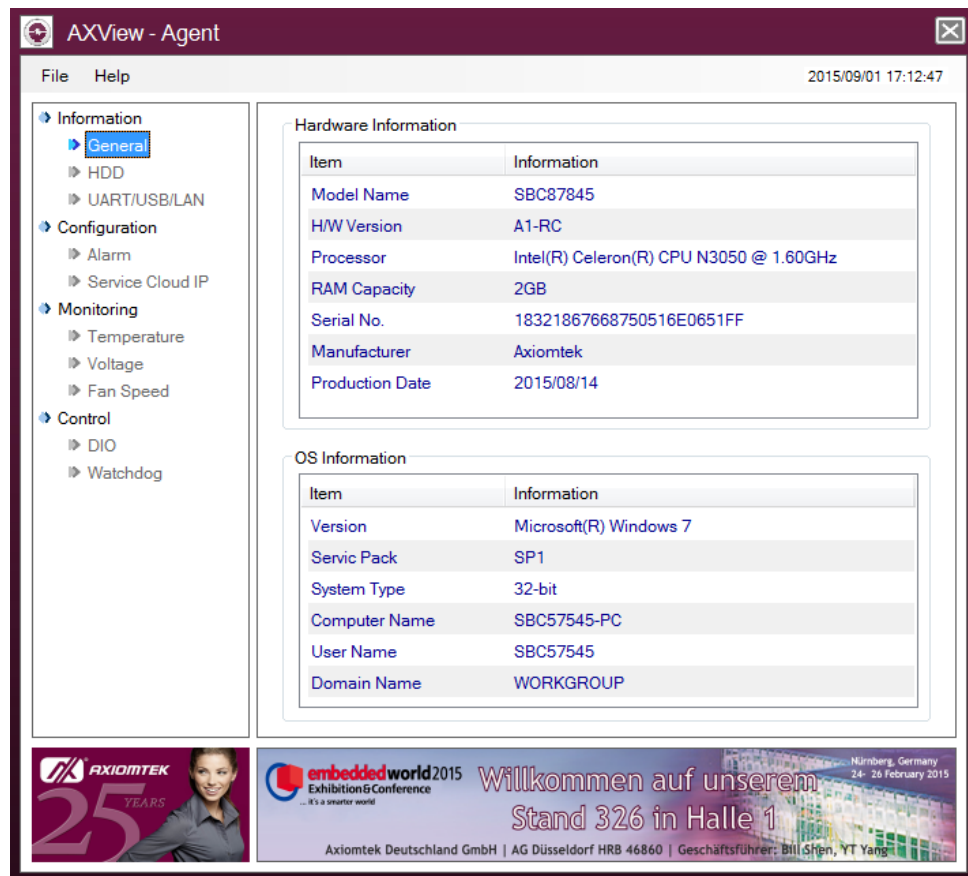
Legend:

- \* "ICON" of "DO Status" for DO level control
- \* Checkbox "Opposite" for alarm when level was not changed by user
- \* Checkbox "H2L" for alarm when level changed from high to low
- \* Checkbox "L2H" for alarm when level changed from low to high

### 3.2.1 Information

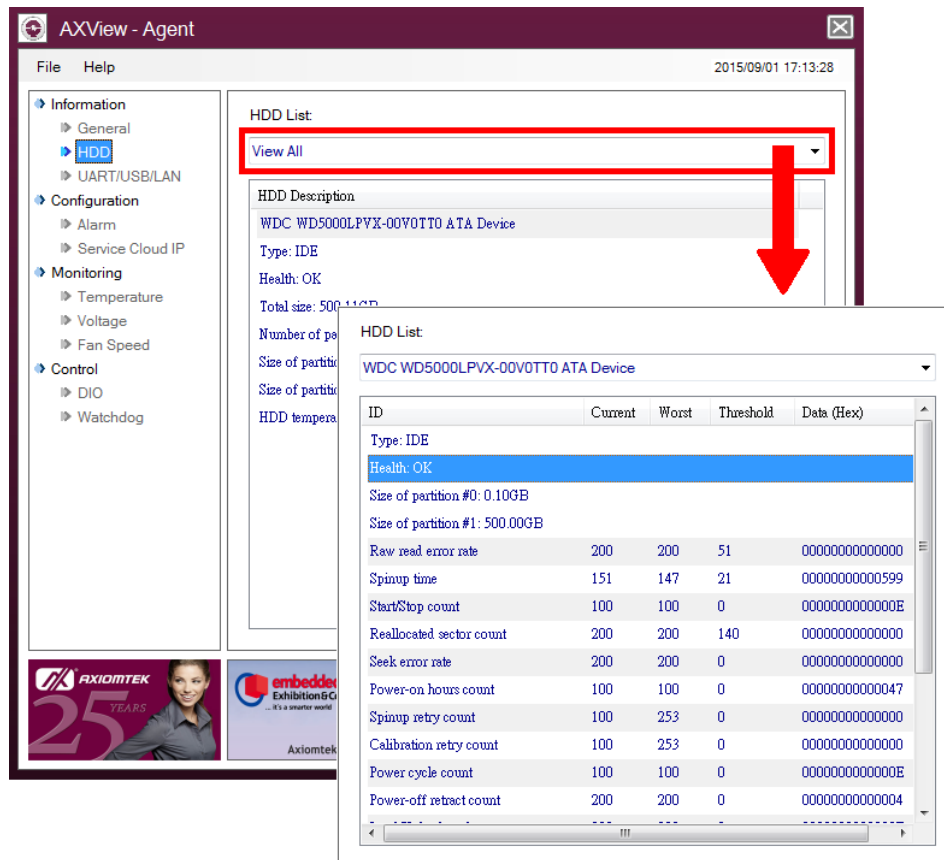
The Information menu displays information about the following items:

- General
- HDD
- UART/USB/LAN



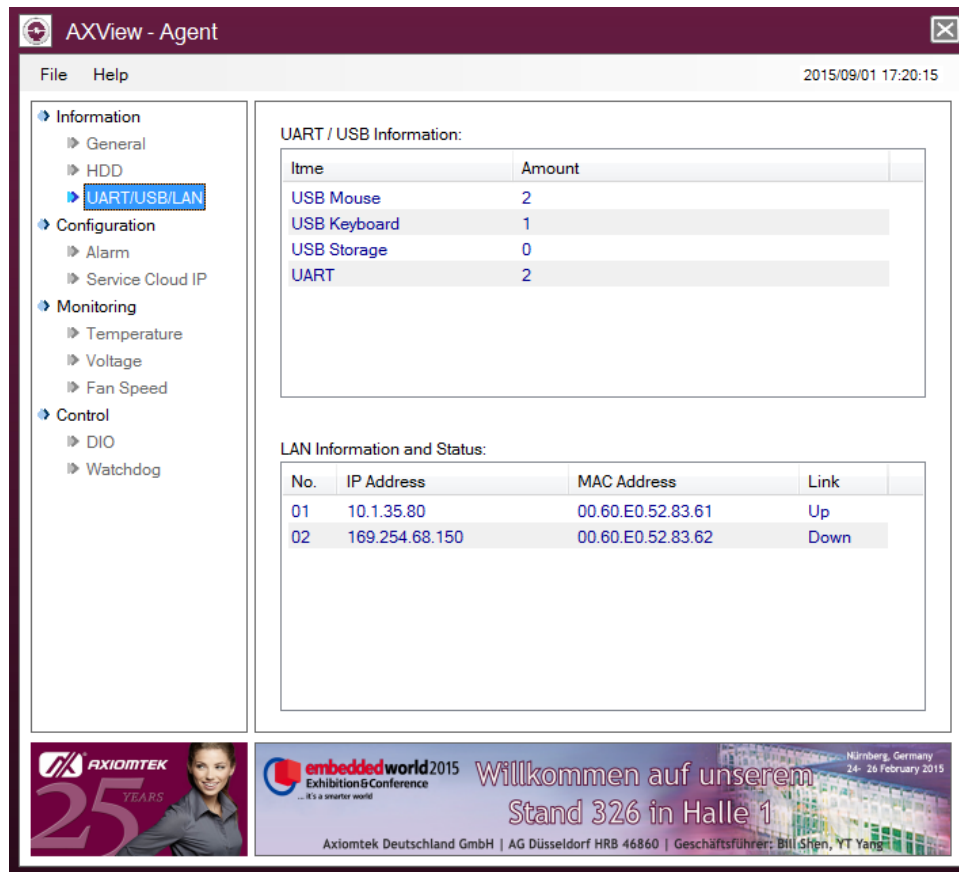
#### General

List hardware and operating system information.



## HDD

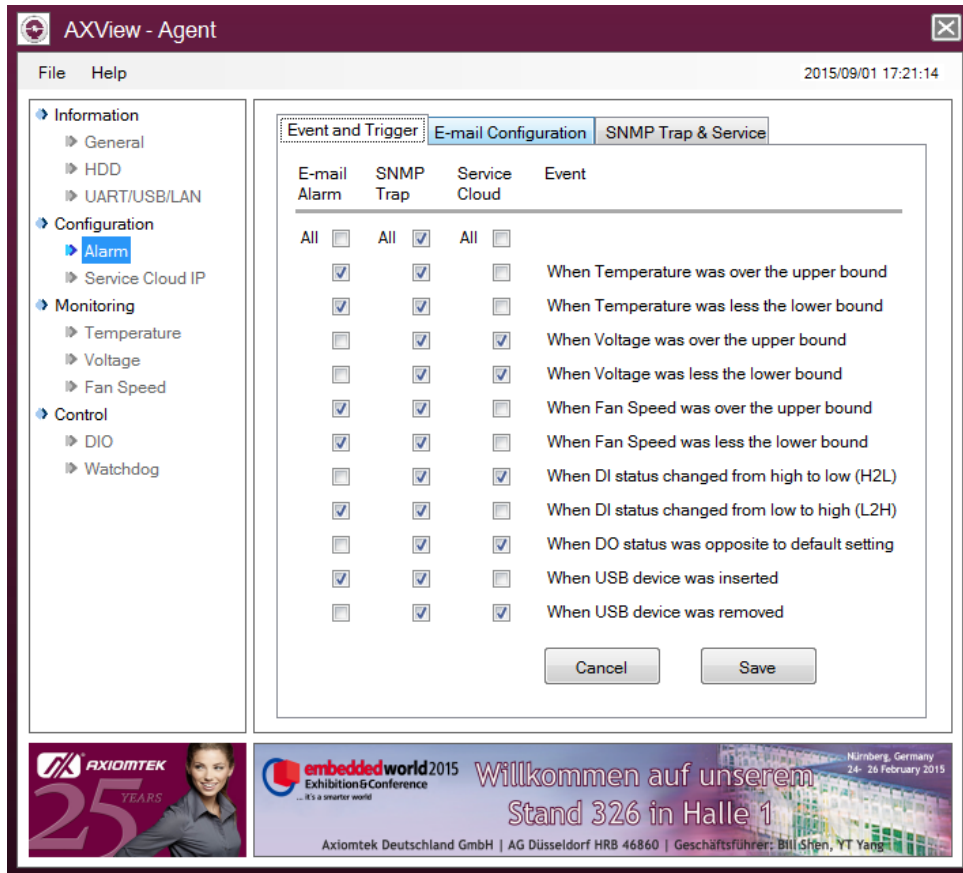
Show the information of all storages connected to the system. Select the drop down list to view the entire information about HDD S.M.A.R.T (Self-Monitoring, Analysis and Reporting Technology).



### UART/USB/LAN

- **UART/USB Information:**  
Show and monitor the number of detected devices (e.g. USB mouse, USB keyboard, USB storage and UART). If any device is removed or inserted, the number will change.
- **LAN Information and Status:**  
List all information of the LAN port (e.g. IP and MAC address) and connection status on the system.

### 3.2.2 Configuration

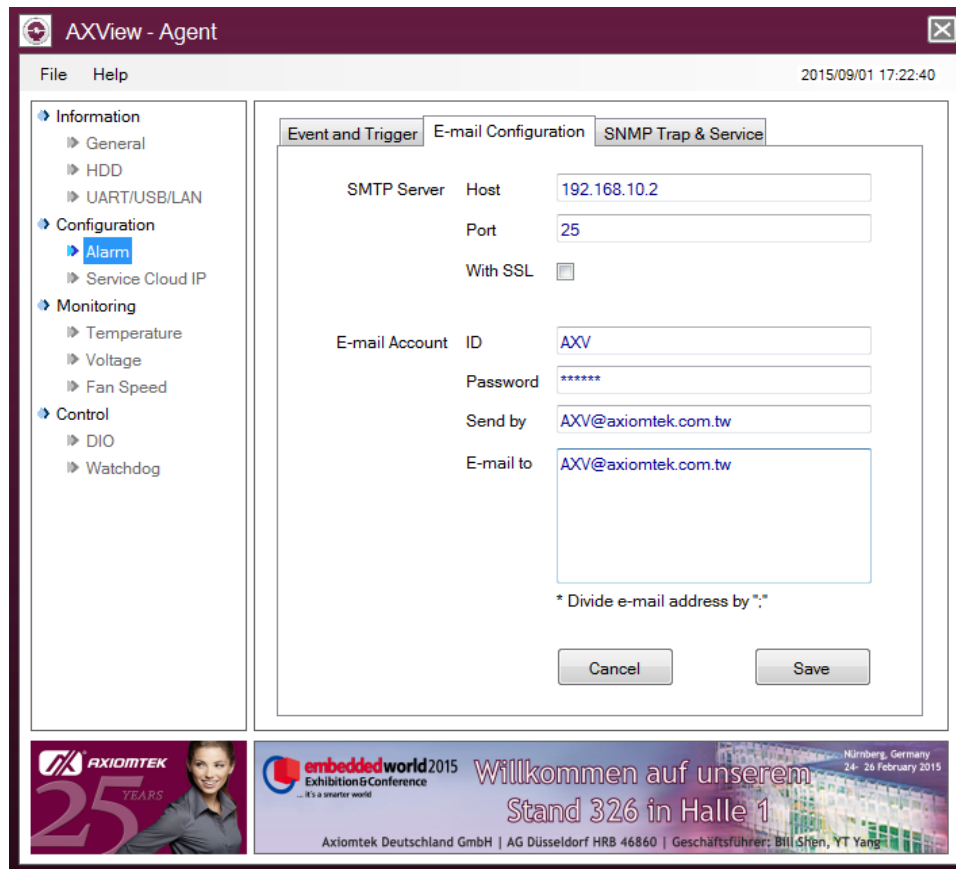


#### Alarm

Select the specific kind of unusual event and alarm informing method.

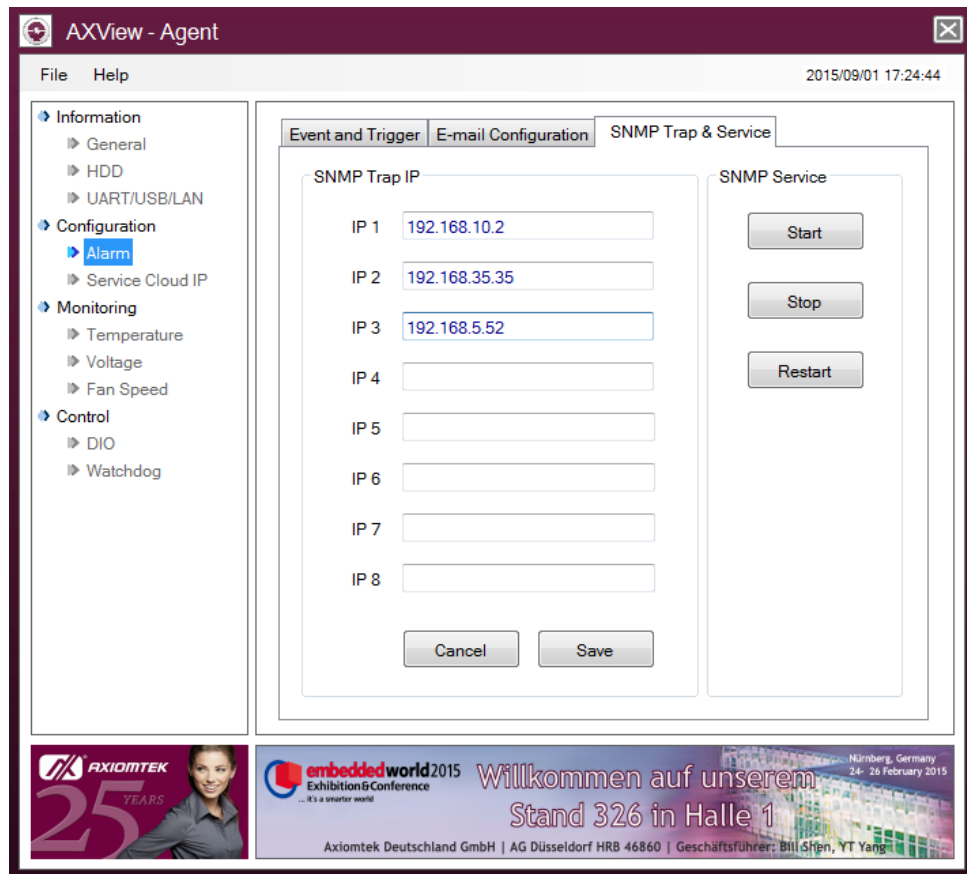
#### Event and Trigger:

Select which one of the unusual event you want to know and the informing method. After that, click  to save and trigger Agent to monitor these selection(s).



### E-mail Configuration

If you want Agent to inform you about the unusual event through email, you must key in the related info for SMTP server and email account.

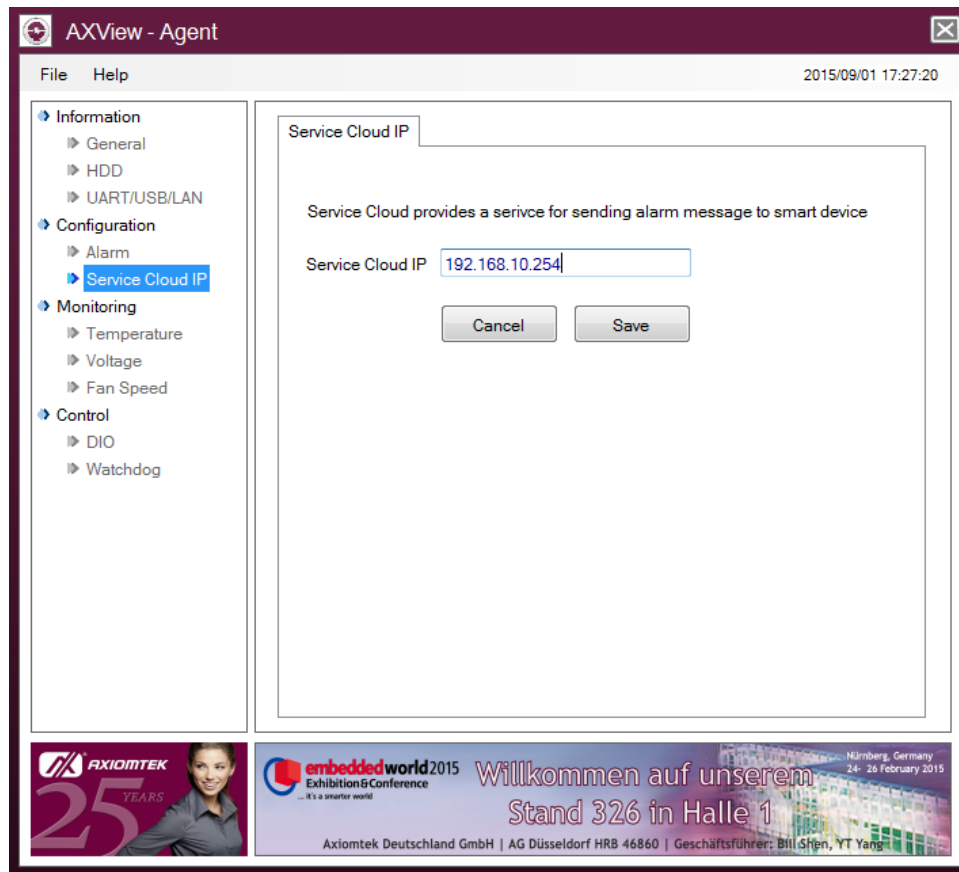


### SNMP Trap & Service\SNMP Trap

If you want Agent to inform you about the unusual event through SNMP Trap, you must key in at least one IP address.

### SNMP Trap & Service\SNMP Service

Control the behavior of SNMP Service.



### Service Cloud IP

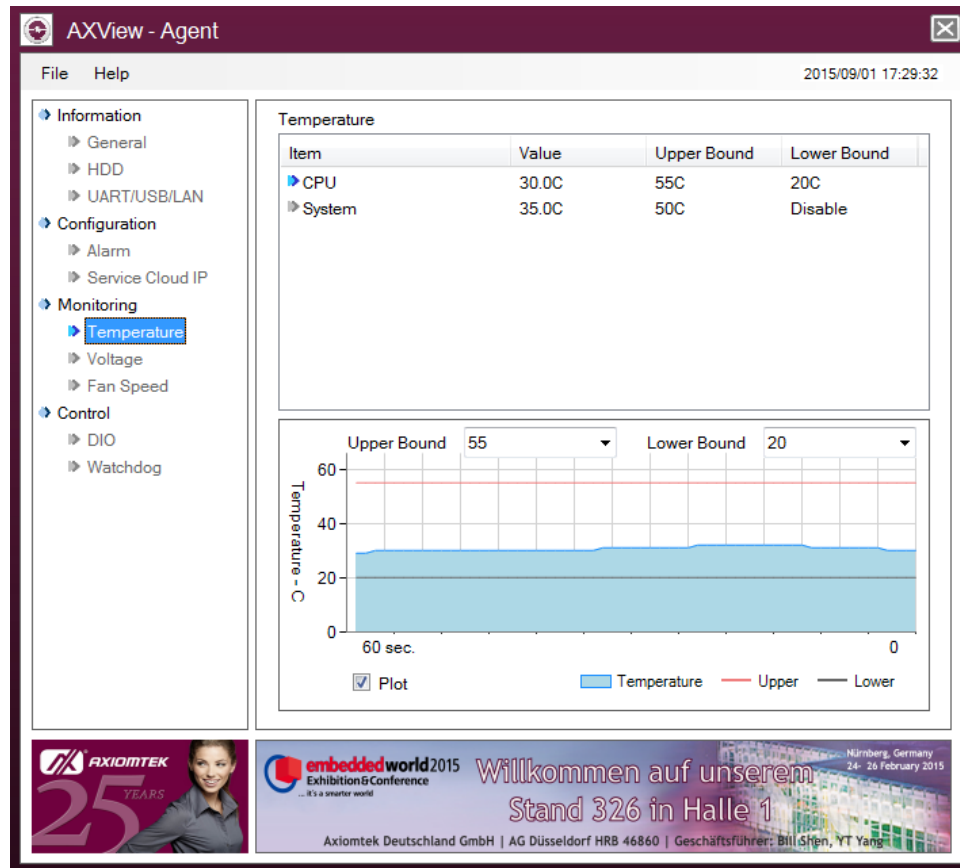
If you want Agent to inform you about the unusual event through Service Cloud, you must key in Service Cloud IP address. When Service Cloud receives the event alarm from Agent, then it will send the alarm message to Remote Manager on your PC or Android mobile device to inform you.



### 3.2.3 Monitoring

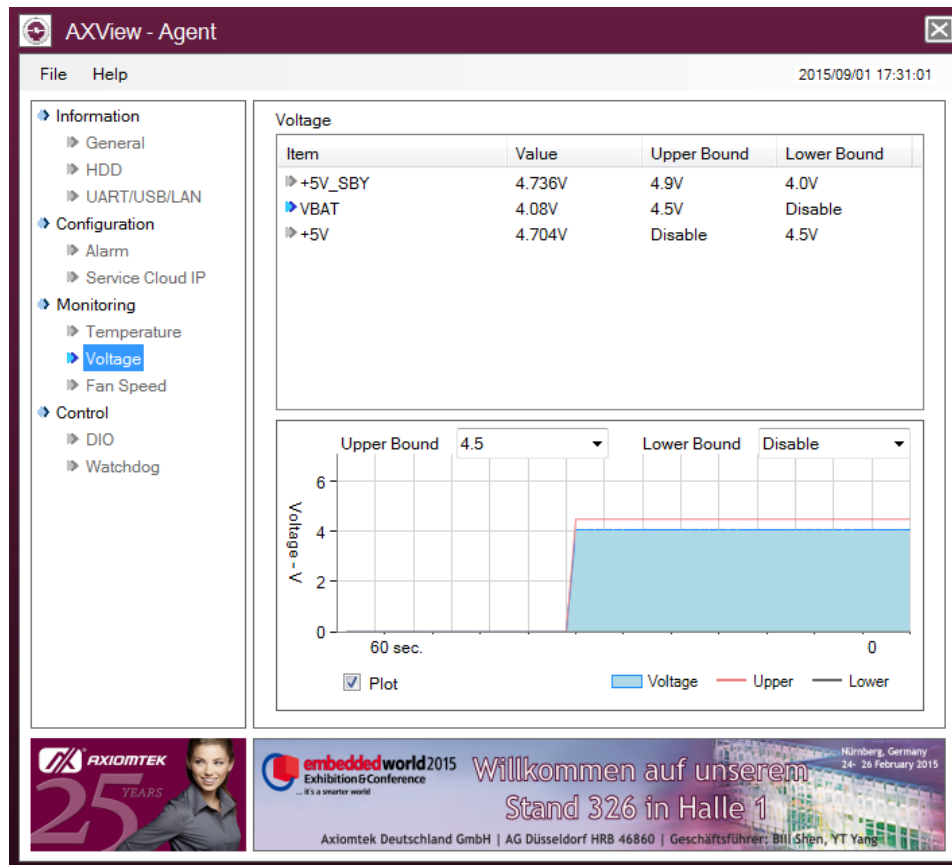
The Monitoring menu displays more detailed information about the following items:

- Temperature
- Voltage
- Fan Speed
- Power Consumption



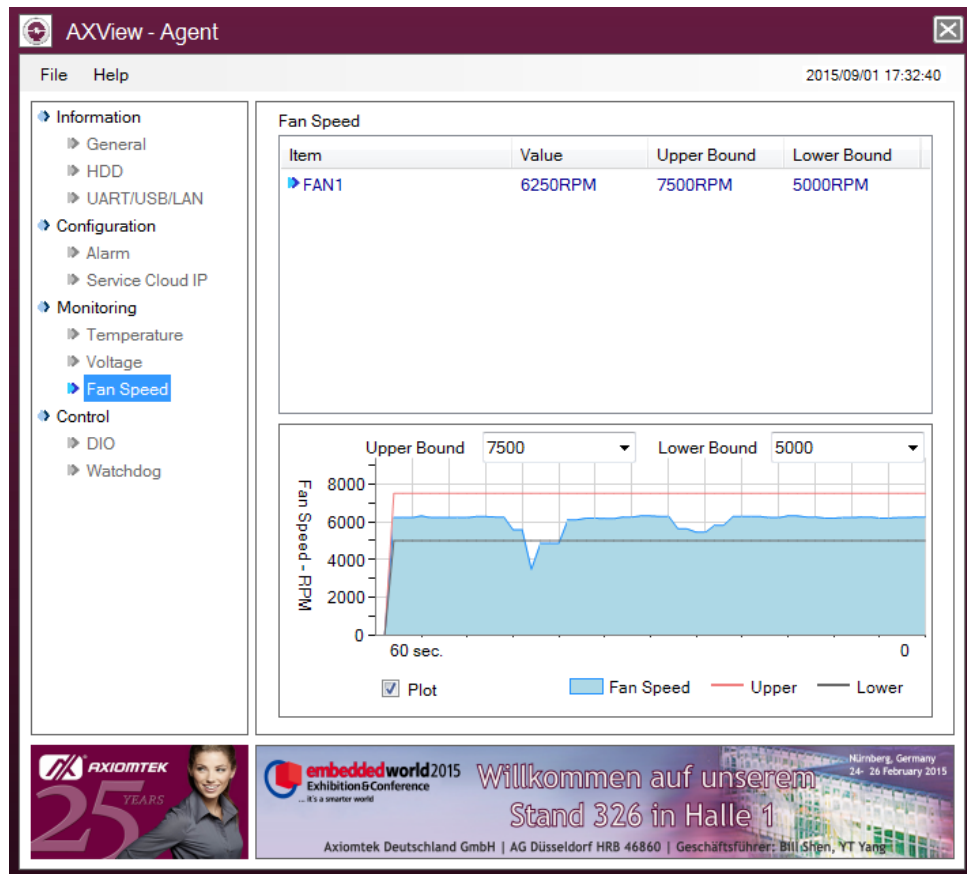
#### Temperature

- Monitor and list temperature and bound values.
- Set up threshold value of upper bound and lower bound.
- Plot continuous values in a line chart when "Plot" tick box is checked.



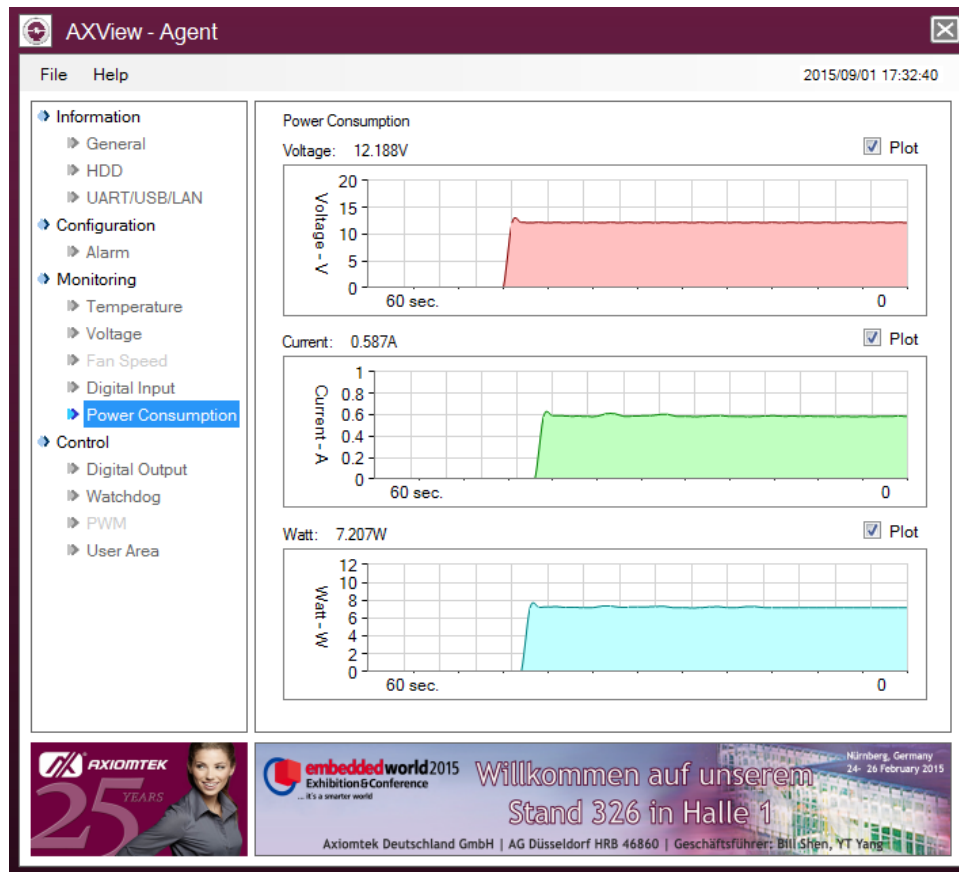
### Voltage

- Monitor and list voltage and bound values.
- Set up threshold value of upper bound and lower bound.
- Plot continuous values in a line chart when "Plot" tick box is checked.



### Fan Speed

- Monitor and list fan speed and bound values.
- Set up threshold value of upper bound and lower bound.
- Plot continuous values in a line chart when "Plot" tick box is checked.



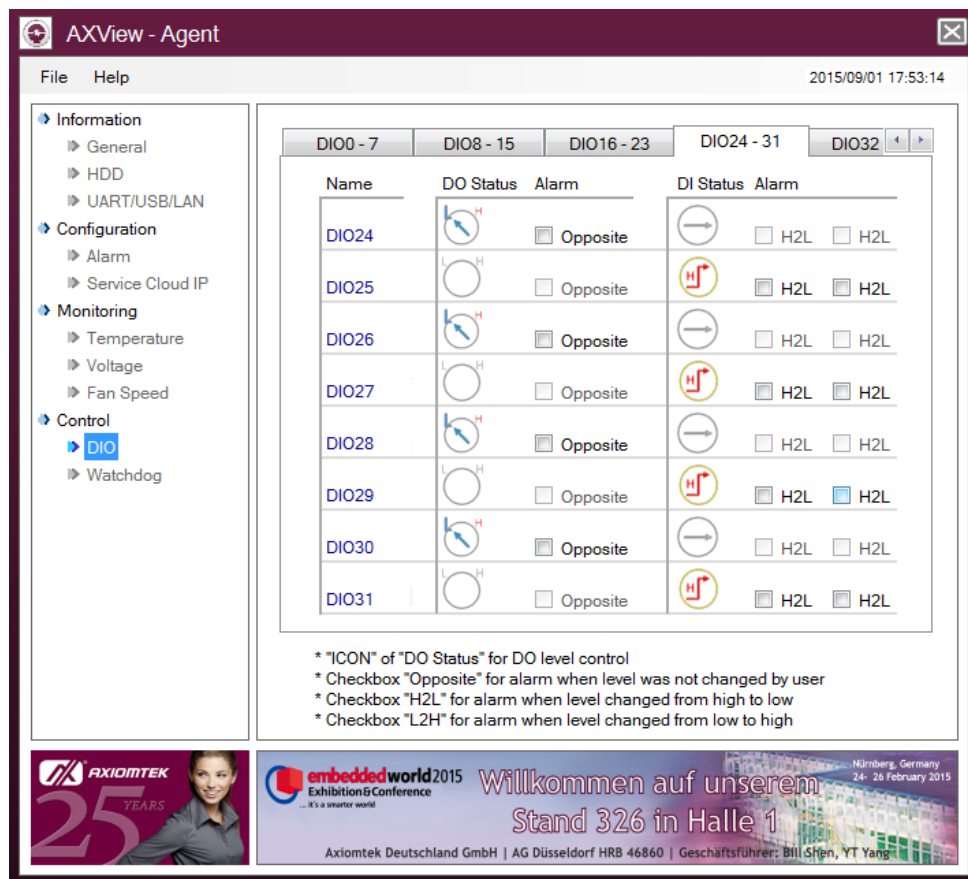
#### Power Consumption (for view-only)

- Monitor and show voltage, current and Watt from input power source.
- Plot continuous values in a line chart when "Plot" tick box is checked.

### 3.2.4 Control

The Control menu allows users to set configuration of the following items:

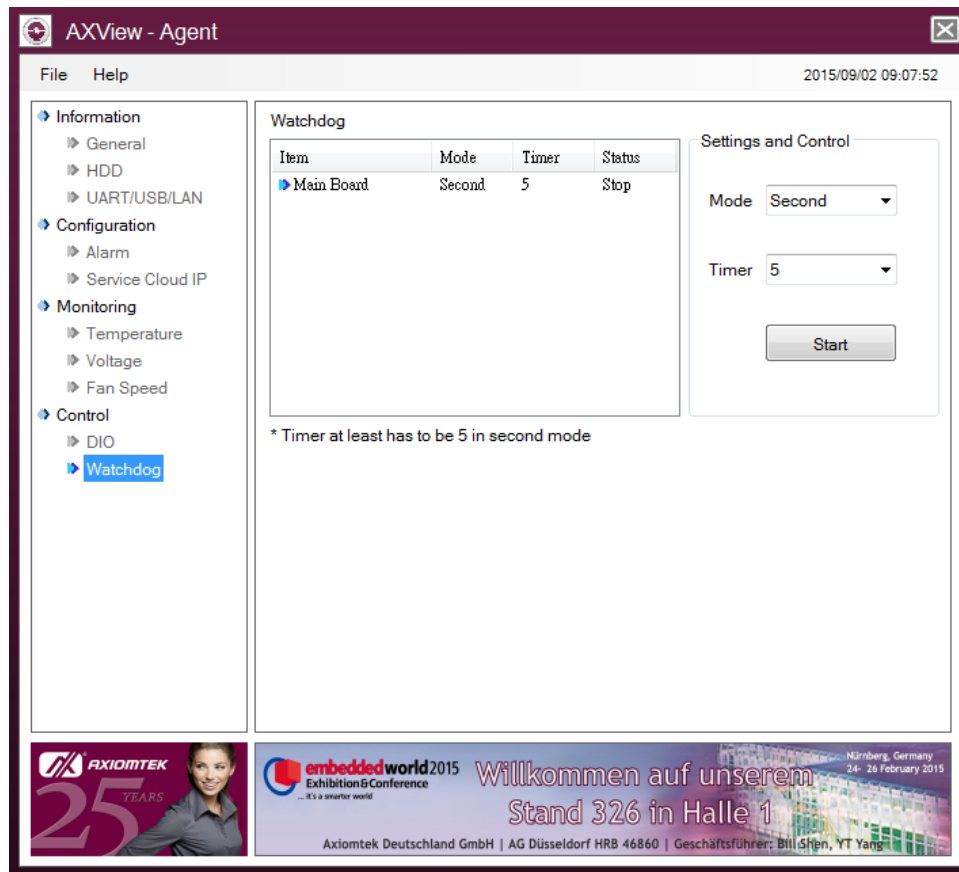
- DIO
- Watchdog
- PWM (Showing in light gray means function is not supported in this hardware model)
- User Area



#### DIO

Monitor and control digital input/output signal.


- Click icon of "DO Status" for digital output level control.
- Select "Opposite" tick box to set up threshold value for detecting state change of digital output signal while it is not changed internally by user.
- Set up threshold value for detecting the state change of digital input signal.  
 H2L means state is changed from high to low.  
 L2H means state is changed from low to high.

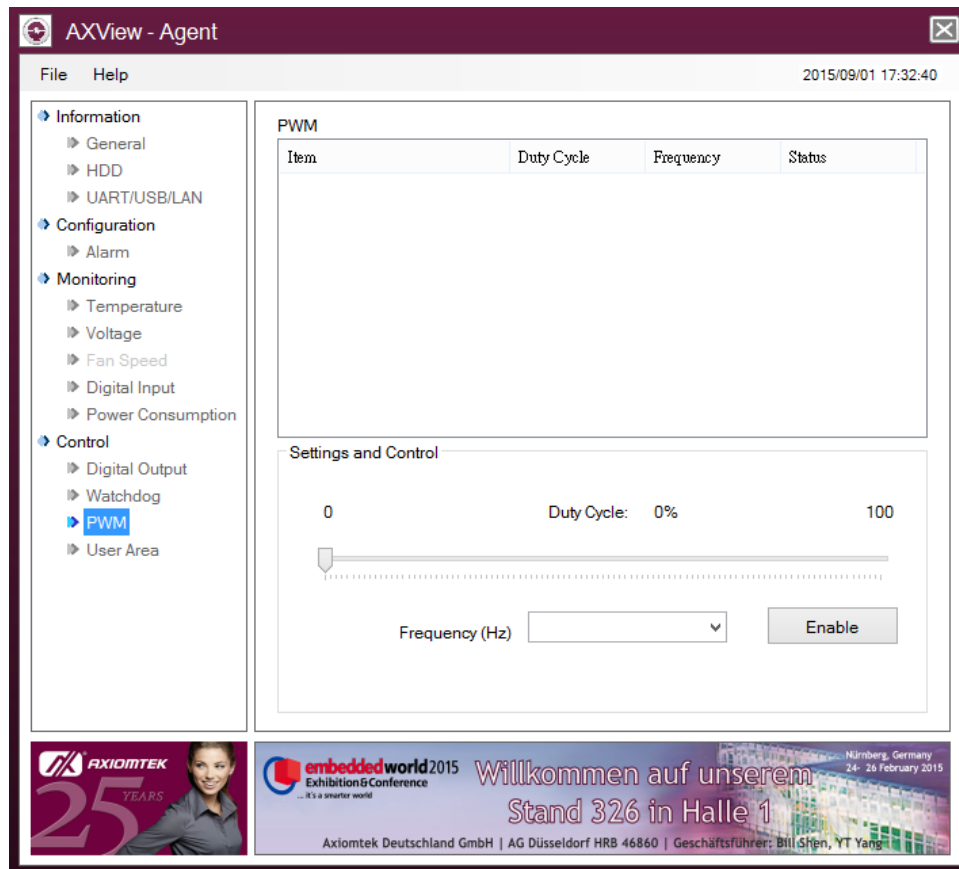


## Watchdog

List information and status of watchdog timers in the system.

## Settings and Control

Set mode (in second or minute) and time value of watchdog through drop down menus. Trigger to start by clicking . If watchdog is set to second mode, the time value must be set to at least 5sec.

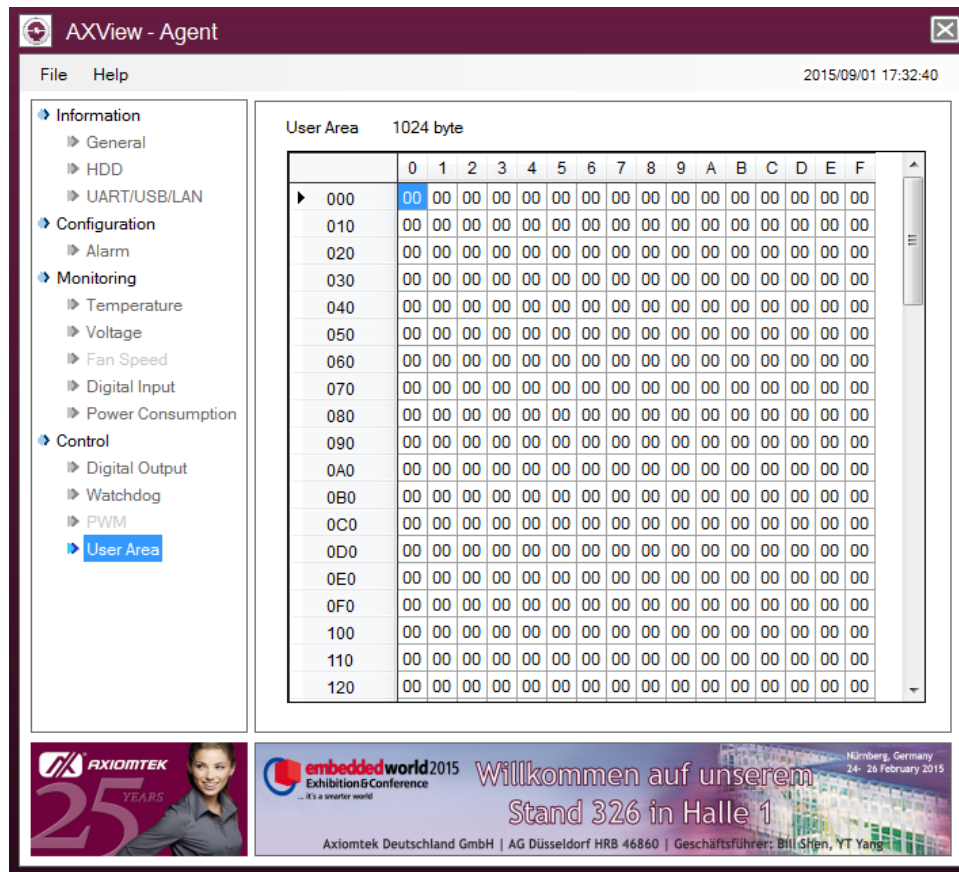


## PWM

List information and status of PWMs in the system.

## Settings and Control

Set duty cycle and frequency of PWM through scroll bar and drop down menus. Trigger to ON/OFF by clicking . Note that when PWM is set up, the text on the button shows "Disable". Otherwise, the text on the button shows "Enable".



### User Area

This function provides 1Kb space for user to write-in any data in Hex in ASCII code.



# Chapter 4

## AXView – Remote Manager

AXView offers easy-to-use remote hardware monitoring functionality for Microsoft Windows® platform and also phablet family through a member of its program group - Remote Manager. In addition, Remote Manager also provides remote management system support functions for DISCOVER, SNMP and Modbus, which helps administrators to locate, identify and manage devices with standard protocols on its network.

Remote management system can play the role of alert receiver. As long as local hardware monitoring service Agent assigns the IP address of the remote management system as the alert receiver, SNMP trap will show up on time on the management screen. If you're using a phablet, simply use the AXView store App to connect to the Service Cloud by entering the IP address of your Service Cloud. Once Service Cloud connects, any event alert fired by Agent will also be pushed to your phablet automatically. The data exchange between Service Cloud and your phablet device is enabled by lightweight messaging MQTT protocol.

Two major functions of Remote Manager are implemented as follows:

- Link to Agent and obtain device information via Modbus protocol.
- Link to Service Cloud and receive device alert messages via MQTT protocol.

In this chapter, we provide a brief guide showing how to configure, perform monitoring and use management functions. The Remote Manager comes in two versions: for PC (Microsoft Windows® platform) and for phablet device.

### 4.1 Remote Manager for Windows

In this section, you can learn how to use Remote Manager for Windows (PC side). To be able to establish connection to Agent and monitor hardware behaviors (such as hardware temperature, voltages, digital I/O signals, etc.), Remote Manager must be installed on your PC.

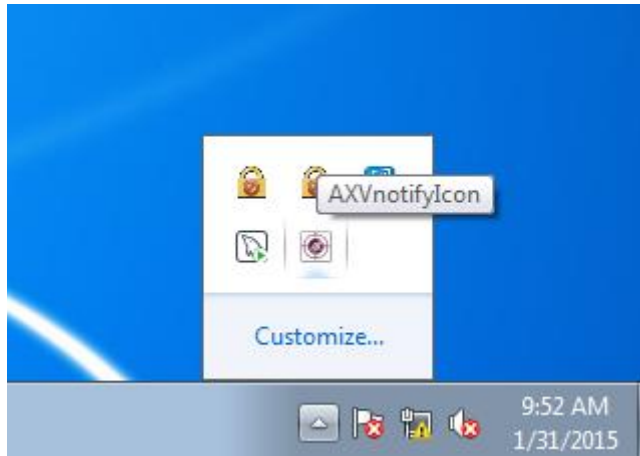
### 4.1.1 Start Up



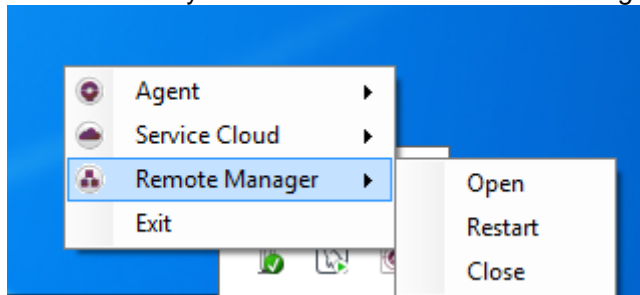
**Note**

***Before getting started, please make sure your PC and the local device are in the same LAN subnet.***

After installing Remote Manager on your PC, you can find “AXVnotifylcon” icon at the bottom right of your screen. See figure below.



Click “AXVnotifylcon” icon and select *Remote Manager > Open* to start the software.



### 4.1.2 Login Setting

You will be prompted for IP address, account and password for accessing the monitoring interfaces, see figure below.

**Cloud IP**

IP address for connecting to Service Cloud.

**Account**

Account group name.

**Password**

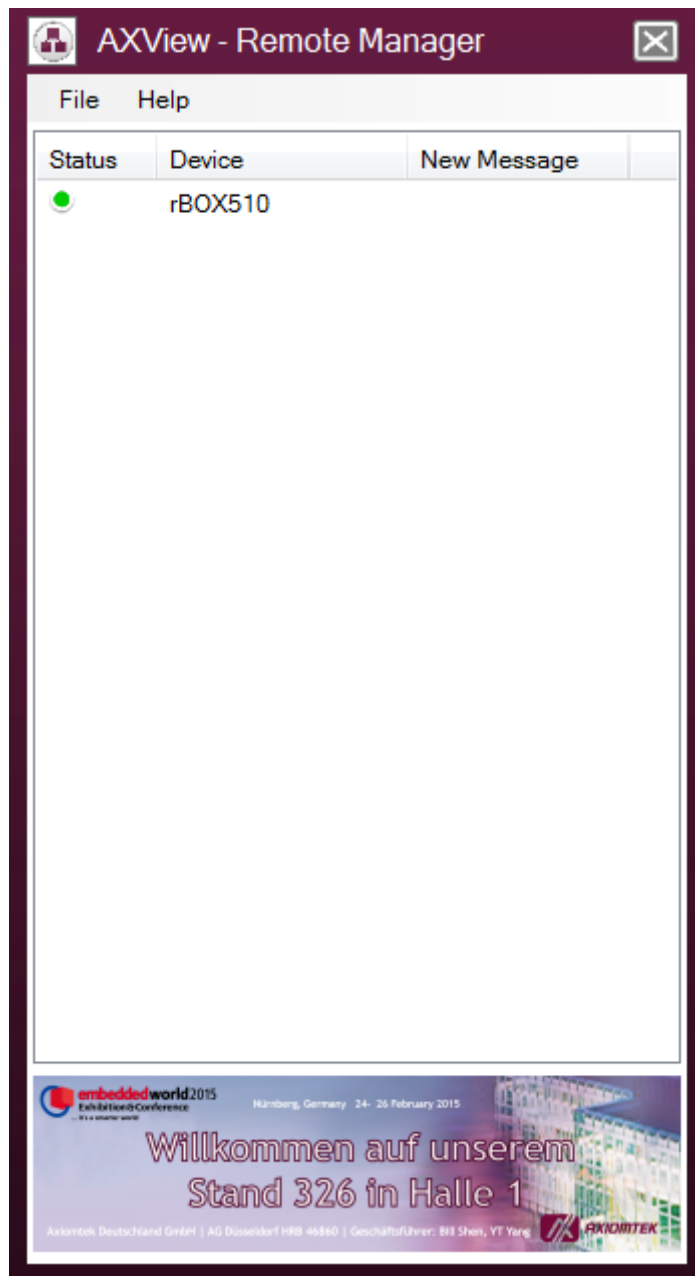
Password for account group.

**Auto Login**

Select this tick box for automatic login. Restart the software and you will not be prompted with the login setting screen again.

Then click .

### 4.1.3 Main Menu



#### Status

Indicate device online/offline status.

- Green: Online.
- Gray: Offline.

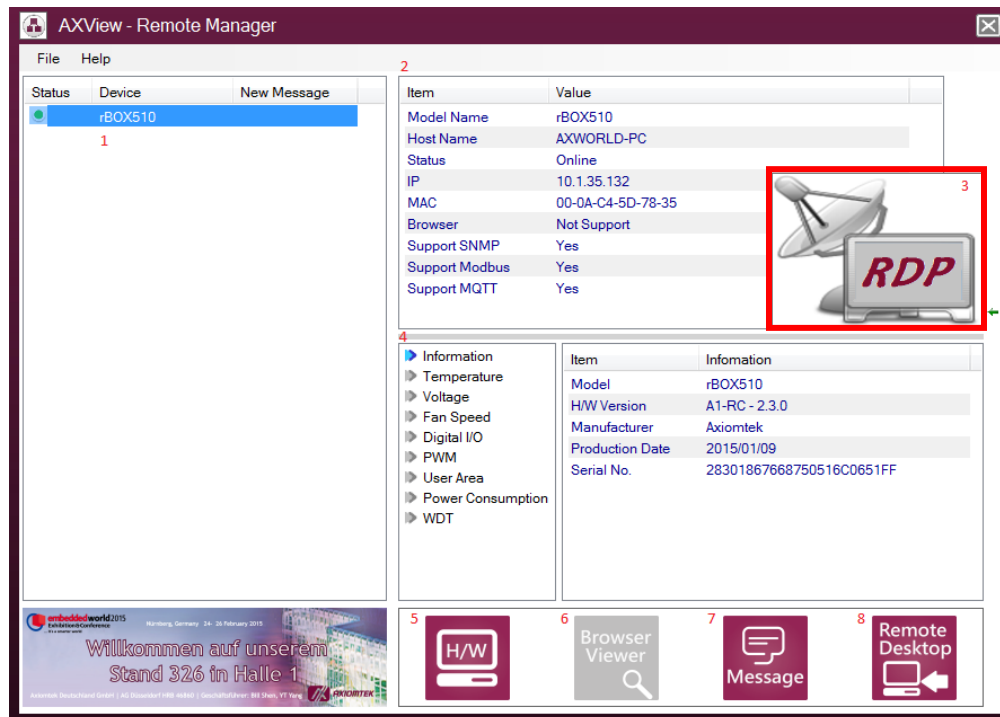
#### Device

Device model name.

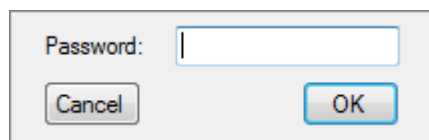
#### New Message

Display number of message(s) not yet read by the device.




Double click at any of the device(s) to open hardware monitoring screen.



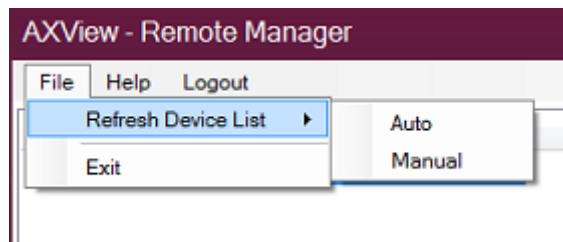
1. Device list area.  
Add device list from Service Cloud's group to this area.
2. Device information.  
Show device's basic information.
3. Remote Desktop Viewer  
Double click red rectangle area in figure above to access Remote Desktop Viewer. Then you will be prompted for password.



Enter password and click **OK** to start Remote Desktop Viewer, also refer to section 4.1.4 for more information about Remote Desktop Viewer.

4. Hardware monitoring.  
Refer to section 4.1.5
5.   
Click to open hardware monitoring screen, also refer to section 4.1.5.
6.   
Click to open browser (if supported).
7.   
Click to view alarm messages, also refer to section 4.1.6.

8.  Click to open remote desktop, refer to section 4.1.4.



Select *File > Refresh Device List*.

#### **Auto**

Refresh device list automatically.

#### **Manual**

Refresh device list manually.

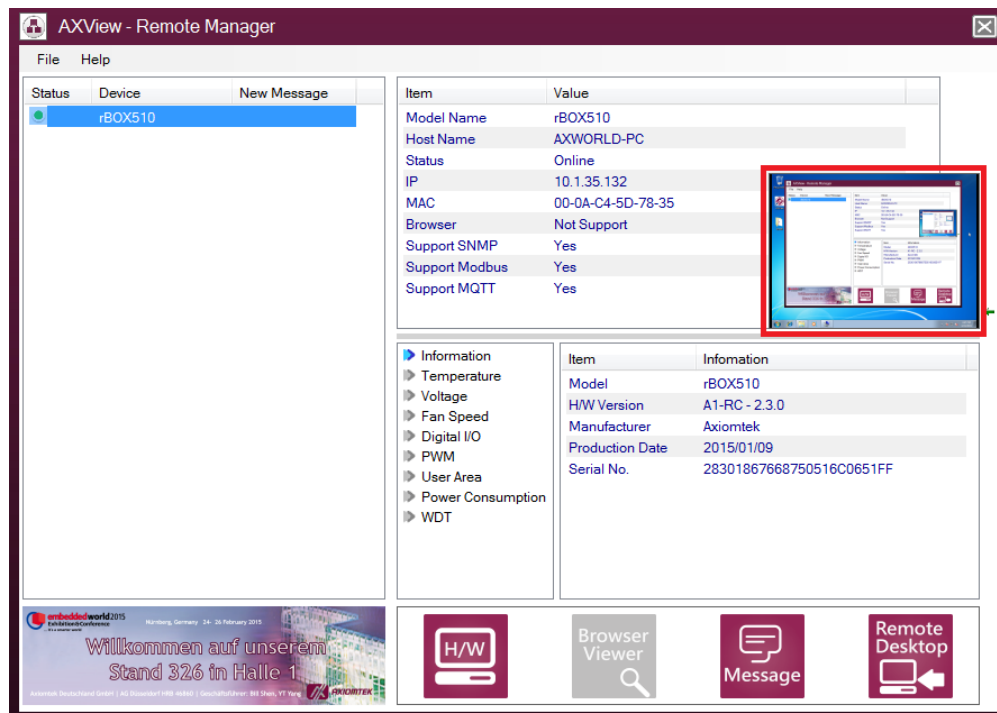
#### **Logout**

Logout from the monitoring interface.

#### **Exit**

Exit the Remote Manager program.

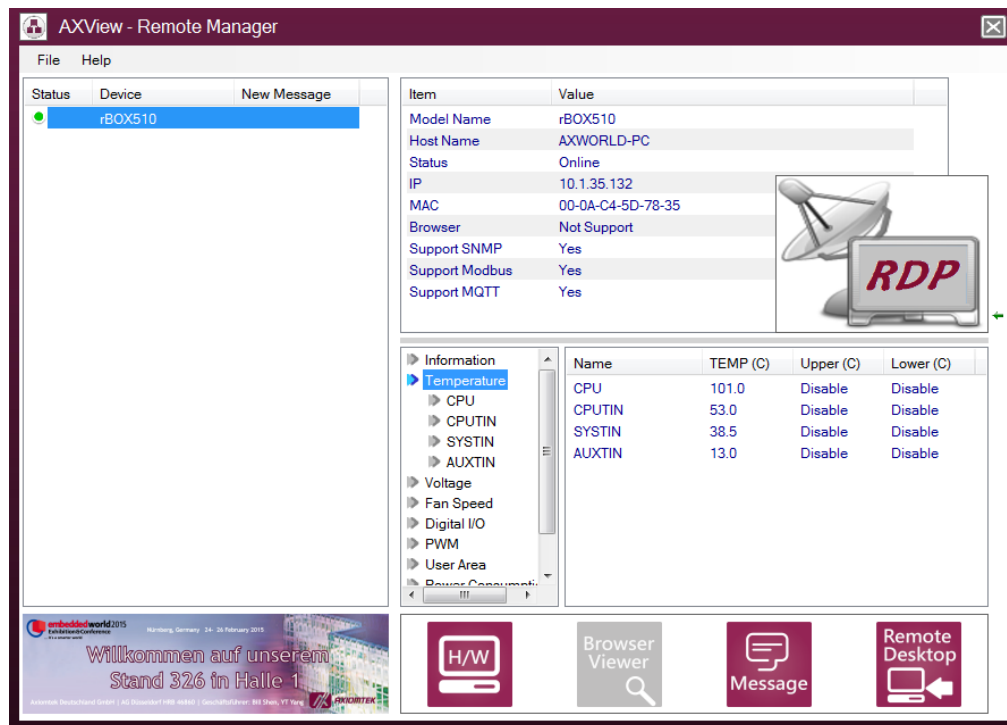
## 4.1.4 Remote Desktop Viewer



Double click red rectangle area in figure above to display remote desktop full screen.

Right click on red rectangle area to save or exit remote desktop full screen.

### 4.1.5 Hardware Monitoring



#### Information

Show device's system information.

#### Temperature

Show all temperature: CPU temperature, system temperature, AUX temperature, etc.

#### Voltage

Show system voltages: +5V standby, battery, +5V carry board, etc.

#### Fan Speed

Show fan(s) speed: CPU fan, system fan, etc.

#### Digital I/O

Show digital I/O signal state.

#### PWM

Show information and status of PWMs in the system.

#### User Area

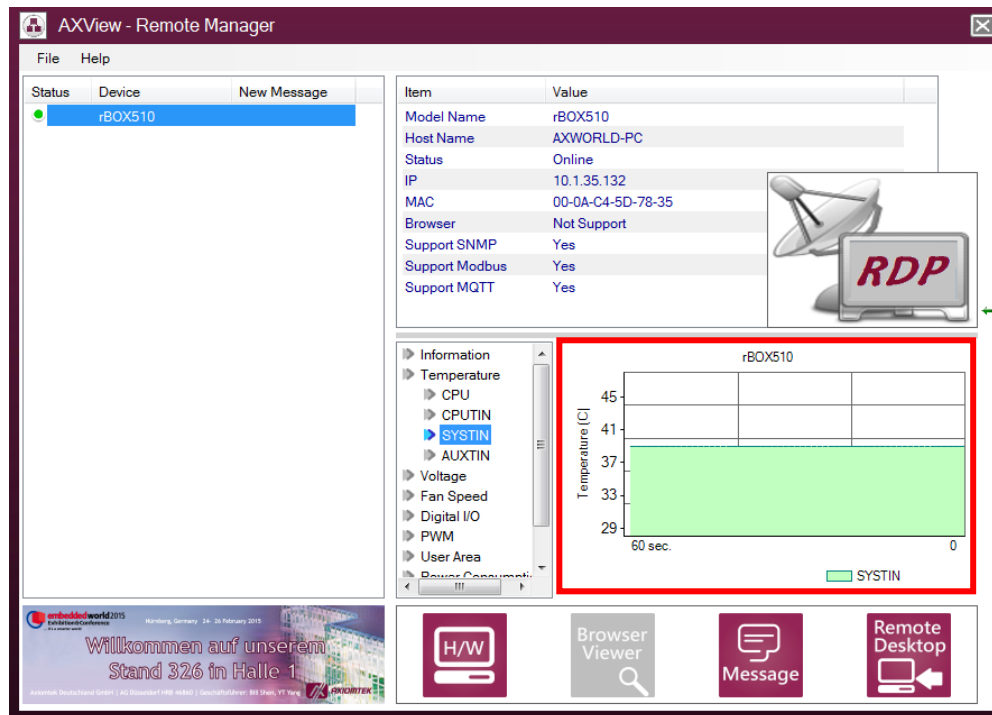
Show all data written in the 1Kb user defined area.

#### Power Consumption

Show voltage, current and Watt from input power source.

#### Watchdog Timer

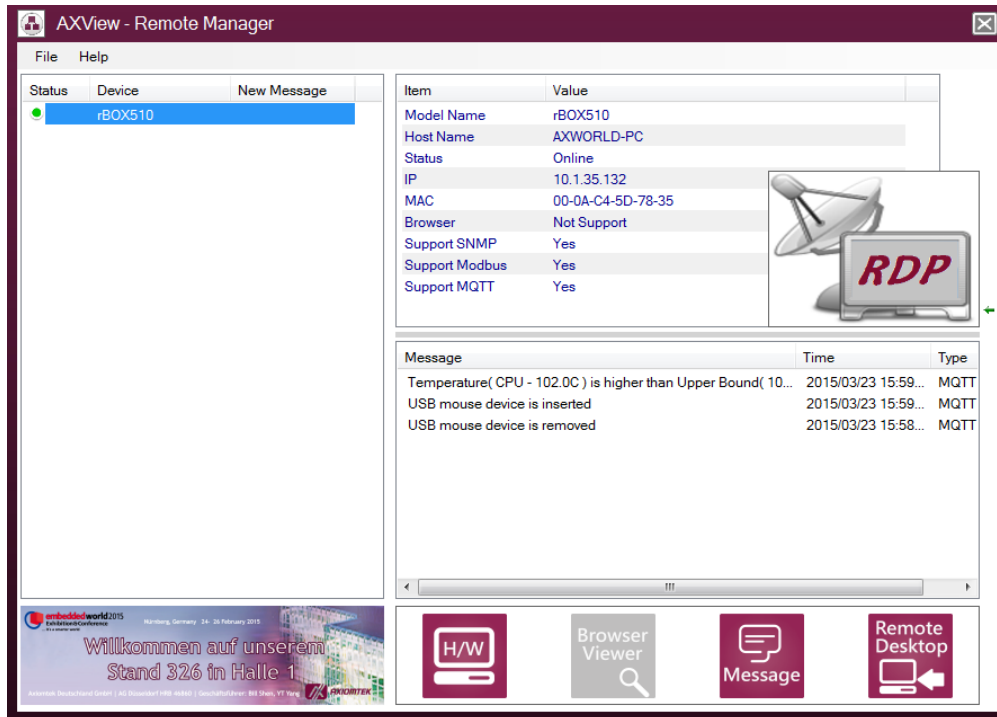
Show status of watchdog timer.



As representing data graphically is often easier and clearer to understand, data value of temperature, voltage, fan speed or power consumption is plotted in a line chart. An example for temperature is given in figure above. Select/click the onscreen item, such as CPU, CPUTIN, SYSTIN1 or SYSTIN2, to display continuous temperature value in graph. The display image automatically refreshes itself in every 3 seconds.



### 4.1.6 Alarm Messages



#### Message

List alarm or messages received. At first each unread message is highlighted with light green background color, but after 2 seconds the background color will disappear automatically.

#### Time

Show timestamp for alarm or messages.

#### Type

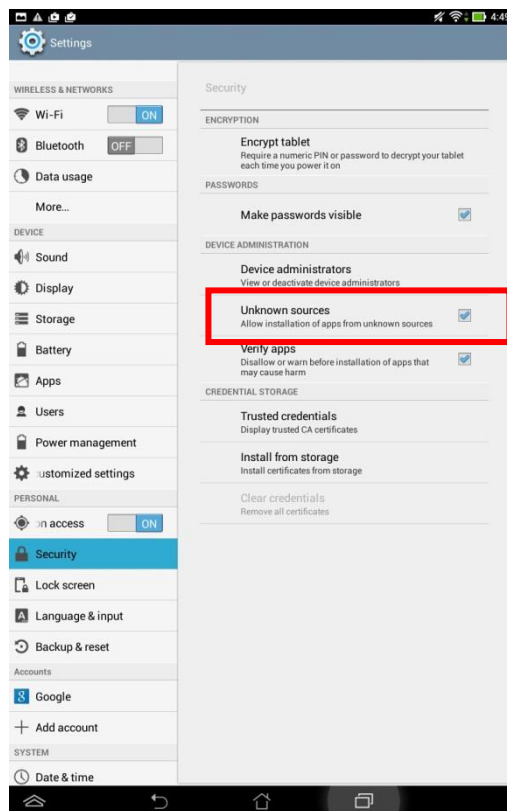
Show source of message: SNMP Trap and MQTT.

## 4.2 Remote Manager App for Android

In this section, you can learn how to use Remote Manager App for Android 4.0 or above. By installing Remote Manager App on Android cellphone, you can always establish connection to Agent and monitor hardware behaviors (such as hardware temperature, voltages, digital I/O signals, etc.) from the cellphone.

### 4.2.1 App Installation

On Android cellphone, go to *Settings > Security* and check “Unknown sources” tick box. See figure below.



Download and install APK via email, see figure below.

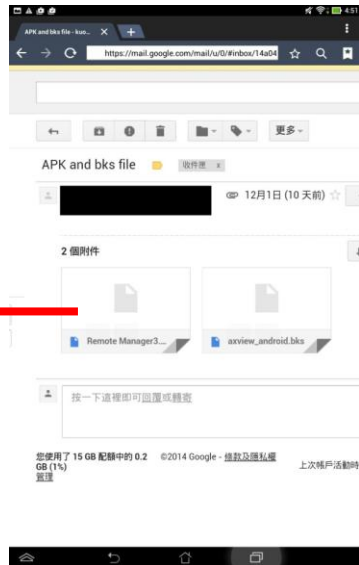


Note

You can download APK file from Axiomtek official website:

<http://www.axiomtek.com/products>

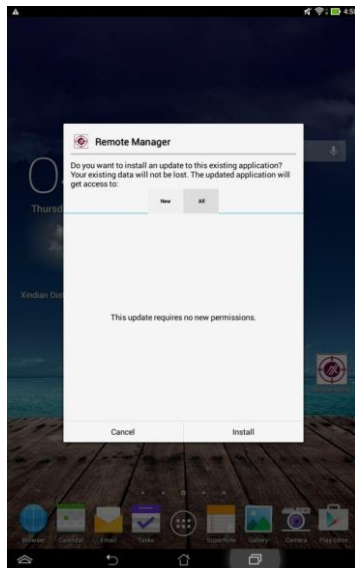
Click here to  
download



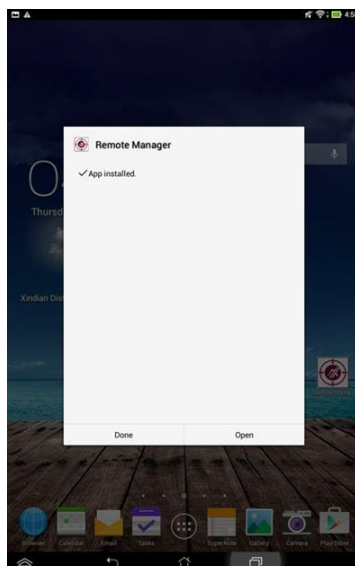
Click here to  
start  
installation



When you see the following figure, click “Install” to continue.



When the installation is complete, the following screen appears.




### 4.2.2 Network Connection

Verify network connection. Please make sure that your cellphone and device are in the same LAN subnet or the device is using real IP address. For example, your device is connected to network within Axiomtek domain. On the cellphone, activate WiFi and also connect it to Axiomtek domain. See figure below to verify whether your cellphone's WiFi is enabled or not, and whether it is linked to the same internal subnet as your device.




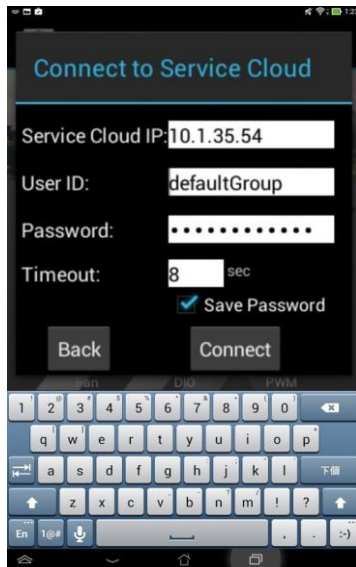
### 4.2.3 Start Up

Open the App by clicking . Then you can see the following screen.



#### 4.2.4 Discover

Click  to search for device, see figure below.



**Service Cloud IP**

IP address for connecting to Service Cloud.

**User ID**

User ID or account name for device group.

**Password**

Enter password. Use password and user ID for identity verification.

**Timeout**

Set connection timeout in second.


**Save Password**

Select this tick box to save password.

## Connect

Click this button to connect to Service Cloud and download banner (<http://Service Cloud IP/banner.jpg>). All the discovered devices are listed in figure below.



Choose from the list of available devices. Click  to select the device you want to connect and go to the next screen that displays more information of the device, see figure below.

### Device Information

Model Name: rBOX510  
IP Address: 10.1.35.166  
Host Name: AXIOMTEK-PC




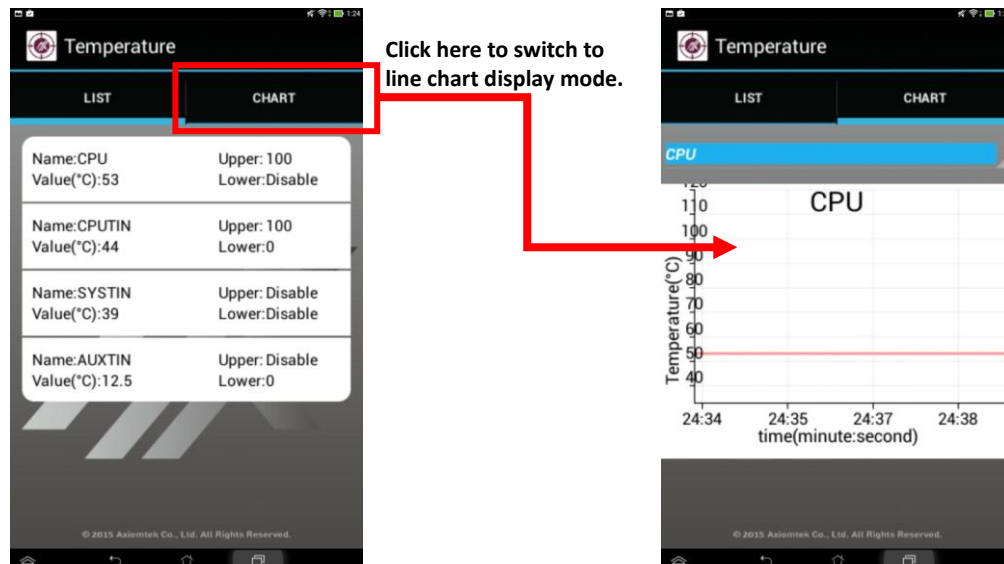
### MQTT Linking Status

Success: Able to receive alarm messages.  
Failed: Unable to receive alarm messages.

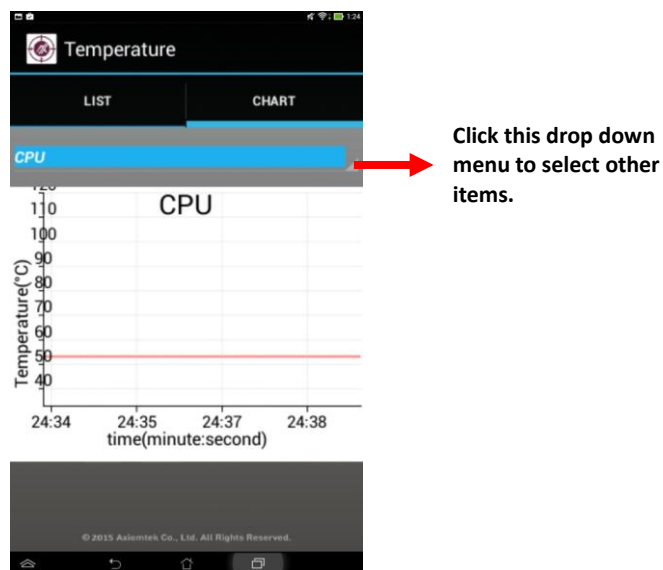
### 4.2.5 Hardware Monitoring

Device health data such as temperature, system voltages, fan speed can be displayed in list and line chart mode; while the other data information is displayed only in list mode.

For example, click  to display temperature data in list mode. See figure below.



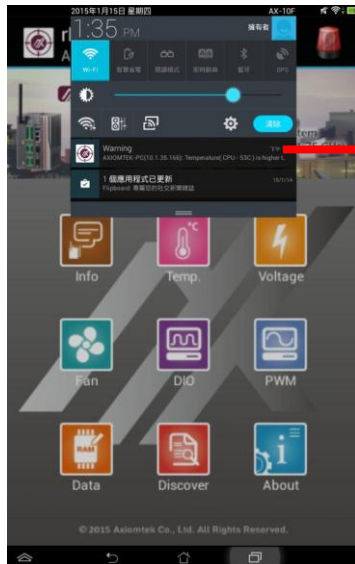
To select other items (e.g. carry board, I/O board or AUX temperature), click on the drop down menu. See figure below.





#### 4.2.6 Receiving Alert

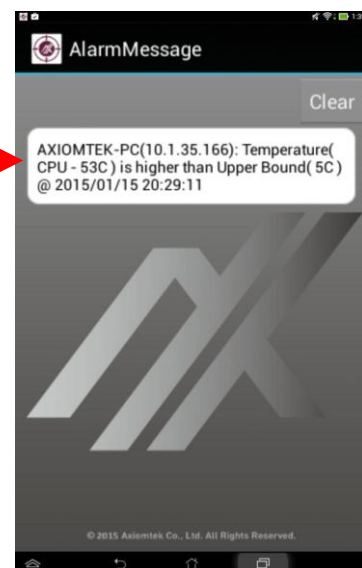
When certain exceptional event occurs in local device, an alert message will be sent out to your cellphone through MQTT protocol. In example below, device with IP address 10.1.35.166 triggers warning message(s).



Click here to link to device (IP address: 10.1.35.166). And the screen will be switched to figure below.



Click this icon to show the full text of the warning message.



#### 4.2.7 Icons Used in the App



Display system information.



Display temperature information.



Display voltages information.



Display fan speed information.



Display digital I/O signal state.



Display information and status of PWMs.



Display user-defined data.



Click to search for device.



Show App about information: version number, copyright, description, etc.



Indicate MQTT connection success which means that alert message can be received. Click this icon to display all alert messages.



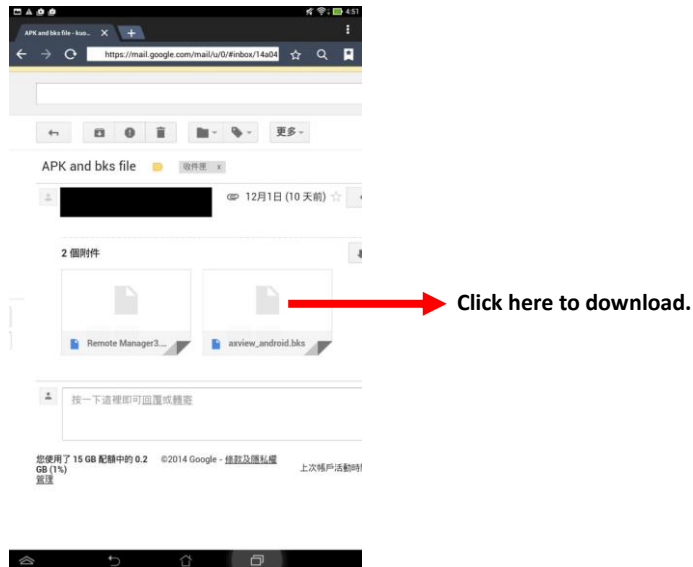
Indicate MQTT connection failure which means that unable to receive alert message. Click this icon to display connection failure reason for troubleshooting.

## 4.2.8 Others

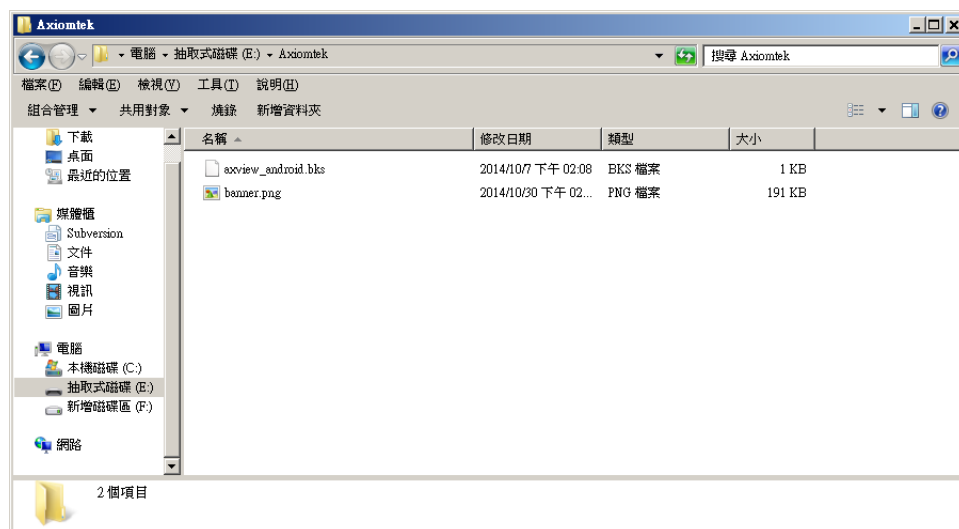
### Import self-generated BKS certificate file.

After installing the App, you can have a default certificate file. Here are two ways to import a self-generated BKS certificate file, choose whichever method you prefer:

1. Download from Internet via email.



2. Via USB. Connect the cellphone to your PC, then copy axview\_android.bks certificate file to "Axiomtek" folder or "Download" folder as given in figure below.



**This page is intentionally left blank.**

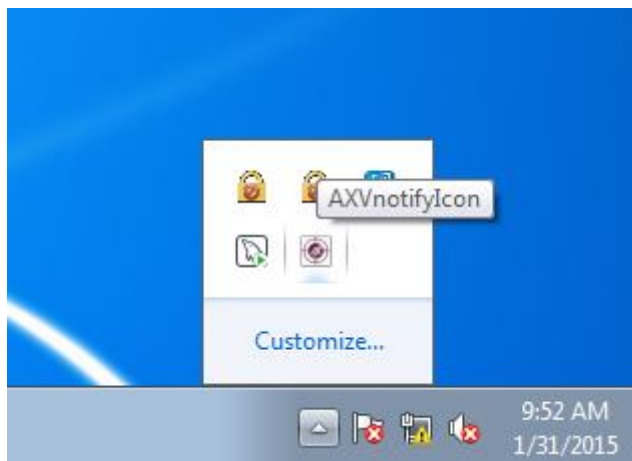
# Chapter 5

## AXView – Service Cloud

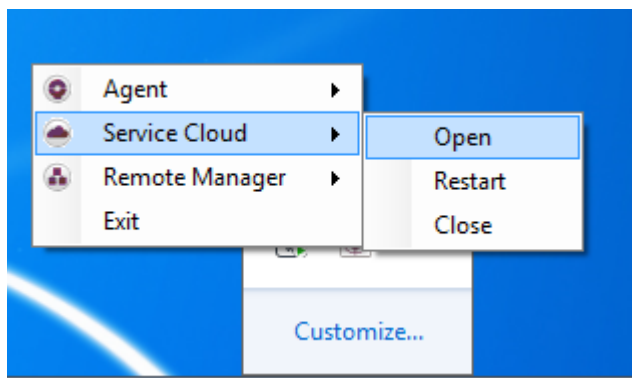
Service Cloud is one of the key features of AXView 2.0 suite. It's designed to store, forward and review device data for behavior analysis. AXView also provides software packages to assist users in constructing their own cloud. Software services developed by AXView will also be available for sharing in the future.

### 5.1 Start Up

Click “AXVnotifylcon” icon which you can find at the bottom right of your screen.




Select *Service Cloud > Open* to start the software.



## 5.2 Login Setting

You will be prompted for IP address, account and password for accessing the Service Cloud, see figure below.



### IP

IP address for connecting to database.

### Account

Enter database account name.

### Password

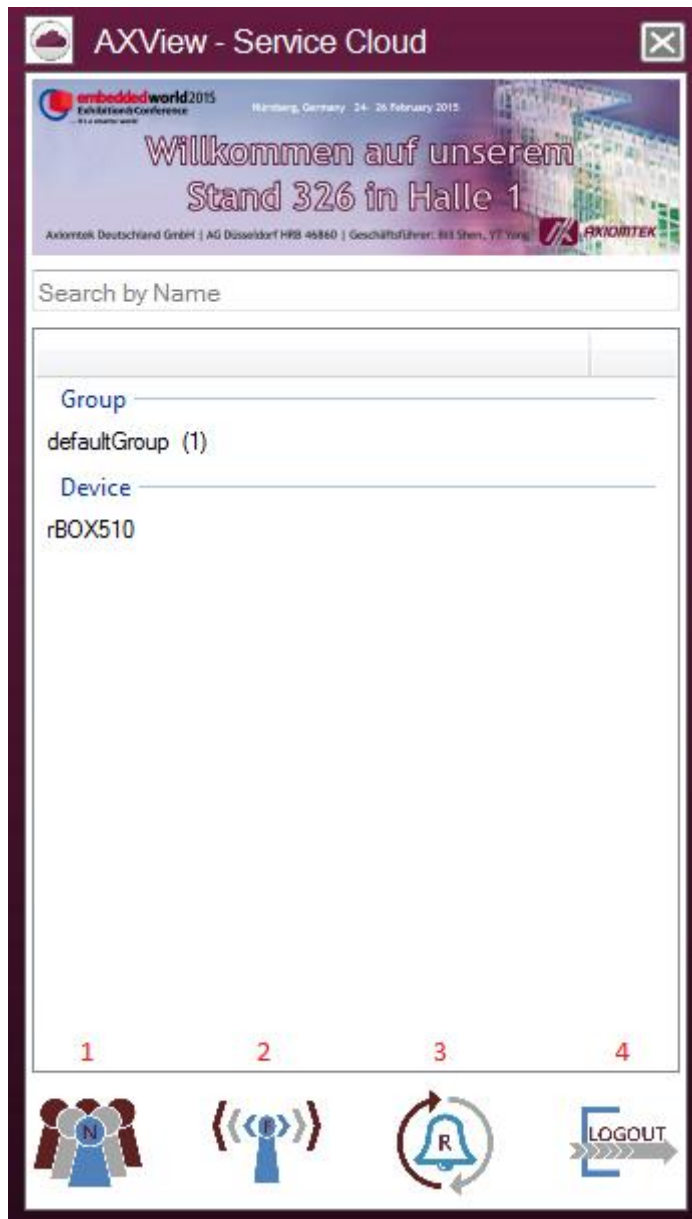
Password for database.

### Auto Login

Select this tick box for automatic login. Restart the software and you will not be prompted with the login setting screen again.

Then click .

## 5.3 Main Menu



### Search by Name





Enter a name here to search for a specific device or group of devices, also refer to section 5.3.1.

### Group

Form devices in a group to facilitate monitoring management by Remote Manager, also refer to section 5.3.2.

### Device

List the device(s) found within the IP range and the existing device(s) in database, also refer to section 5.3.3.

1.  Add new device group (refer to section 5.3.4).
2.  Set IP address range for device searching, also refer to section 5.3.5.
3.  Click to restart cloud (MQTT).
4.  Click to logout from Service Cloud.

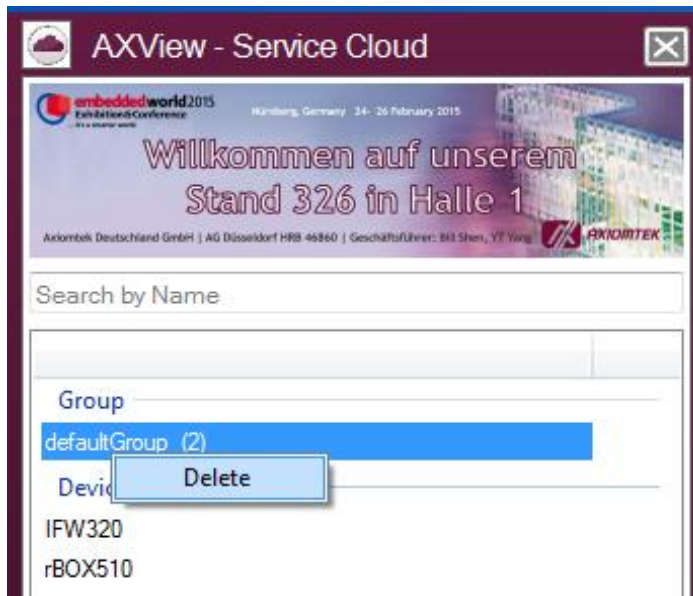
### 5.3.1 Search by Name



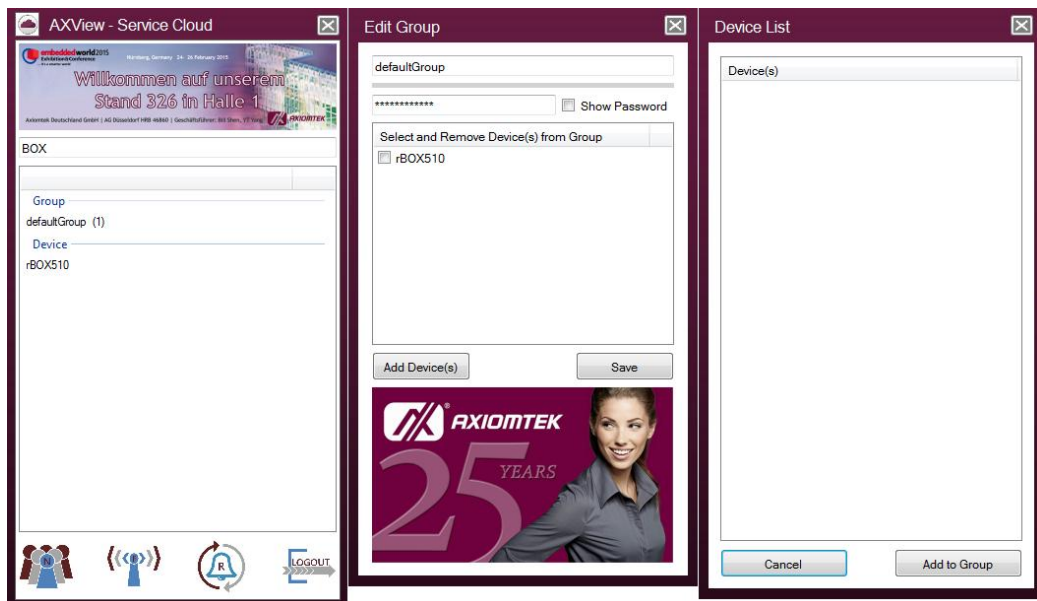
Enter the device name you want to search in this field. Note that device name is case sensitive.



### 5.3.2 Group



Default setting is “defaultGroup”. Right click on a group and select delete to delete it.



Double click a group if you want to change settings. In figure above, you can see that the group name is “defaultGroup”. You can change the group name by entering a new name in this field.

#### Show Password

Password is shown in asterisks (\*\*\*\*\*). Check “Show Password” tick box to reveal password hidden behind asterisks.

#### Select and Remove Device(s) From Group

Check device(s) and click “Save” button to remove device(s) from group.

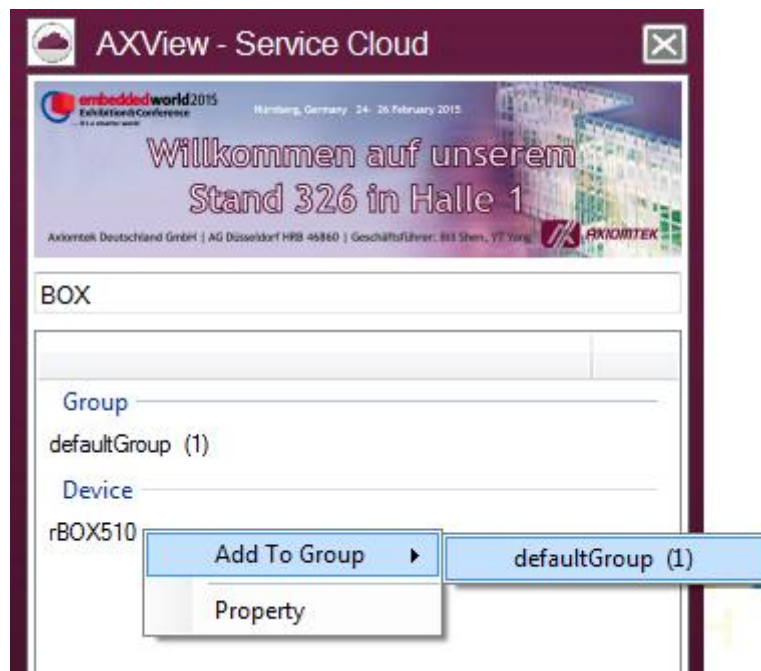
### Save

Click this button to save list of group.

### Add Device(s)

Click this button to pop up Device List window. Then select device(s) to add device(s) to group.

## 5.3.3 Device



Right click on a device to show additional functions.

### Add To Group

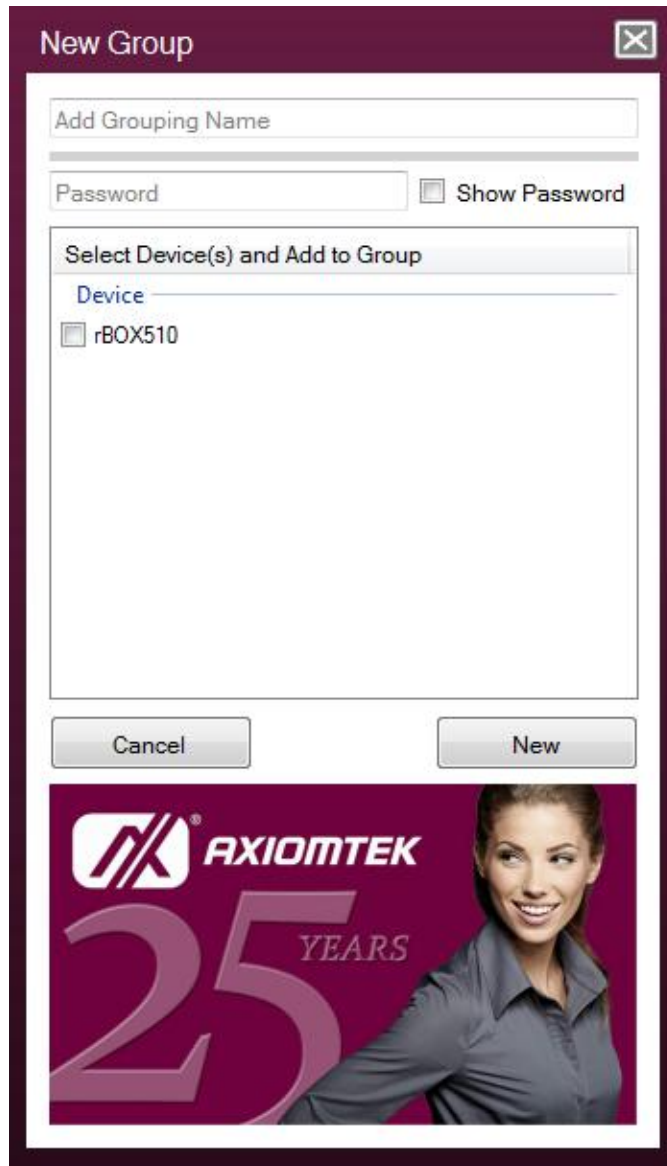
Directly add the selected device to a group in list.

### Property

Click this item to display Device Properties window showing device information.

### 5.3.4 Add New Group

Click  to show New Group window.



The 'New Group' dialog box is a window with a maroon title bar and a close button. It contains several input fields and a list box. At the top is a text box labeled 'Add Grouping Name'. Below it is a 'Password' text box with a 'Show Password' checkbox to its right. Underneath is a section titled 'Select Device(s) and Add to Group' which contains a list box with a 'Device' header and one item, 'rBOX510', with a checkbox next to it. At the bottom are 'Cancel' and 'New' buttons. Below the dialog box is a promotional banner for Axiomtek's 25th anniversary, featuring the company logo, the text '25 YEARS', and a smiling woman.

**Add Grouping Name**

Enter group name in this field.

**Password**

Enter password for group.

**Show Password**

Password is shown in asterisks (\*\*\*\*\*). Check "Show Password" tick box to reveal password hidden behind asterisks.


**Select Device(s) and Add to Group**

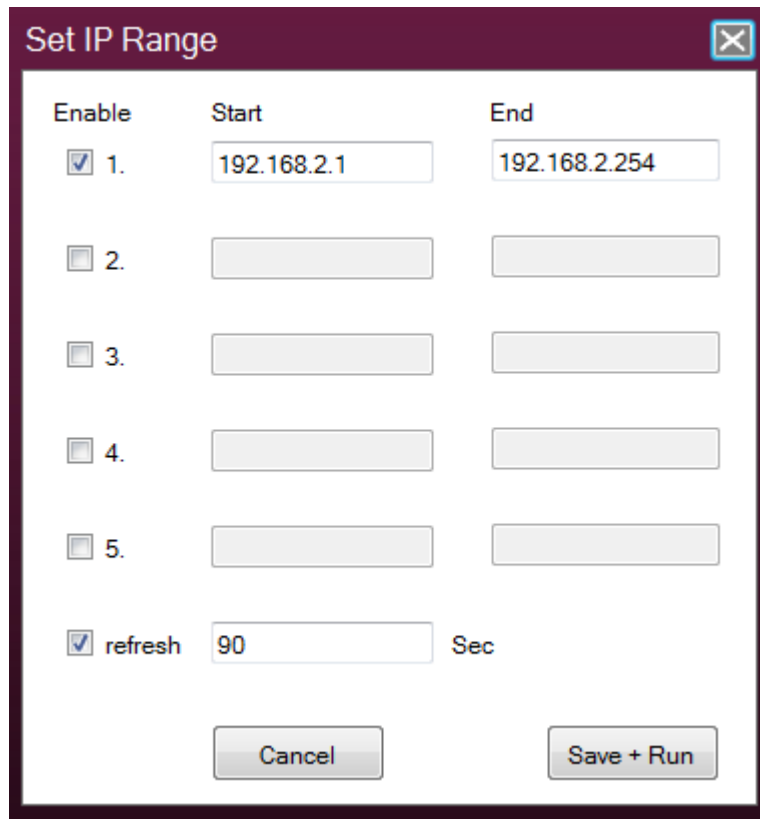
Select device(s) and add them to group.

**New**

Click this button to create a new group.

### 5.3.5 Set IP Range

Set IP address range for device searching. Click  to show the Set IP Range window.



The 'Set IP Range' dialog box has a title bar with a close button. It contains three columns: 'Enable', 'Start', and 'End'. Under 'Enable', there are five checkboxes labeled 1 through 5, and a 'refresh' checkbox. Under 'Start', there are five text input fields. Under 'End', there are five text input fields. The first row is pre-filled with '192.168.2.1' and '192.168.2.254'. Below these fields is a 'refresh' checkbox, a text input field containing '90', and the label 'Sec'. At the bottom are 'Cancel' and 'Save + Run' buttons.

Enable	Start	End
<input checked="" type="checkbox"/> 1.	192.168.2.1	192.168.2.254
<input type="checkbox"/> 2.		
<input type="checkbox"/> 3.		
<input type="checkbox"/> 4.		
<input type="checkbox"/> 5.		

☒ refresh    90    Sec

Cancel    Save + Run

#### Enable

Check tick box to enable device searching process.

#### Start\End

Set the start and end address of IP range.

#### Refresh

Set data update rate in second.

#### Save + Run

Click this button to save settings and start searching.