



NID EX Software Installation and Setup Guide

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1. Scope and Software Versions

This installation and setup guide details the installation, configuration, and operation of the below software versions:

- **NOS-1064_1.02. or higher** as installed on the NanoRam®-1064 device
- **NID EX_1.02 or higher** to be installed on the PC

To ensure compatibility for software operation, you **MUST** use **matching versions of NID EX on the PC and NOS-1064 on the device as indicated in the Packing List or Release Note.**

For users who has previous NID EX version installed, please refer to appendix IV for instructions.

User's IT administrator is recommended to be locally available during software installation and any Firewall setup or connection troubleshooting.

2. Operating System Compatibility

The following Microsoft operating systems have been verified to be compatible with this software:

- Windows 8, 64 bit
- Windows 10, 64 bit

3. Minimum Hardware Requirement

Your PC's hardware configuration must meet or exceed the following specifications:

- Processor: 2GHz
- RAM: 2GB
- Hard disk space: 5GB available

4. Installation Package

Upon delivery of the NanoRam®-1064 Handheld Raman System, locate the USB drive included in the shipping box. This USB drive contains all of the manuals, software packages and necessary supporting documents and programs.

If the USB drive cannot be located, you may request a file download by submitting a Technical Support Request at <http://www.bwtek.com/support/>.

Fill out all required fields and be sure to also include the below information in the Questions/Comments section:

- This is a request for **product registration and portal account access**;
- The current NOS-1064 version on the NanoRam®-1064 unit;
- The current NID EX version installed on your PC (if any).

Once your request has been authenticated, your customer portal account will be created with login information sent to your e-mail, to allow download access at any time.

5. Installation Prerequisites

The following requirements must be met to ensure proper software installation and operation, and these required installation components are included in the USB drive provided by B&W Tek. Please copy the “NID_EX_Installation” folder to the local PC.

1. The user **MUST** have **Windows Administrative privilege** on the Windows computer to install and configure the software.
2. Internet access is required during the installation of software.
3. *.NET Framework 4.6.2* or newer is required for running this software:
 - a. Installer will automatically detect if the proper version of *.NET Framework* has been installed on the PC already.
 - b. If it is not installed, locate NDP462-KB3151800-x86-x64-AllOS-ENU.exe in the folder `..\NID_EX_1.02.178 Installation\MySQL Server\`. Right click this program and **Run as administrator** to install.

A certificate from Microsoft is required for *.NET framework* installation. Ensure that the operating computer has internet access. In the case where internet access is not available, refer to Microsoft Root Certificate Authority Update Instruction in **Appendix I**.

4. *Microsoft Visual C++ 2013 Redistributable (x64) (version 12.0.30501* or newer) is required, which is located in the folder `..\NID_EX_Installation\Prerequisites\`.
5. *Microsoft Visual C++ 2013 Redistributable (x86) (version 12.0.30501* or newer) is required, which is located in the folder `..\NID_EX_Installation\Prerequisites\`.
6. *Microsoft Visual C++ 2015 Redistributable (x64) (version 14.0.23026* or newer) is required, which is located in the folder `..\NID_EX_Installation\Prerequisites\`.
7. *Microsoft Visual C++ 2015 Redistributable (x86) (version 14.0.24215* or newer) is required, which is located in the folder `..\NID_EX_Installation\Prerequisites\`.

For further help, please contact B&W Tek Technical Support for assistance.

If an older version of NID EX is installed, and users want to upgrade the NID EX software, please refer to [Appendix IV](#) for upgrade instructions.

Prior to installation, please note that NID EX software provides Client/Server structure features such that a user can log in from one computer as Client to any computer (including itself or another) which is set as Server. All data can be saved and maintained in a restricted environment defined by user IT management. The following installation and setup work-flow focuses on using the NID EX on a single PC. For remote client-server setup, please refer to Appendix V.

Please follow the steps from Page 5 to Page 31 to fully install and configure the software. Skipping any operation or screen will cause installation or software FAILURE!

6. MySQL Server Installation and Configuration

MySQL server provides the backbone database services for the NanoRam®-1064 NID EX software product. Installation and configuration are required on the computer to be used for database service.

MySQL server is **NOT** required if a dedicated PC is used only as the Client login for normal operations such as synchronization, data reports and e-signature, whereas the database is installed on a server computer under the same local network. MySQL server **MUST** be installed on the computer which is defined as Server.

MySQL Server installer will automatically check if your PC meets all prerequisites. If a compatibility screen displays during installation, click on “Execute” to install.

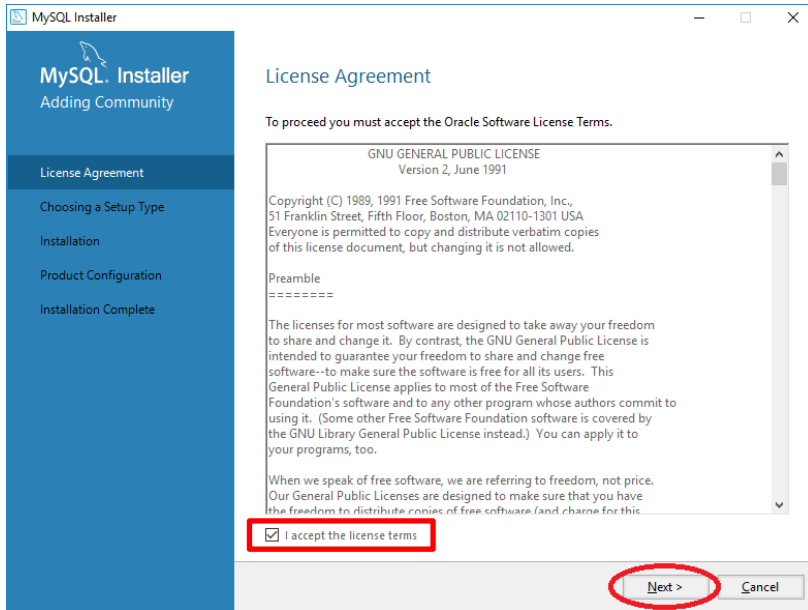
The version listed below has been verified to be compatible with NID EX.

- MySQL community 5.7.18.0 or newer

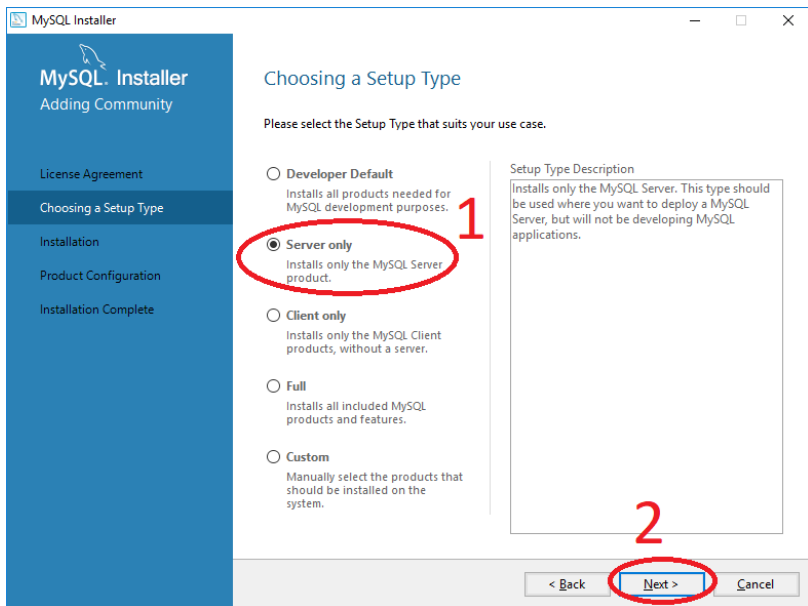
NOTE: If the proper version of MySQL Server is already installed, skip MySQL Server installation. After confirmation of the MySQL Server configuration settings, continue with NID EX Installation and Configuration in Section 7.

- In the folder ..\NID EX Installation\MySQL Server\, launch *mysql-installer-community-5.7.18.0.msi*:

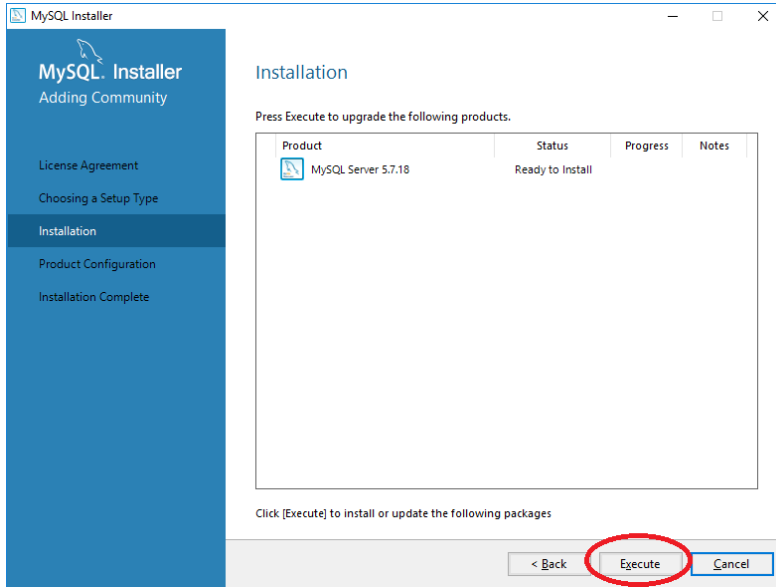
- “License Agreement”: Make sure “I accept the license terms” is checked. Click **Next**.



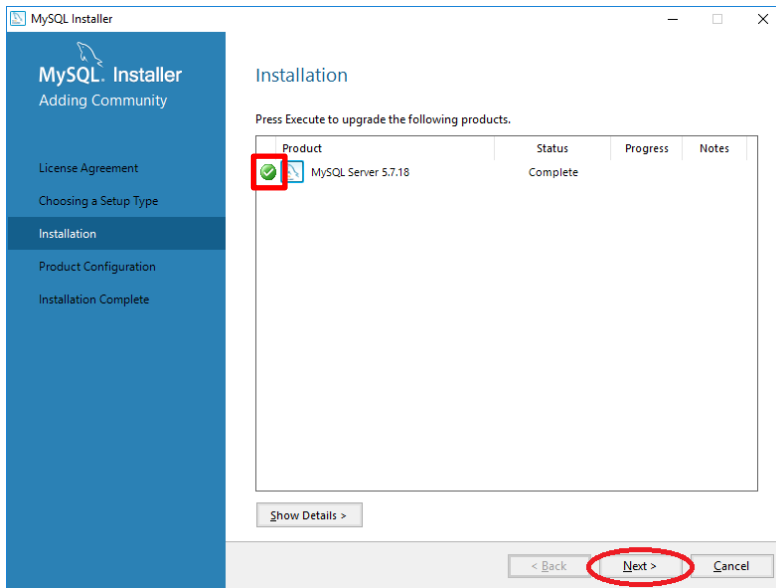
- “Choosing a Setup Type”: choose “Server only” at Setup Type. Click **Next**.



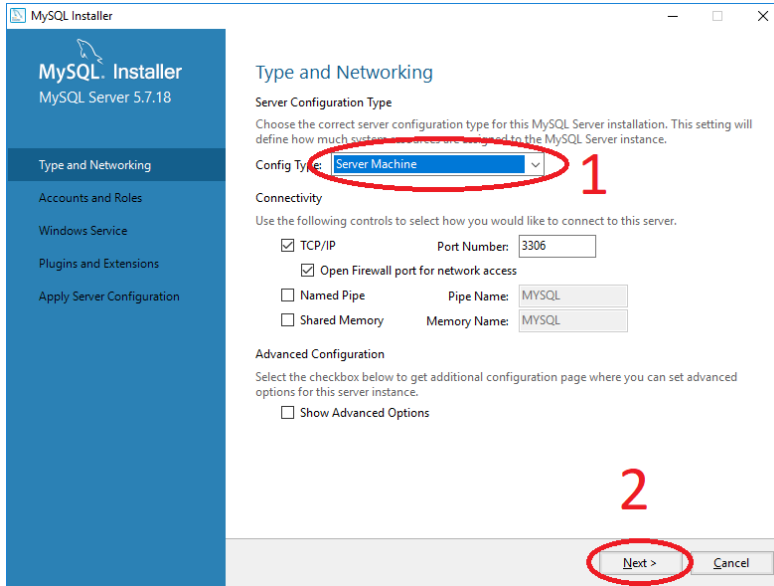
- “Installation”: click **Execute** to start installation of MySQL.



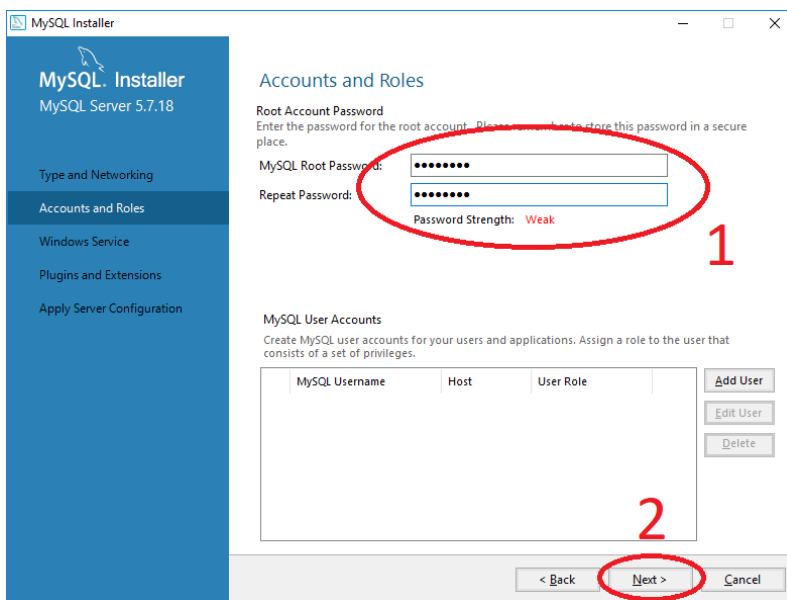
- After the installation is completed, a green check will appear. Click **Next** to start the MySQL configuration:



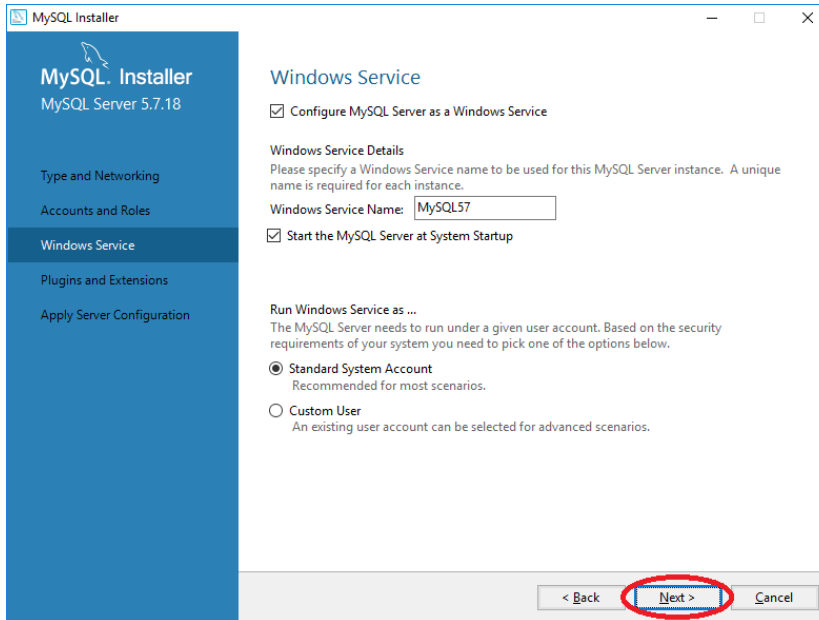
- “Type and Networking”: set “Config Type” as “Server Machine”. Keep other settings as shown below. Click **Next**.



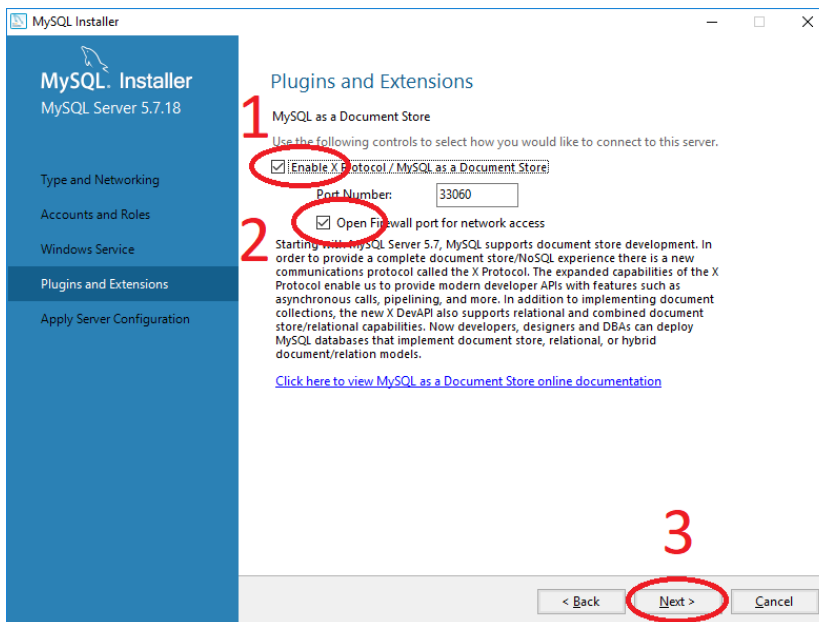
- “Accounts and Roles”: create a MySQL Server Root Password. This password must contain **ASCII printable characters** (uppercase, lowercase, numbers, or special characters). This password may not contain special characters that require a language pack. *****Document this password and store it securely*****



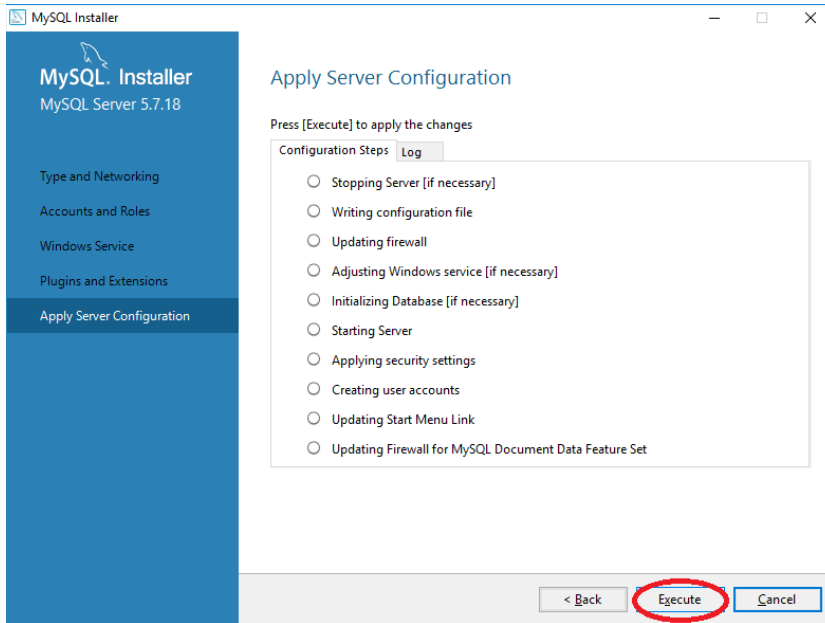
- “Windows Service”: keep default configurations. Click **Next**.



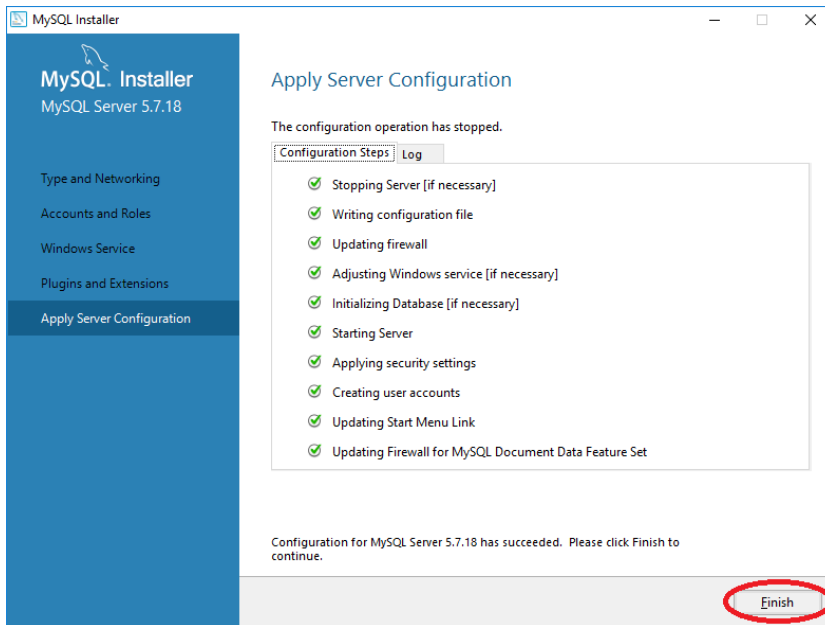
- “Plugins and Extensions”: configure to enable X Protocol and specify the “Port Number” as “33060”. Select “Open Firewall port for network access”. Click **Next**.



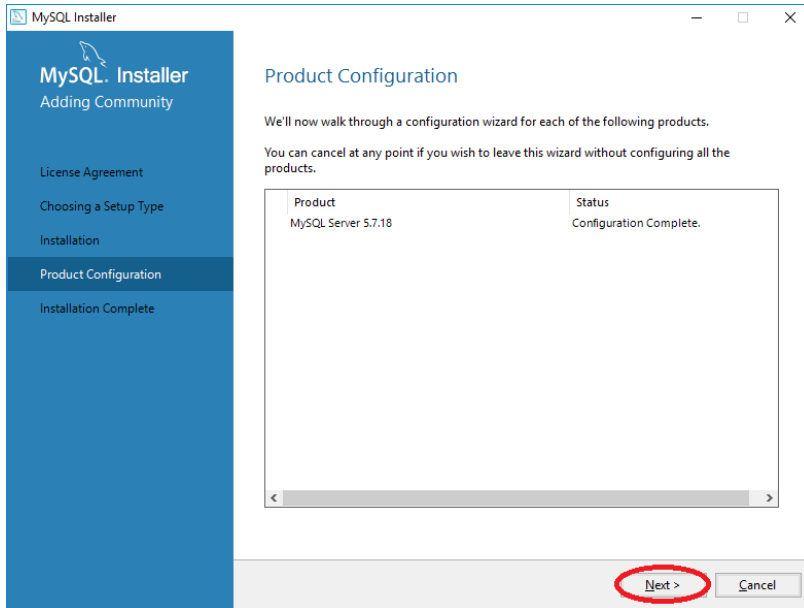
- “Apply Server Configuration”: click **Execute**. This will take some time while it goes through the list of configuration steps until all items are configured and checked. No action is required during configuration.



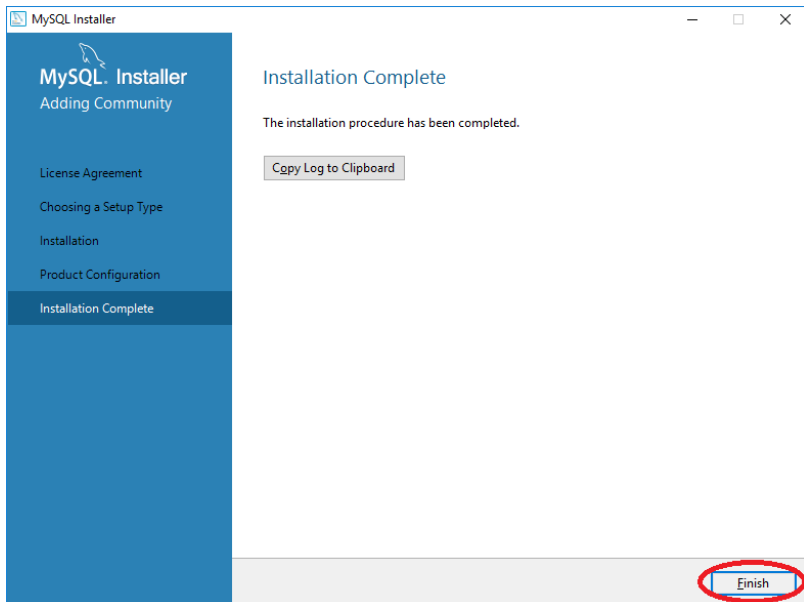
- Configuration is done when all the items are checked. Click **Finish**.



- “Product Configuration”: MySQL configuration completion is confirmed. Click **Next**.



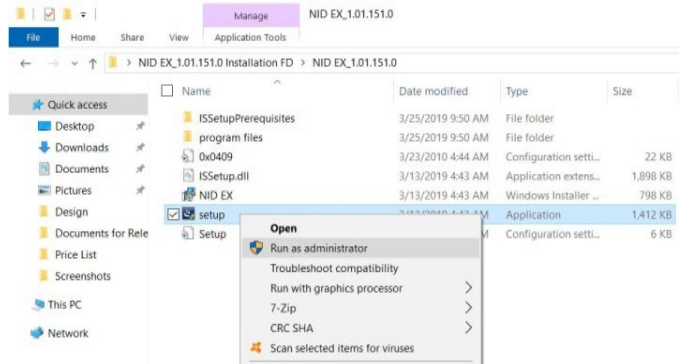
- “Installation Complete”: click **Finish** to complete MySQL Server installation. MySQL Server is now installed and configured.



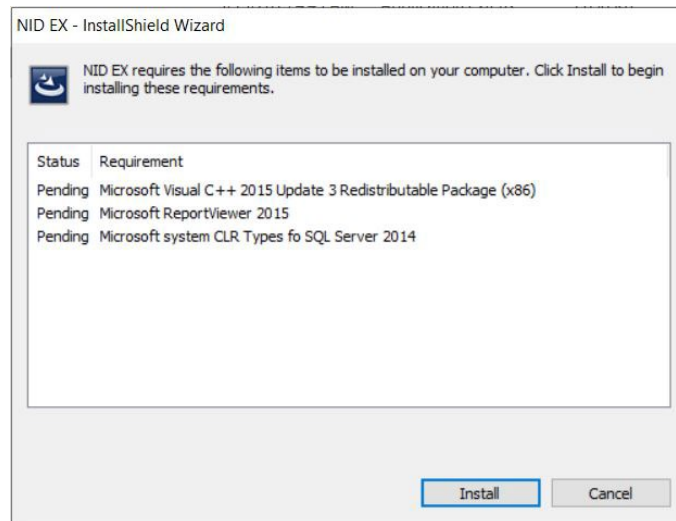
7. NID EX Installation and Configuration

After successful installation and configuration of MySQL Server, the NID EX software needs to be installed and configured:

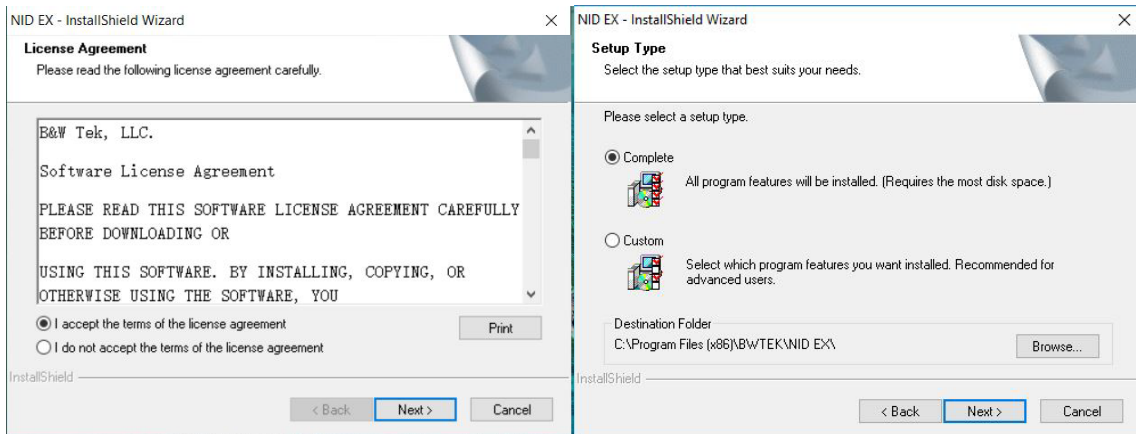
- a) In the folder `..\NID_EX_Installation\NID EX Software\`, launch **setup.exe** by right-clicking the icon and **Run as administrator**.



- b) You may be required to install certain programs onto your computer. Click "Install" and reboot your computer if required.



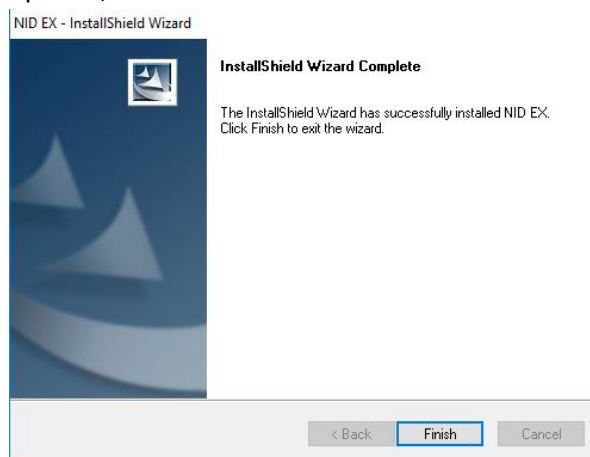
- c) Read and accept the end-user license agreement. Choose **Complete** setup type and default installation location: C:\Program Files (x86)\BWTEK\NID EX\.



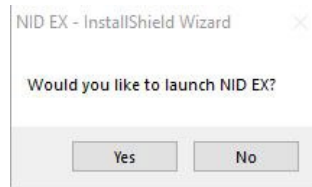
- d) During the installation, the following screen may appear, and installation may temporarily be held. Press any key to continue.

```
Select C:\Windows\SysWOW64\cmd.exe
lllog
assemblypath = C:\Program Files (x86)\BWTEK\TID EX Server\WindowsServiceHost.exe
The Commit phase completed successfully.
The transacted install has completed.
C:\Program Files (x86)\BWTEK\TID EX Server>sc config TIDEXDatabaseService start=
auto
[SC] ChangeServiceConfig SUCCESS
C:\Program Files (x86)\BWTEK\TID EX Server>set CERTNAME=TacticIDServer
C:\Program Files (x86)\BWTEK\TID EX Server>certutil.exe -del -c -r localMachine -
s my -n TacticIDServer
Error: Failed to find a certificate to delete
CertMgr Failed
C:\Program Files (x86)\BWTEK\TID EX Server>makecert.exe -sr LocalMachine -ss My
-a sha1 -n C:\TacticIDServer -sky exchange -pe
Succeeded
C:\Program Files (x86)\BWTEK\TID EX Server>pause
Press any key to continue . . .
```

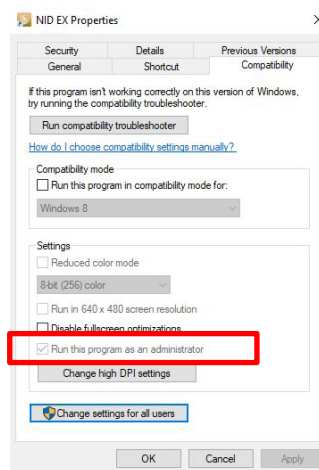
- e) When installation is completed, click **Finish**:



- f) The message box shown below will appear. For first-time installation, click **No** to exit; if this is a software upgrade, click **Yes** and finish steps: m), n) and o).

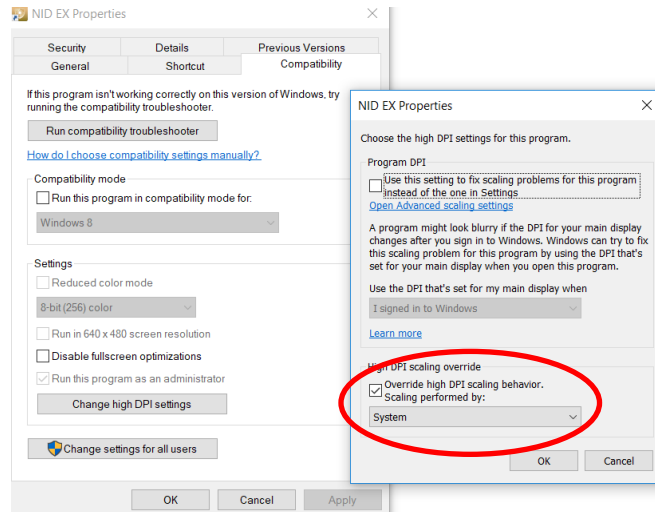


- g) Installation of NID EX software is successful on the PC. The icon for **NID EX** will appear on the PC desktop. Right click **NID EX** and left click on **Properties**. Under the **Compatibility** tab, check **Run this program as an administrator**. Click **Apply** and then **OK**. If it is already checked, click **OK** to exit.



- h) For Windows 10 users:

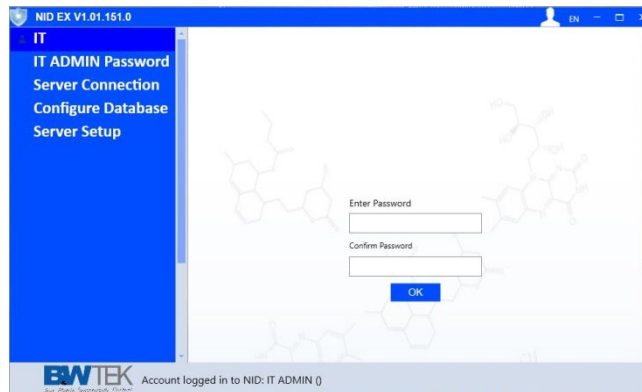
To avoid issues related to display scaling (such as some report spectra contents unable to populate properly when being printed physically or electronically, or slow PC performance when operating NID), the computer must be updated to **Creators Update** to include the additional scaling options in the **Compatibility** tab. Enable **Override high DPI scaling behavior. Scaling performed by:** and select **System** in the Drop-Down Menu. Then run the computer in the default (recommended by Windows 10) scaling and resolution settings.



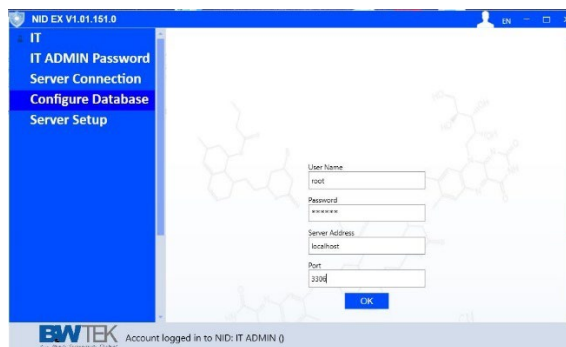
- i) Launch NID EX software from the Desktop, and the NID EX login screen appears. Enter username: "IT ADMIN" with default password "999999"; click **Login** to continue. For first-time login, the "NID Server" and "Device SN" fields are left blank; for an upgrade, keep the existing information as is.



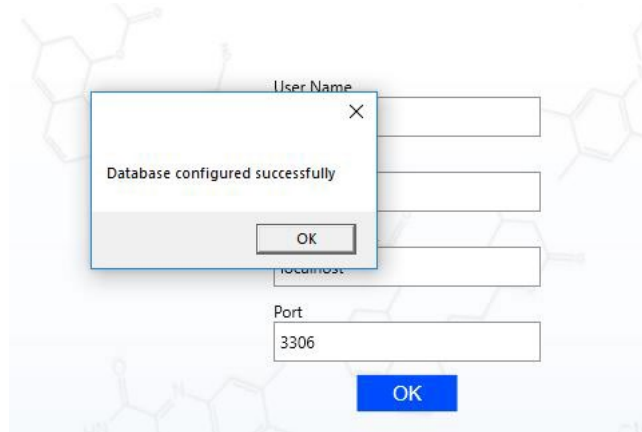
- j) Configuration table appears for IT management:



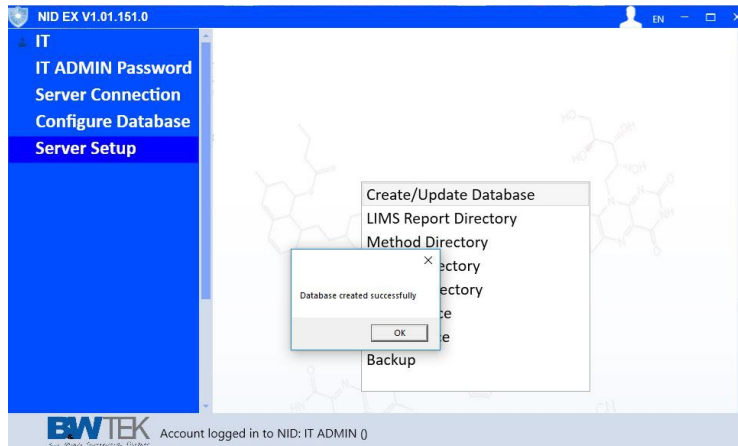
- k) "IT ADMIN Password" is for IT administrator to reset password.
- l) Fill out the **Configure Database** tab as listed below:
- User Name: root
 - Password: use the password created during MySQL installation in Section 6.
 - Server address: localhost
 - Port: 3306



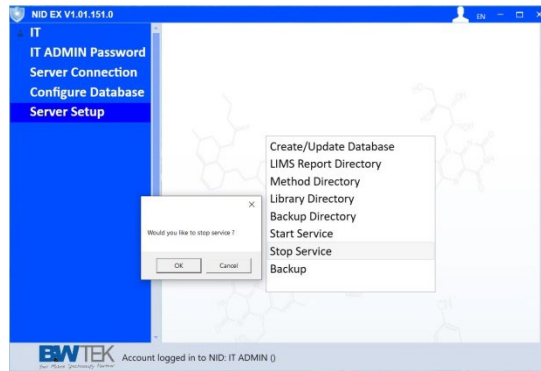
- m) After clicking **OK**, a message indicating that the database has been configured successfully will appear.



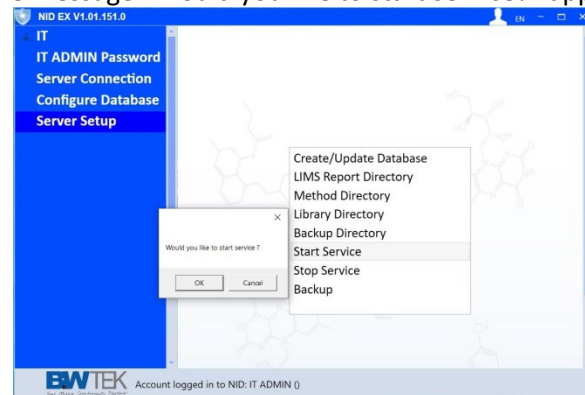
- n) In "Server Setup", click **Create/Update Database** and a message will pop up: "Database created successfully". Click **OK** to continue.



o) Click **Stop Service**. The message “Would you like to stop service?” appears. Click **OK**.

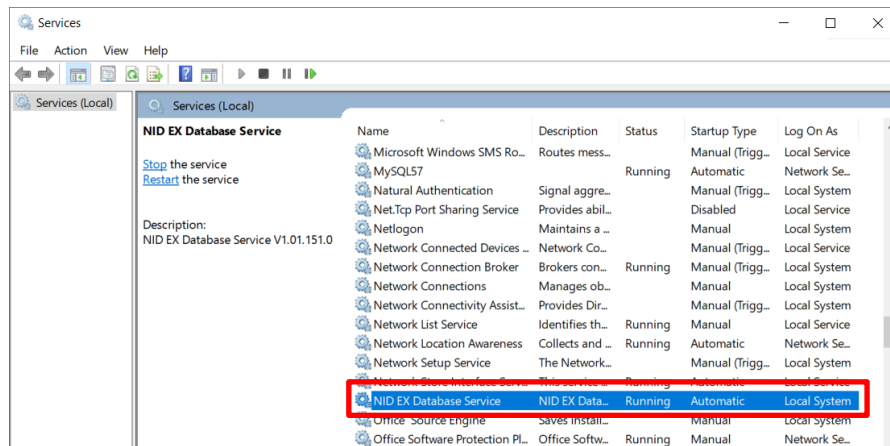


p) Click **Start Service**. The message “Would you like to start service?” appears. Click **OK**.



Note: Steps n) and o), of starting and stopping the service, are to ensure Windows service of “NID EX Database Service” is running successfully.

q) In Windows Search Bar, type in “Computer Management”. In the “Services and Applications” panel to the left, click on **Services**, or directly search “Services”. In the services list, find “NID EX Database Service” and confirm it is running.



- r) "Server Connection": this operation is to set up connection between PC Client and the MySQL Server which might be installed on another computer. Configure the connection as required below:
- Server Name: name tag for your Server connection
 - Server Address: localhost (or IP address where MySQL Server is installed)
 - Port: 8734

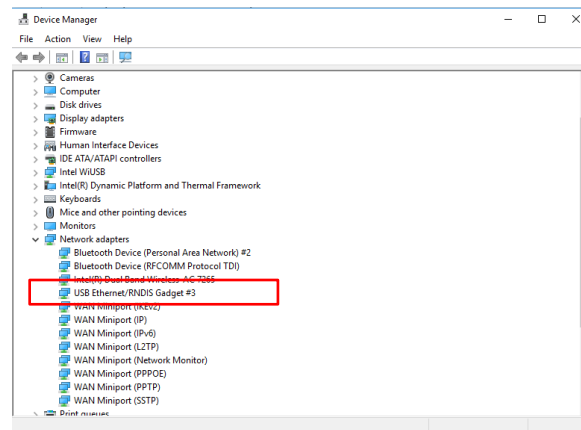


- s) Click **Create**. A message will appear to confirm the configuration.
- t) Exit NID EX IT Configuration window.

8. Device USB Driver Installation

If USB connection is used to connect the NanoRam®-1064 device and NID EX on the PC, the device driver may need to be installed on the PC. Generally, the device driver will be installed on the PC automatically once the connection is established between the device and the PC using the USB cable shipped with the unit. The following steps will guide the users to check whether or not the device driver installation is completed.

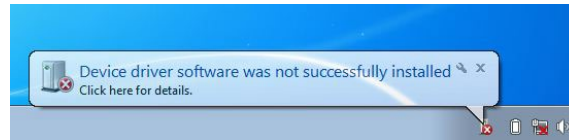
1. Power on the NanoRam®-1064 device.
2. Insert one end of the USB cable into the MicroUSB port of the NanoRam®-1064 device and insert the other end into a USB port on the PC.
3. A message “a device is plugged in and may need further configuration” may appear. Wait until the driver is installed automatically on the computer with a message “device is configured/installed and ready to use”.
4. Another message may show up indicating the device is installed as “USB Ethernet/RNDIS Gadget”.
5. To confirm the device driver is installed successfully, go to the “Windows Search Bar” and type “Device Manager”. The device driver is installed successfully when “USB Ethernet/RNDIS Gadget” is listed under “Network adapters”.



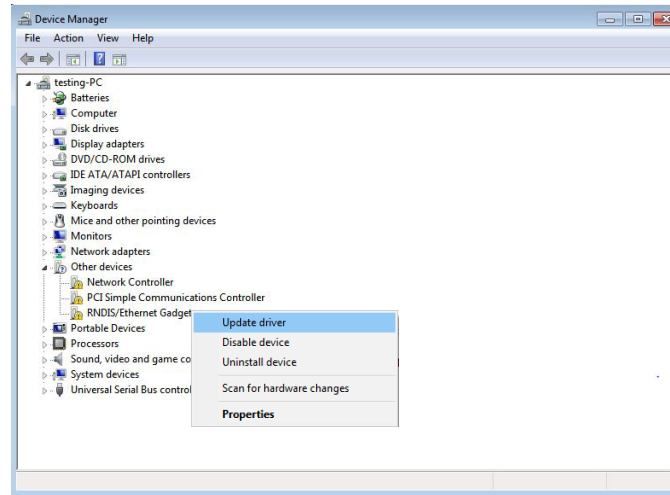
6. Manual driver installation:

Most computers with Windows 7 or Windows 8 operating systems (and some Windows 10 operating systems) will need a manual installation of the device driver. Follow the instructions listed below:

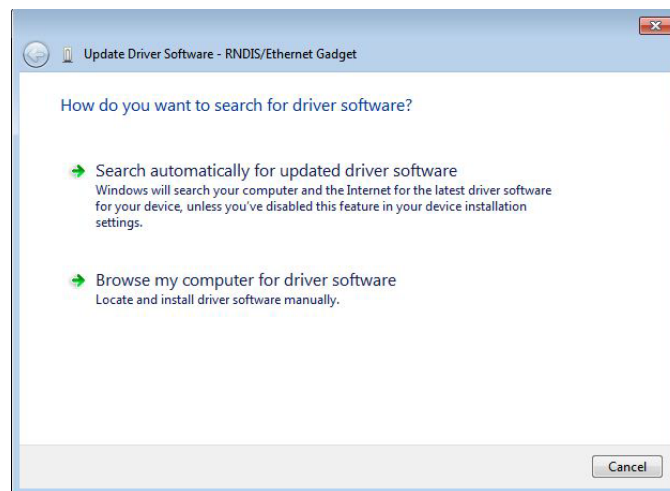
If the USB driver cannot be installed automatically, perform operation steps 1-3 listed above to make the physical connection of the NanoRam-1064 to the PC.



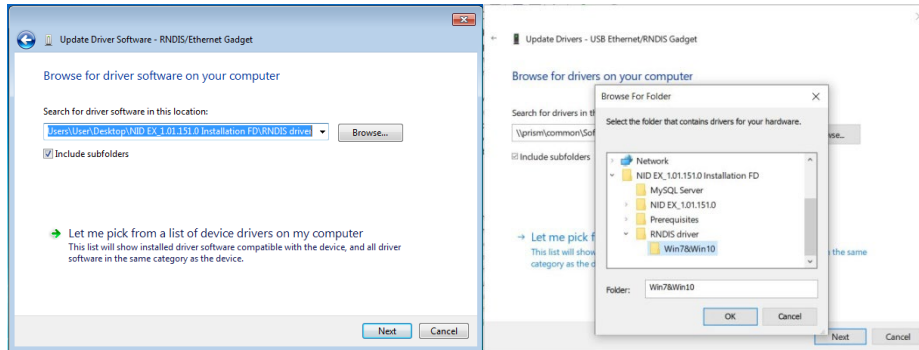
- a. In the Windows search bar, type "Device Manager" and find the malfunctioning USB device "RNDIS/Ethernet Gadget". Right click this device and select **Update Driver**.



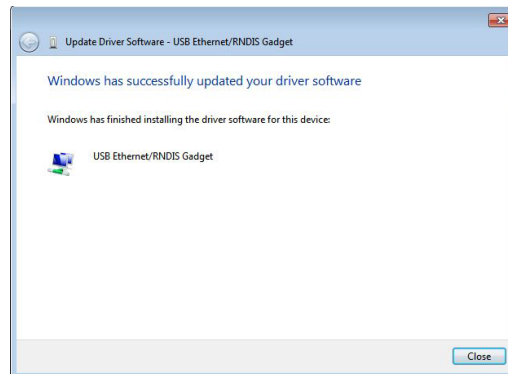
- b. Select **Browse my computer for driver software**.



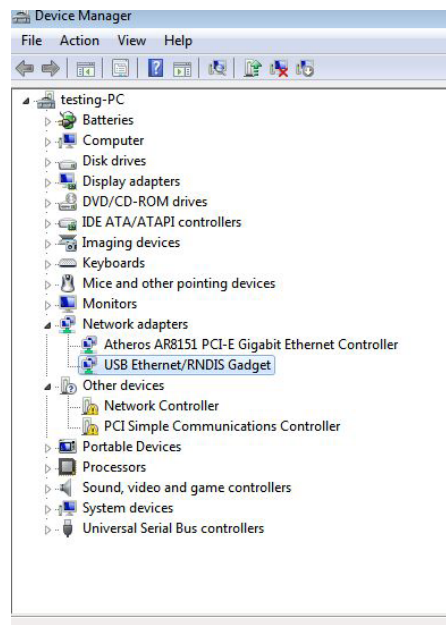
- c. Click “Browse” and navigate to the folder of “RNDIS driver” in the NID EX installation folder:



- d. Click **Next** and then wait until the driver is installed successfully onto the computer:



- e. Go back to Device Manager to confirm the “USB Ethernet/RNDIS Gadget driver” is installed and running properly:



9. Firewall Configuration

Note: Please present this document to the user's IT administrator. Use the procedures to check or set firewall configuration only when the connection cannot be established between NanoRam®-1064 device and PC where NID EX is installed.

This procedure is to ensure proper communication can be established between the NanoRam®-1064 device and NID EX on the PC. Certain network traffic rules and Windows Firewall Settings may need to be applied. **Third Party Antivirus or Firewall** software (such as McAfee, Norton Endpoint, Avast etc.) may block or conflict with the communication between the device and software. Consult your IT Department for firewall configuration.

- Communication Port Requirement

The NanoRam®-1064 product uses several specific network ports to establish communication between database services on the device and PC. These communication ports need to be **OPEN** and allow **BOTH TCP and UDP** protocols. **Third Party Antivirus or Firewall software or other application software** may block or conflict with the communication between the device and software. Consult with your IT Department. The specific ports that are used are:

MySQL Server:

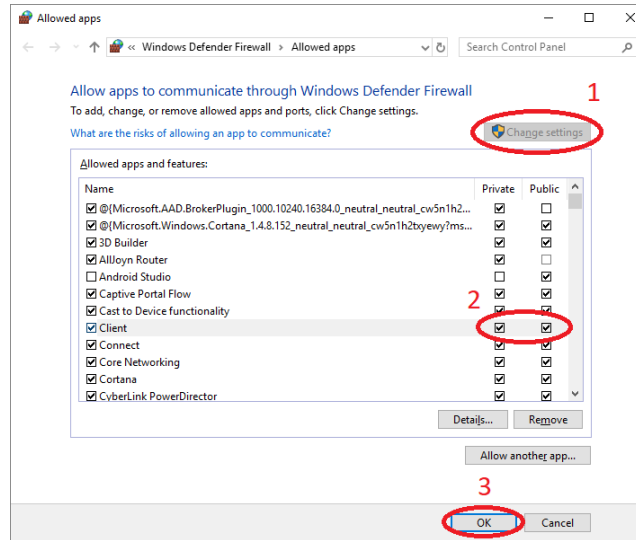
- TCP: 33060

NID EX:

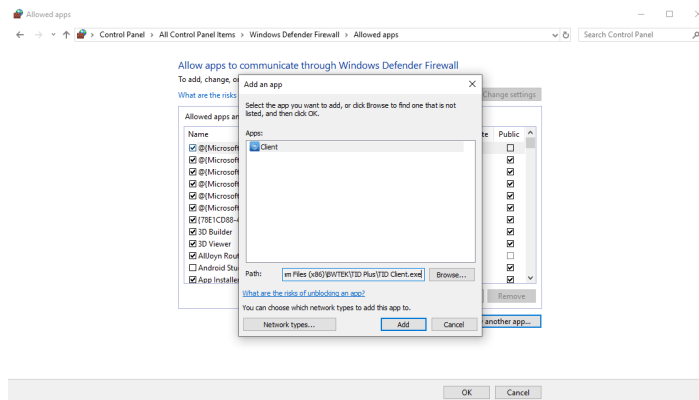
- TCP: 12401, 8734
- UDP: 12402, 12403
- Allow NID EX in Windows Firewall
 1. Open "Windows Firewall" in "Control Panel". Click on "Allow a program or feature through Windows Firewall".



2. Click **Change settings**, and then find **Client**. Enable both “Home/Work (Private)” and “Public” categories, by checking the checkboxes. Click **OK** to exit.

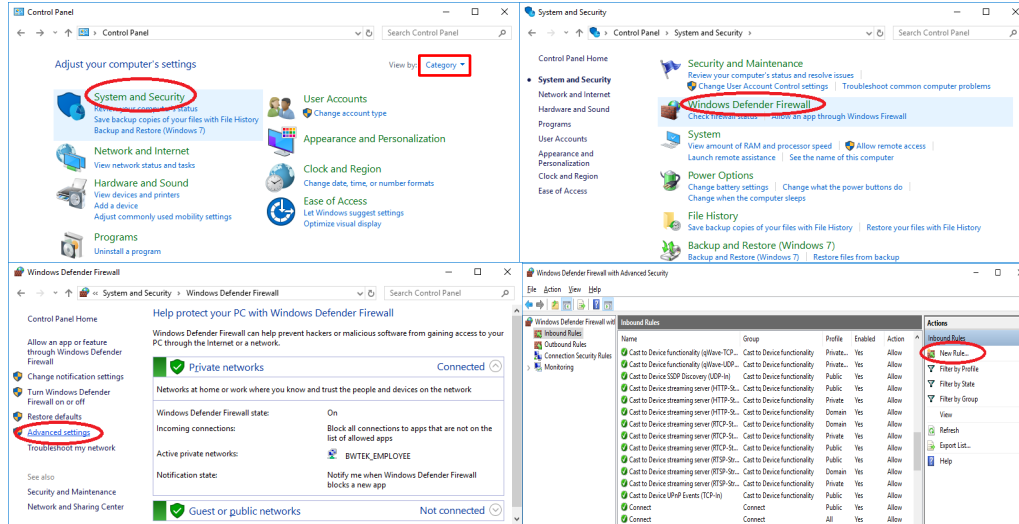


NOTE: In a scenario where “Client.exe” is not listed, the program will need to be added manually. Click **Allow another app**. Find the program in the following directory: “C:\Program Files (x86)\BWTEK\NID EX\NID EX.exe”. Click **Add** and follow step 2 above.



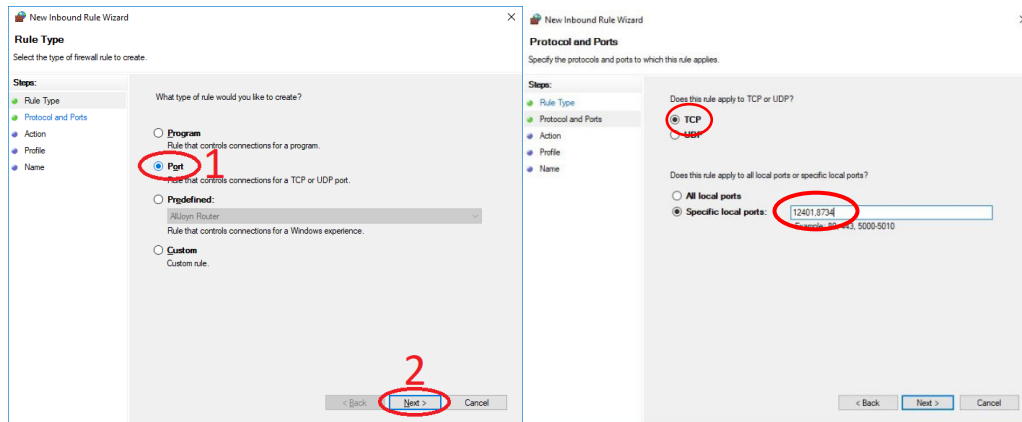
- Windows Firewall Rule Configuration

- Navigate to “Control Panel” (Category View) -> “System and Security” -> “Windows Defender Firewall” -> “Advanced settings” -> “Inbound Rules” -> “New Rule”.

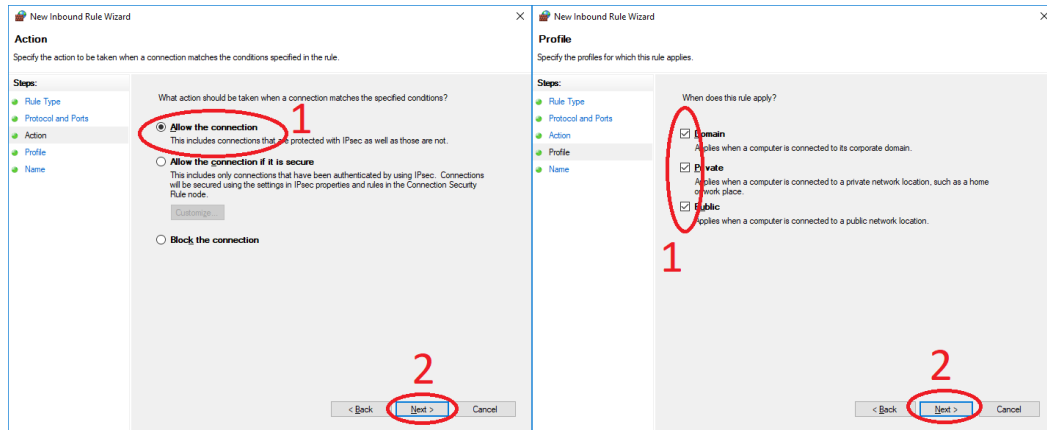


- “Rule Type”: select “Port” and click **Next**.

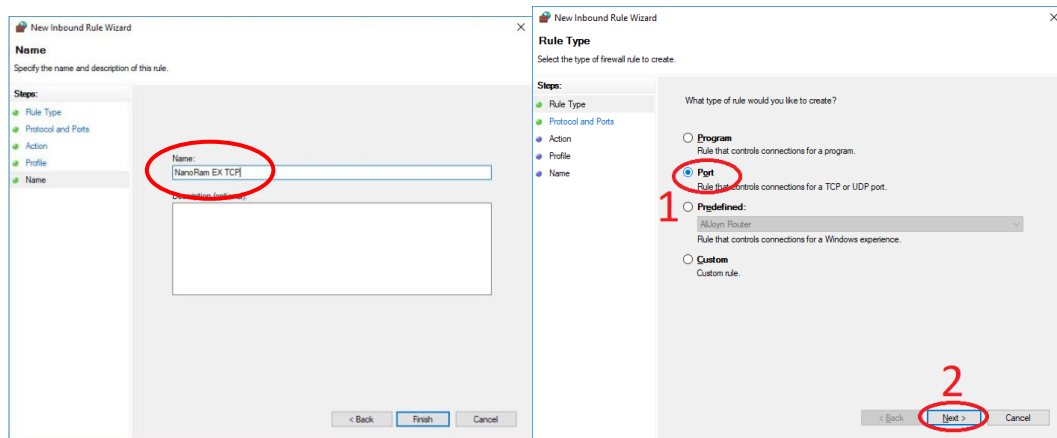
“Protocol and Ports”: choose “TCP”. In “Specific local ports”, enter: “12401, 8734” and click **Next**.



3. "Action": choose "Allow the connection" and click **Next**.
"Profile": check "Domain", "Private", "Public" and click **Next**.



4. "Name": use name "NanoRam® EX TCP" and click **Finish**.
Then "Create" another "New Rule".
"Rule Type": select "Port" and click **Next**.



5. "Protocol and Ports": choose "UDP". In "Specific local ports", enter: "12402, 12403". Click **Next**.

The image shows two screenshots of the 'New Inbound Rule Wizard' interface. The left screenshot is the 'Protocol and Ports' step, where 'UDP' is selected under 'Does this rule apply to TCP or UDP?' and '12402, 12403' is entered in the 'Specific local ports' field. The right screenshot is the 'Action' step, where 'Allow the connection' is selected under 'What action should be taken when a connection matches the specified conditions?'. Red circles and numbers '1' and '2' highlight the 'Allow the connection' option and the 'Next >' button, respectively.

6. "Profile": check "Domain", "Private", "Public" and click **Next**.
"Name": use name "NanoRam® EX UDP" and click **Finish**.

The image shows two screenshots of the 'New Inbound Rule Wizard' interface. The left screenshot is the 'Profile' step, where 'Domain', 'Private', and 'Public' are checked under 'When does this rule apply?'. The right screenshot is the 'Name' step, where 'NanoRam EX UDP' is entered in the 'Name' field. Red circles and numbers '1' and '2' highlight the checked profile options and the 'Next >' button, respectively.

10. NID Login

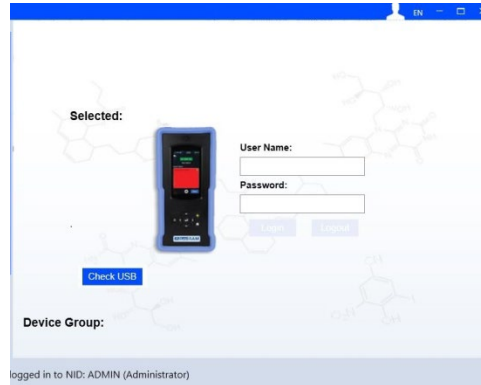
NID EX software accepts different levels of account logins for data management. After the completion of the installation steps above, the first synchronization with the NanoRam-1064 device must be done with the “NID Admin” account. Further description of possible NID EX software login credentials are below:



- Username: IT ADMIN
Default Password: 999999
Offers functions of IT management. “NID Server” and “Device SN” can be blank. This is accessed in section 7: h) of this manual.
- Username: NID ADMIN
Default Password: 999999
For first-time use to activate the server database when MySQL database has never been synchronized. After first-time synchronization to the device, this account will be disabled. Select the “NID Server”; “Device SN” can be blank.
- Account of “ADMIN” and all other device-created user accounts are accepted for user login to NID EX. These are only available after the server is initialized and after the first synchronization with “NID Admin” account is complete. User must select both “NID Server” and “Device SN” in addition to the appropriate login credentials.

11. IP address configuration

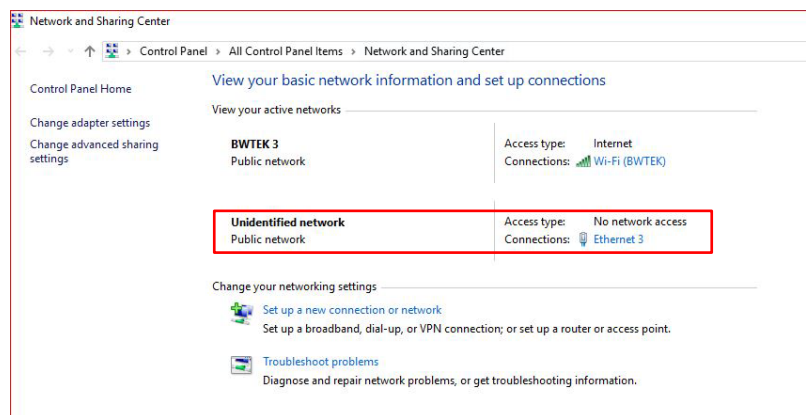
Make sure the device is powered on and connected via USB cable to the PC where NID EX is installed. Start NID EX and login using the “NID Admin” account for the first time, or another device account. Reference section 10 of this document. After a successful login, the screen below should appear:



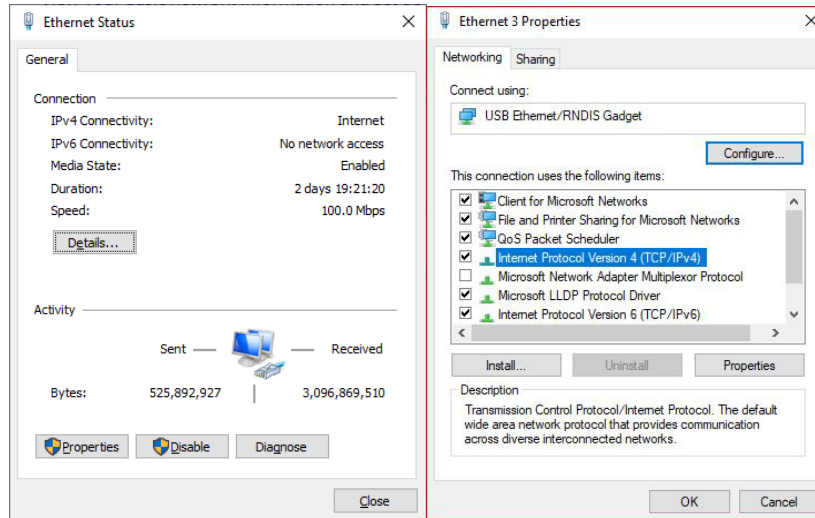
The “Check USB” button is activated when the device is detected. Click this button and the IP address of this connection will be configured automatically.

In some scenarios, due to IT restrictions, the automatic IP address configuration for USB connection will not work after clicking this button. In this case, manual setup is required by authorized IT personnel:

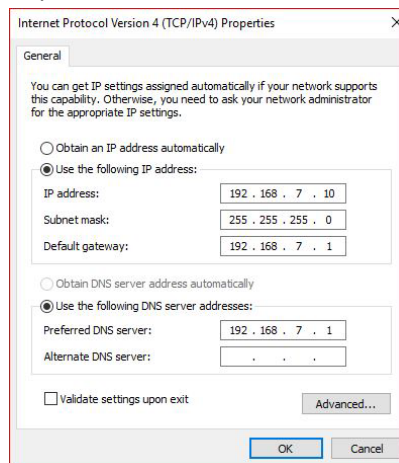
1. Go to the “Network and Sharing Center” in Windows 10 or equivalent program in Windows 7 or 8. Find the network connection which is associated with this device. Plug in the device while on this window to easily determine which connection to change. It should appear as an “Ethernet” connection:



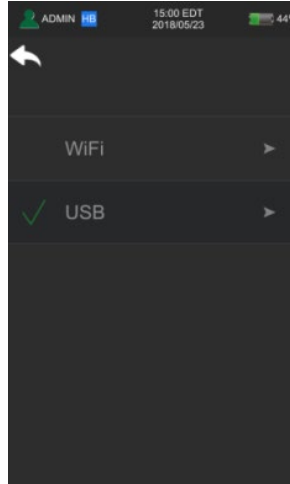
- Click the appropriate “Connections” link, for example “Ethernet 3” as shown above. Click “Properties” on the status window that appears. In the Properties window, select “Internet Protocol Version 4 (TCP/IPv4)” until highlighted and click “Properties” again:



- “Internet Protocol Version 4 (TCP/IPv4) Properties”: select “Use the following IP address” and configure as below:
 - IP address: 192.168.7.10 (increment the 4th digit if unavailable. Ex. 192.168.7.11)
 - Subnet mask: 255.255.255.0
 - Default gateway: 192.168.7.1
 - Preferred DNS server: 192.168.7.1
 - Alternate DNS server: keep blank



4. On the NanoRam®-1064 Device, login with any account. Navigate to “Data Transfer” and select the USB on the left to cause the green check mark to appear. Do not navigate away from this screen or connection to device will not occur.



5. The NanoRam-1064 icon with the device SN will appear under “Device Group” in the NID EX interface. This means communication has been established successfully.
 - Note: If the icon does not appear under “Device Group”, double check the firewall settings and IP configuration, or call B&W Tek technical support for help.



6. Click the device under “Device Group” that you want to login to, and input the “User Name” and “Password” for this account. Click “Login” to connect to the device.
7. Connection and installation are complete.

12. Appendix I: Microsoft Root Certificate Authority Update Instruction

The following information can be referenced in the event .NET Framework 4.6.2 failed to install properly:

The .NET Framework 4.5 redistributable was updated on October 9, 2012 to correct an issue related to an improper timestamp on a digital certificate, which caused the digital signature on files produced and signed by Microsoft to expire prematurely.

- docs.microsoft.com/en-us/

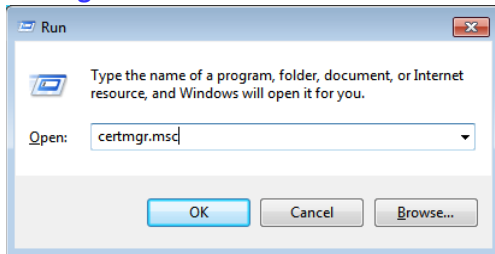
This issue occurs when this certificate MicRooCerAut2011_2011_03_22.cer is missing particularly when you operate in an environment that's disconnected from the Internet or that has a firewall that blocks content from <http://ctldl.windowsupdate.com>. This behavior is due to recent changes to Microsoft Windows Enforcement of Authenticode Code Signing and Timestamping.

- <https://blogs.msdn.microsoft.com/>

Here is the solution to manually import the missing certificate:

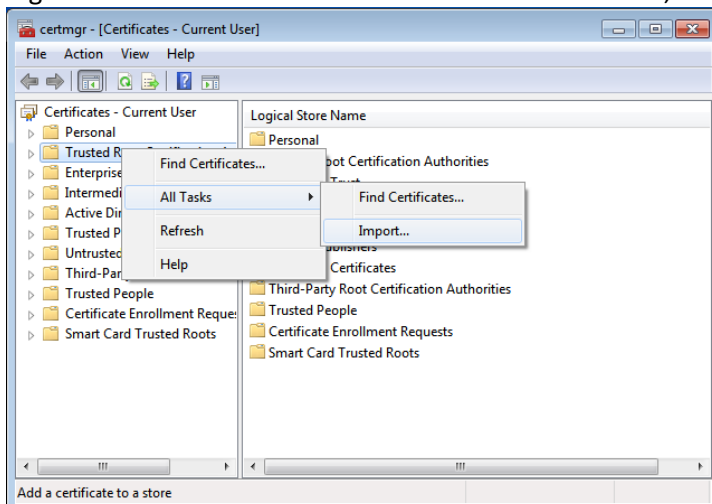
Step 1:

On your keyboard, press the **Win** key and **R** key at the same time to bring up the "Run dialog". Enter **certmgr.msc** and click the **OK** button.



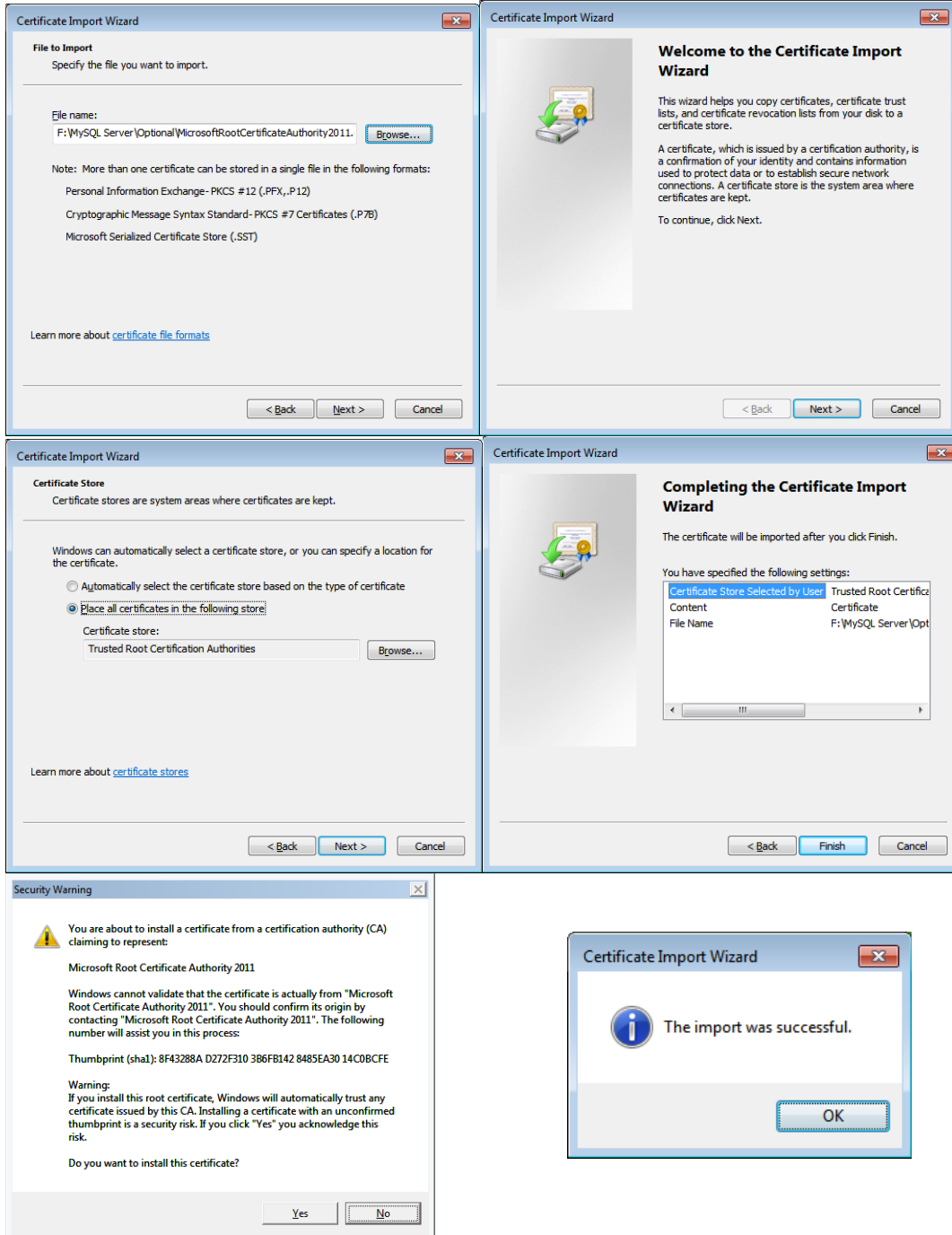
Step 2:

Right-click the "**Trusted Root Certification Authorities**", then click the "**All Tasks**", then "**Import**".



Step 3:

Click the **Next** button on the “Certificate Import Wizard”, then use the **Browse** button to locate the certificate file in the installation folder of Prerequisites. Click the **Next** button on all of the following pages. On the last page, click the **Finish** button. If a Security Warning message pops out to inform you that you are installing the “Microsoft Root Authority 2011”, click the **Yes** button to complete the import.



13. Appendix II: Frequently Asked Questions

1. What if Device is identified as USB Serial device (COM port) and not as RNDIS device?

Solution:

- a) Locate the file “5-runasadmin_register-CA-cer.cmd” in the folder NID_EX_1.02.178\Installation\Prerequisites\kindle_rndis.inf_amd64-v1.0.0.1\kindle_rndis.inf_amd64. Right click this file and “Run it as administrator”.
- b) In “Device Manager”, find this device and right click to update driver.
- c) Manually locate the folder of NID_EX_1.02.178 Installation\Prerequisites\kindle_rndis.inf_amd64-v1.0.0.1\ and click **Next**.
- d) Device is recognized successfully as “Kindle USB RNDIS Device (USBNetwork enabled).

2. What if NID EX Database Service cannot start in Windows Services?

Solution:

Most of the time this is due to the port conflict between NID EX and other software preinstalled on the same computer. The list of ports used in NID EX software is provided in section 9 of this document. Disable other services which have port conflicts. So far, the only known app with a port conflict is “HP JumpStart”. We will update this list if more program conflicts are found.

3. What if, after connecting the NanoRam[®]-1064 device to PC and logging in to both NOS and NID, the device SN does not show up in the Device Group?

Solution:

- a. On the device’s “Data Transfer” screen, go to the configuration page (tap on the arrow) of the selected connection to see if it is disabled. If it is disabled, enable it.
- b. Check if the device is plugged into a different USB port than before. If so, click “Check USB” again to re-configure the IP address setting, or check section 11 of this document if there are IT restrictions stopping the automatic configuration.
- c. If the connection is through Wi-Fi, check to ensure that both Device and PC are under the same network.
- d. Check the firewall settings to make sure the NID EX program is allowed to go through the firewall in both public and private networks.
- e. If MySQL service is located in another computer of the same network, make sure both computers have inbound/outbound rules set correctly.

4. What if I forget MySQL root password?

Solution:

This procedure requires IT assistance.

- a. First, shut down the service “mysql57”.
- b. Go to C:\ProgramData\MySQL\MySQL Server 5.7, note that “ProgramData” is a hidden folder.
- c. Look for the file “my.ini”. Create a copy of “my.ini” as a backup in different folder. Open the original one and add one line “skip-grant-tables” below “[mysqld]” section as shown below:

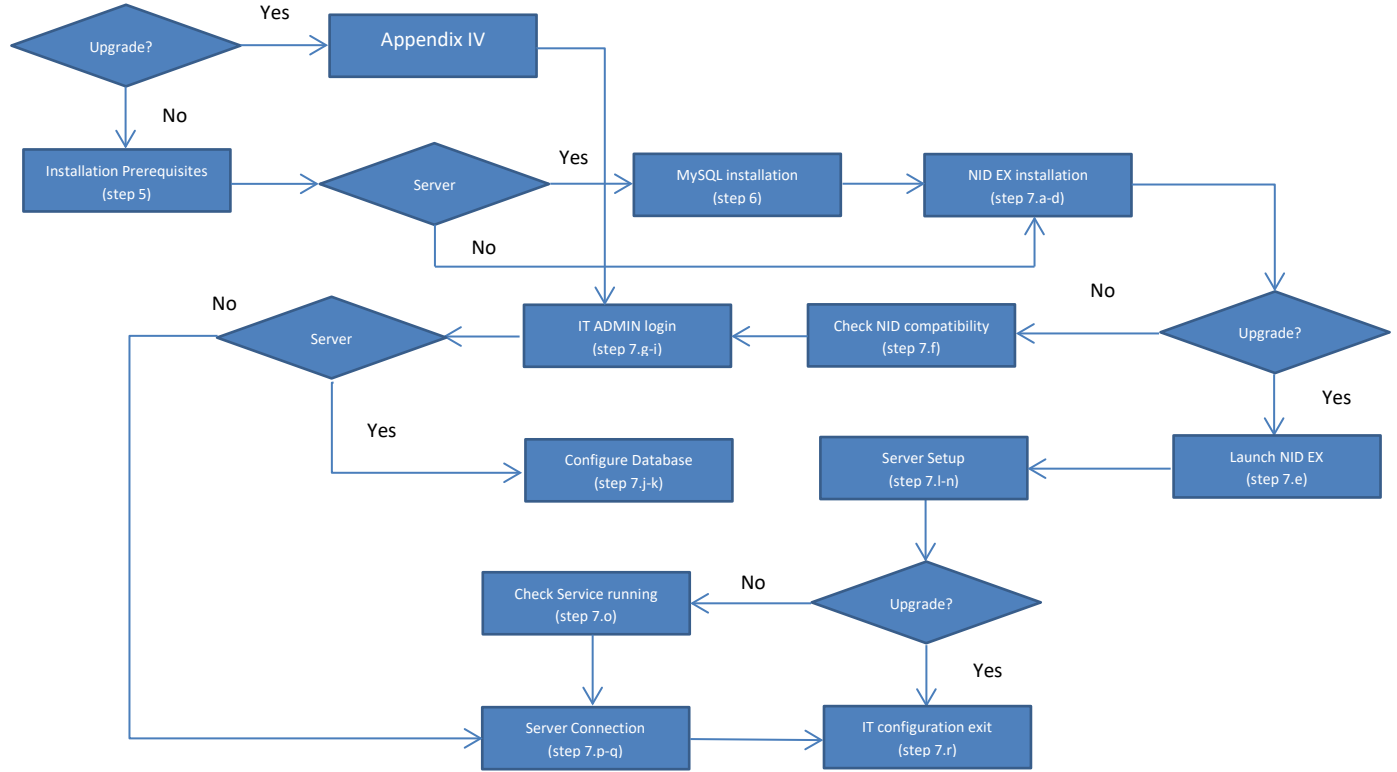
```
[mysqld]
skip-grant-tables
```

- d. Start the service “mysql57”.
- e. If done correctly, you can access the database.
- f. Using cmd or powershell, run `mysql -u root -p` under the database directory to access the database. Typically, the directory is located at C:\Program Files\MySQL\MySQL Server 5.7\bin.
- g. Use the following query to update the password: `update mysql.user set authentication_string=password('NEW_PASSWORD') where user='root'`. The ‘NEW_PASSWORD’ should be the new password you want to set.
- h. Shut down the “mysql57” service again and remove the line ‘skip-grant-tables’ from “my.ini”. Save the file.
- i. Start the service again and try to use the password you set to login MySQL root.

5. What if I forget my IT ADMIN account password?

IT ADMIN account password can be recovered by the Windows system administrator. Simply delete the ServerSettings.xml file inside C:\Program Files (x86)\BWTEK\NID EX, or from your custom installation directory. After deleting the xml file, login to NID EX with the default “IT ADMIN” account and password “999999”. User must then reconfigure their database with the MySQL password, update their database, stop/start services.

14. Appendix III: Workflow of Software Installation



15. Appendix IV: Software Update/Upgrade Instruction

Note: Instruction intended for:

NOS-1064 v1.01.189.0 and NID EX v1.01.151.0 upgrade to
NOS-1064 v1.02.235.0 and NID EX v1.02.178.0 or later

Before updating the NID EX client, **please make sure to update the NanoRam-1064 operation system first**. Simply connect your NanoRam-1064 device to the NID EX client, go to Device -> update NOS and choose the update package to update the NOS-1064 software.

After the NOS-1064 software update, user can proceed to update the NID EX software.

For NID EX software update with NID EX 1.02.151 or higher, the user is **NOT required to uninstall previous NID EX version** (1.01.151.0). User can directly update from previous NID EX version by right-clicking setup.exe in NID EX software folder and **Run as administrator**. The installation package will automatically detect the existing software, and ask users whether they need to update the software. User can continue with the default settings and finish the installation of NID EX. All user data will be preserved in the database during the NID EX software update.

Below is a **step-by-step guide line** to upgrade the NOS-1064 and NID EX:

- 1.1. For all procedures below, user should login to the same administrator account on both the NOS-1064 device and NID EX software.
- 1.2. Record the current NOS-1064 version by logging in and go to Setup -> General -> About
- 1.3. Record the current NID EX version. Make sure the NID EX version currently installed is compatible with the NOS-1064 software version. (see software release notes)
- 1.4. Connect the NOS-1064 with the NID EX, login using the administrator account, and synchronize the NOS-1064 to NID EX. Wait for the synchronization to finish. (This step allows user to transfer measurement data to the NID EX secured database on PC.)
- 1.5. On the NanoRam-1064 device, go to Setup -> System Backup and click Full system backup. Wait for the backup to finish and restart the system. (This step allows user to backup all essential software data to a backup SD card that can be used for system recovery.)
- 1.6. Connect NOS-1064 with the NID EX. Login and go to Instrument -> Update NOS. Choose the NOS-1064 update package provided by the supplier and update the software. Wait until the NID EX displays the message that the installation is successfully completed and reboot the NOS-1064 system.
- 1.7. Check and record the NOS-1064 system version
- 1.8. Optional: If you have updated your device to NOS 1.02.279 or later from a prior version, a new perf. Validation file needs to be created by Developer if the previous performance validation reference file does not fulfill the latest USP criteria.

- 1.9. Close NID EX. Right click the new NID EX software installation file “setup” and run as an administrator. Choose Yes to perform upgrade of “NID EX”. Continue with all default settings to finish the software upgrade.
- 1.10. Open NID EX and login as “IT ADMIN” with your password. The factory default password is 999999.
- 1.11. Go to Server Setup, Click “Create/Update Database”, wait for database configured successful message.
- 1.12. Click Stop Service, wait for successful message.
- 1.13. Click Start Service, wait for successful message.
- 1.14. Close NID EX. Open NID EX; the software should recognize the server within a few second. Choose the device SN, and login using the Admin account.
- 1.15. Connect NOS-1064 to NID EX. Perform synchronization and finish the software upgrade/update.

16. Appendix V Setup for remote Server-Client access

In this section, we will describe the recommended steps for setting up remote NID EX client to access the server NID EX. This procedure applies to users who would like to control and manage the MySQL database on a server PC, and access this database from a remote client PC. Contact your IT department if you would like to setup remote access.

Pre-requisite:

1. User should have both MySQL and NID EX installed on the Server PC and have completed the main installation and setup sections 5 to 11.
2. Both the Client PC and Server PC should be connected to the same network, and within the same subnet.
3. NID EX should be installed on the Client PC strictly following the main installation and setup guide from sections 7 to 9.

Setup steps:

1. On the Server PC, log in NID EX as IT ADMIN, record the **Server Name**.
2. On the Server PC, record the **Server IP address**.
3. On the Client PC, log in NID EX as IT ADMIN, with default password 999999. Under Server Connection, type in the **Server Name** and the **Server IP address** you recorded in step 1 and 2, enter port 8734, then click create. You should receive a success message afterward. Restart NID EX.
4. On the Client PC, the Server name should be then recognizable in the drop-down menu. Proceed with the initial log-in credentials (NID ADMIN, 999999) or account information that's stored in the Server PC. Information can now be synchronized from the NanoRam-1064 device to the Server PC through the client PC.