



TID EX Software Installation and Setup Guide

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1. Scope and Software Versions

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

- **TOS-1064_1.01.65.2 or higher** as installed on the TacticID-1064 device
- **TID EX_1.01.20.33 or higher** as installed on the PC

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

2. Operating System Compatibility

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

- Windows 7 sp1, 64 bit
- Windows 8, 64 bit
- Windows 10, 64 bit

We recommend user to use windows system in English (United States) format settings to ensure compatibility with TID EX. There may be problem of the TID EX installation and functionality related to the local settings of the computer.

3. Minimum Hardware Requirement

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

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

4. Installation Package

Upon delivery of the TacticID-1064 Handheld Raman System, locate the USB drive included in the shipping box. This USB drive contains all 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 below information in the Questions/Comments section:

- This is a request for **product registration and portal account access**;

- The current TOS-1064 and library version on the TacticID-1064 device;
- The current TID EX version installed on your PC (if any).

Once your request has been authenticated, your customer portal account will be created and login information sent to your email 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 “TID_EX_Installation” folder to 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 proper version of *.net Framework* has been installed on PC already.
 - b. If not, locate *NDP462-KB3151800-x86-x64-AllOS-ENU.exe* in the folder TID_EX_Installation\Prerequisites\MySQL Server\. Right click this program and **Run it 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, please 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 `..\TID_EX_Installation\Prerequisites\`.
5. Microsoft Visual C++ 2013 Redistributable (x86) (version 12.0.30501 or newer) is required, which is located in the folder `..\TID_EX_Installation\Prerequisites\`.
6. Microsoft Visual C++ 2015 Redistributable (x64) (version 14.0.23026 or newer) is required, which is located in the folder `..\TID_EX_Installation\Prerequisites\`.
7. Microsoft Visual C++ 2015 Redistributable (x86) (version 14.0.24215 or newer) is required, which is located in the folder `..\TID_EX_Installation\Prerequisites\`.

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

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

Please keep all username and/or password created during installation in safe and accessible location. B&W Tek is not responsible for account recovery!

6. MySQL Server Installation and Configuration

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

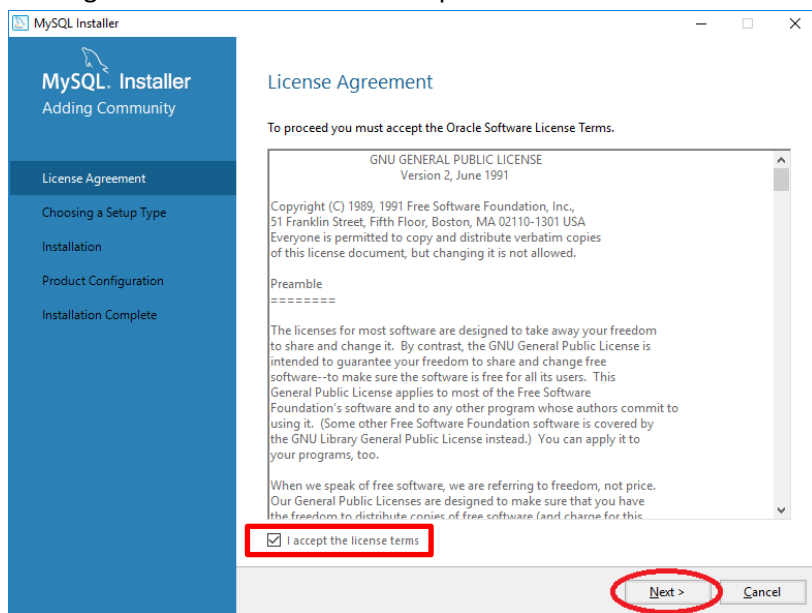
MySQL Server installer will automatically check if your PC meets all prerequisites. If a compatibility screen displays during installation, click on “Execute” to install.

The versions listed below have been verified to be compatible with TID EX.

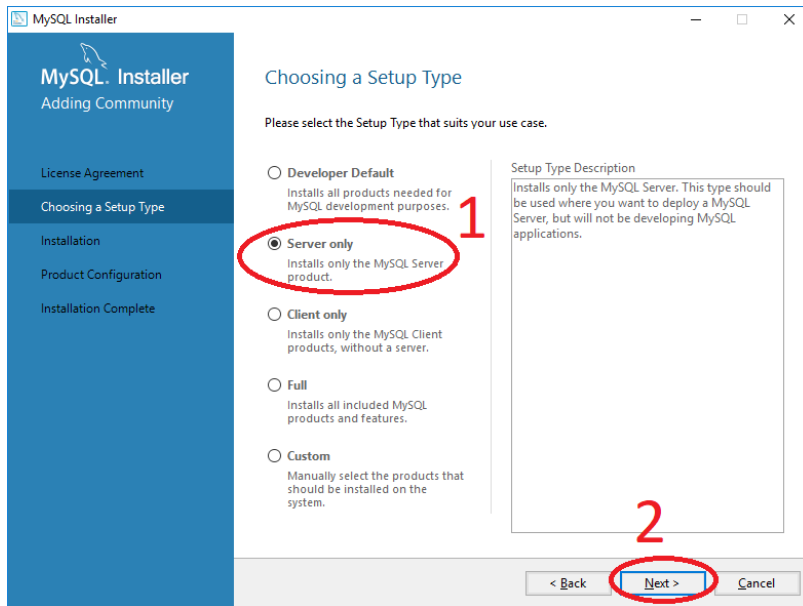
- MySQL community 5.7.18.0 or newer

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

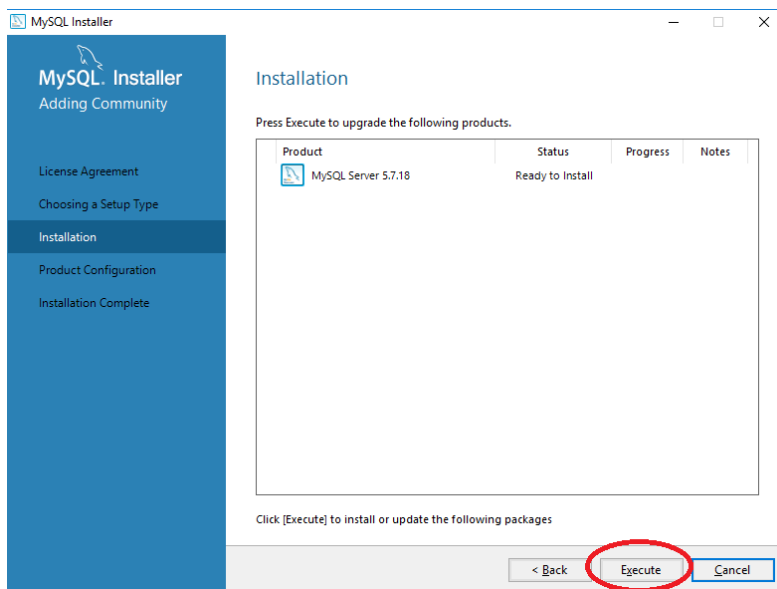
- In the folder ..\TID EX Installation\MySQL Server\, launch mysql-installer-community-5.7.18.0.msi;
- “License Agreement”: Make sure “I accept the license terms” is checked. Then click Next;



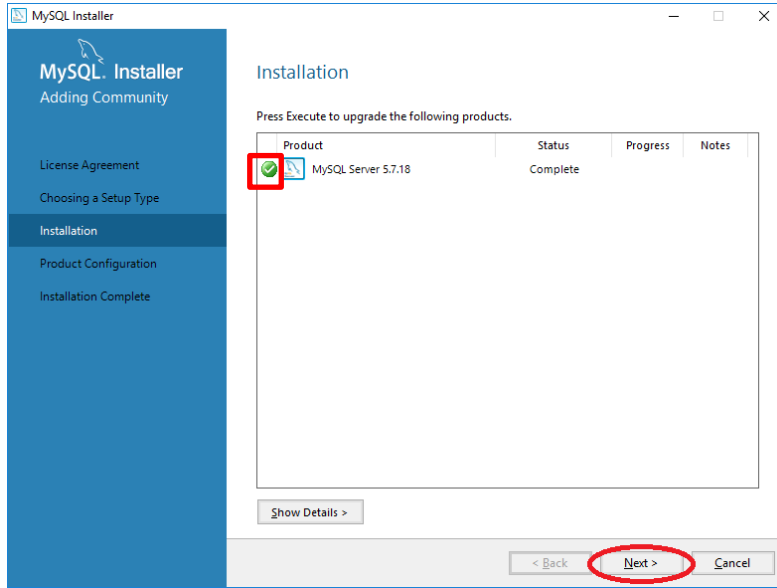
- Choosing a Setup type: choose “Server only” at Setup Type. Then click Next.



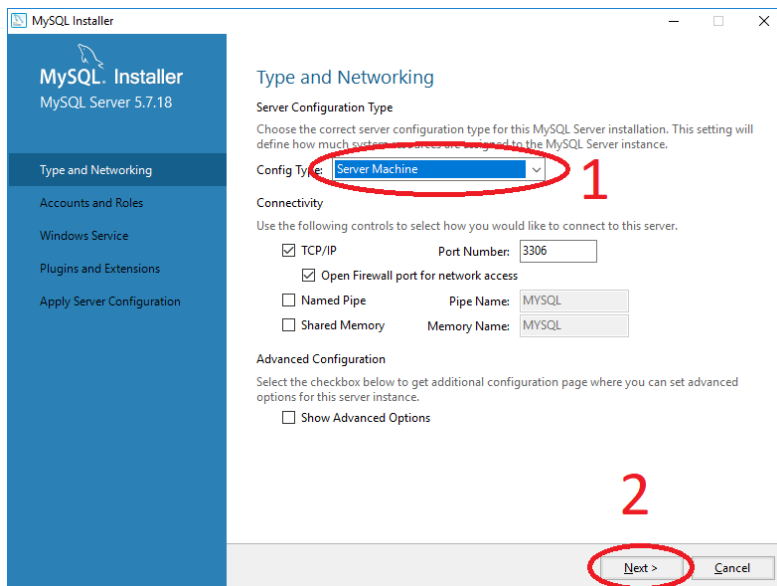
- “Installation”: click Execute to start installation of MySQL.



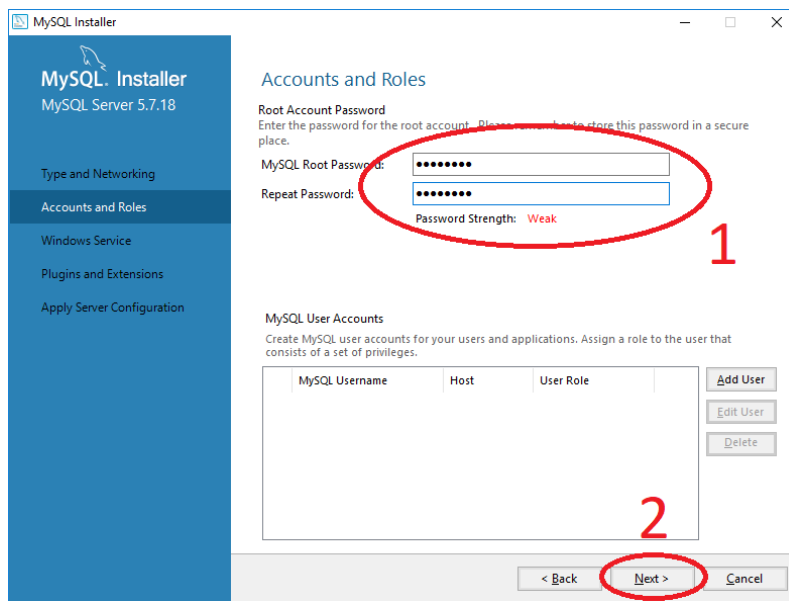
- After the installation is completed, a green check will appear. Click Next to start the MySQL configuration



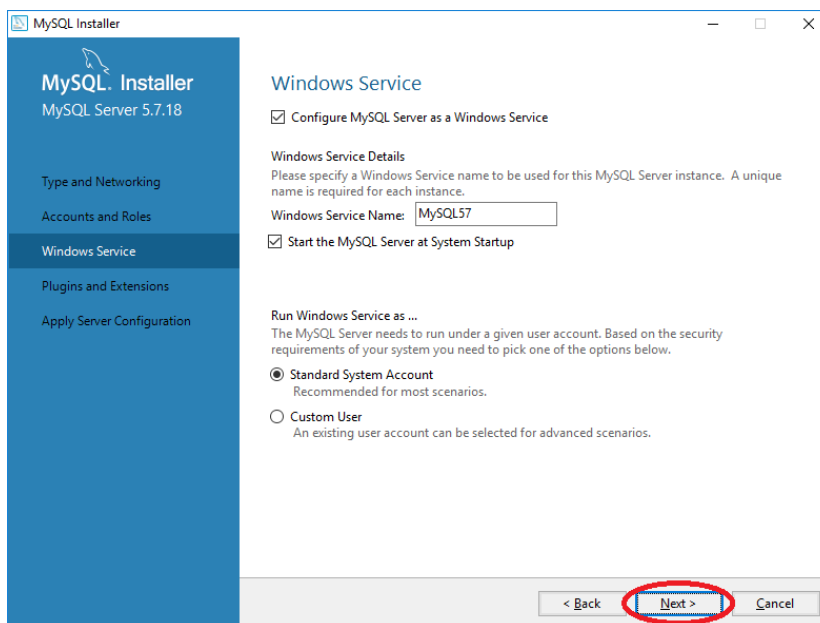
- “Type and Networking”: set “Config Type” as “Server Machine”, keep other settings as shown below. Click **Next**.



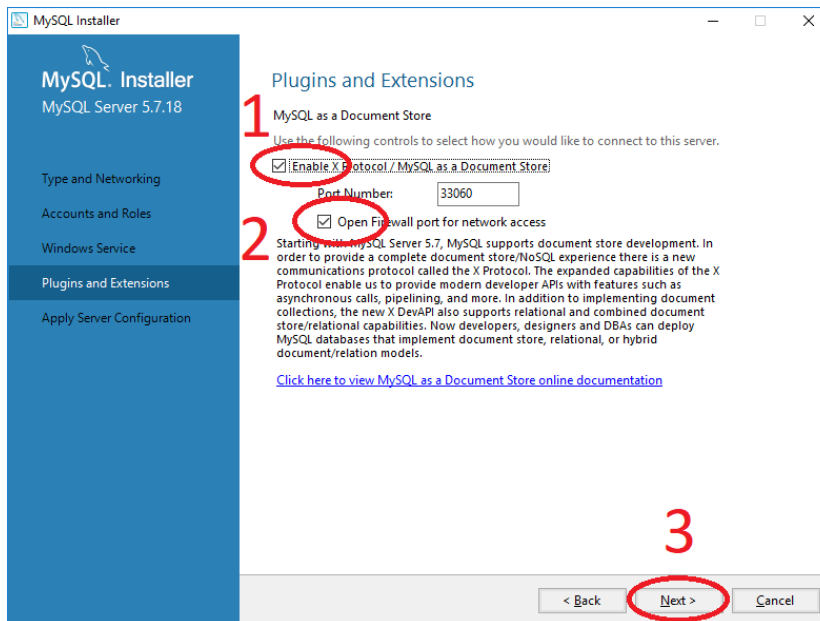
- “Accounts and Roles”: create a MySQL Server Root Password.
This password must contain ASCII printable characters (uppercase, lowercase, numbers, or special characters). This password should not contain special characters that require a language pack.
*****Document this password and store it securely*****



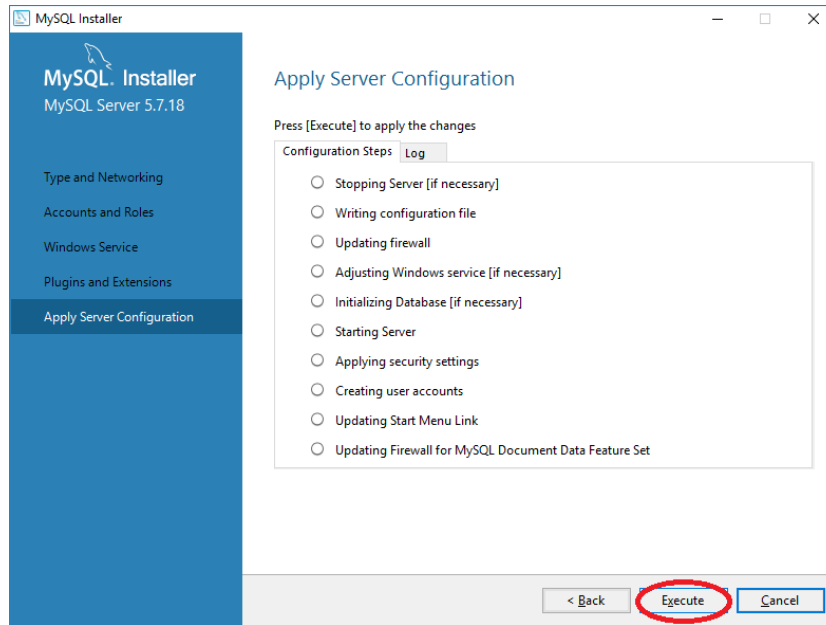
- “Windows Service”: keep default configurations. Click **Next**.



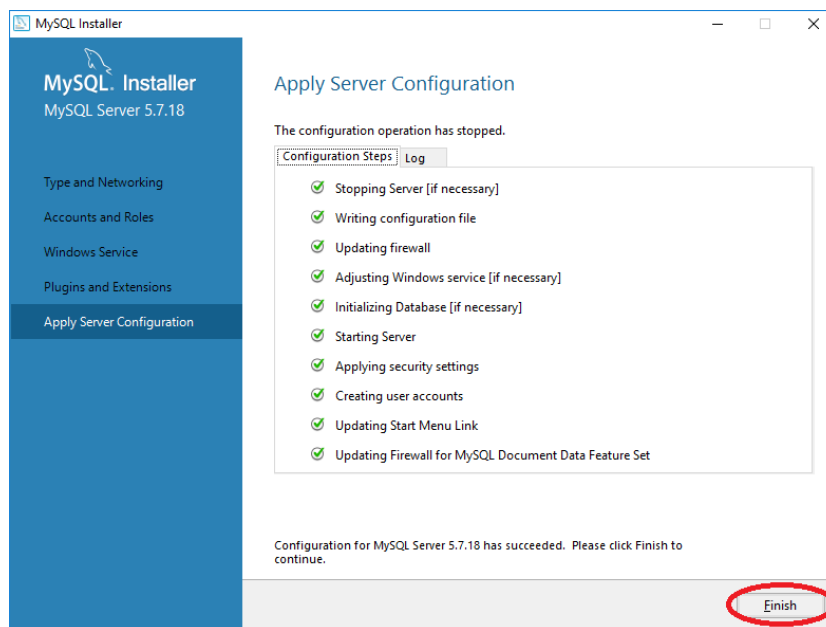
- “Plugins and Extensions”: configure to enable X Protocol and specify “Port number” as 33060. Select “Open Firewall port for network access”. Click **Next**.



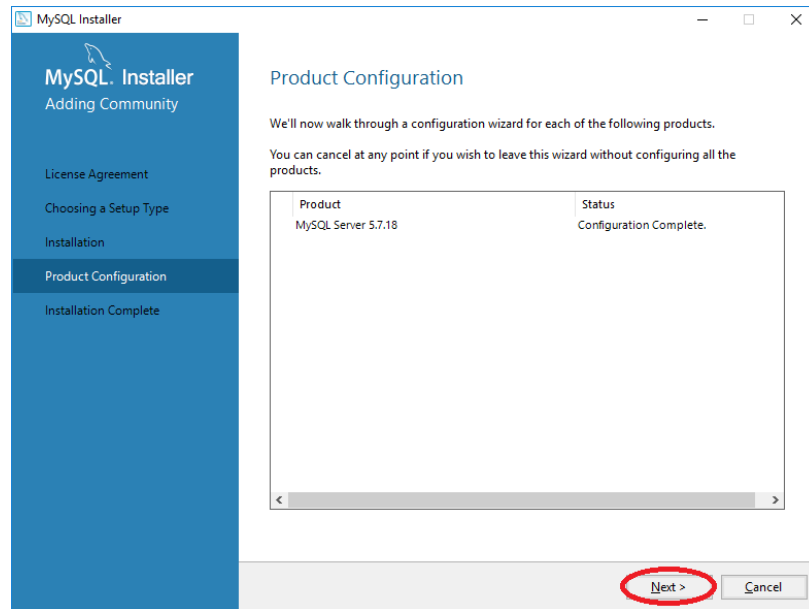
- “Apply Server Configuration”: click **Execute**. This will take some time while it goes through the list of configuration steps until all items are configured and checked. No action is required during configuration.



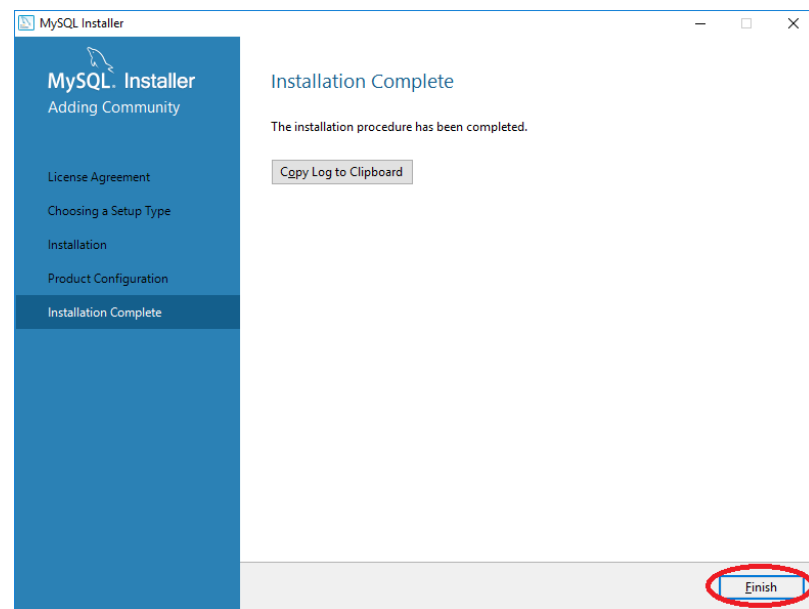
- Configuration is done when all the items are checked. Click **Finish**.



- “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.

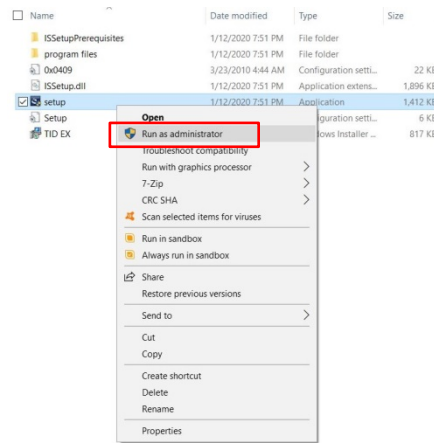


7. TID EX Installation and Configuration

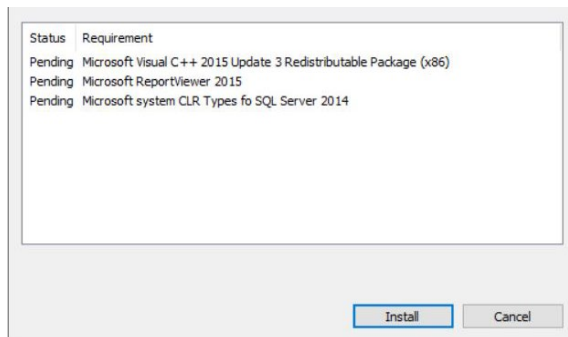
After successful installation and configuration of MySQL Server, TID EX software needs to be installed and configured:

19 Shea Way, Newark, DE 19713, USA • Tel: +1 (302) 368-7824 • Fax: +1 (302) 368-7830 • Web: www.bwtek.com

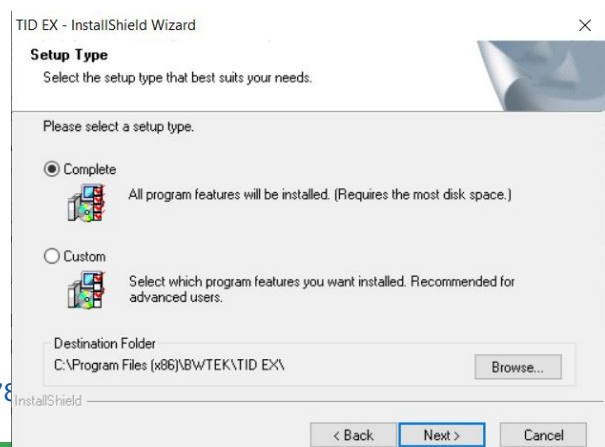
- In the folder \TID_EX_Installation\TID EX Software\, launch **setup.exe** by right-clicking the icon and **Run as administrator**. Click Yes if there is User Account Control confirmation box shows up.

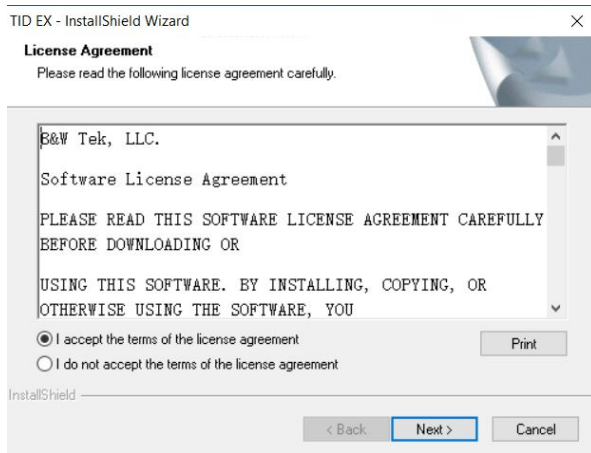


- It may be required to install certain programs onto your computer. Click “Install” and reboot your computer if required.

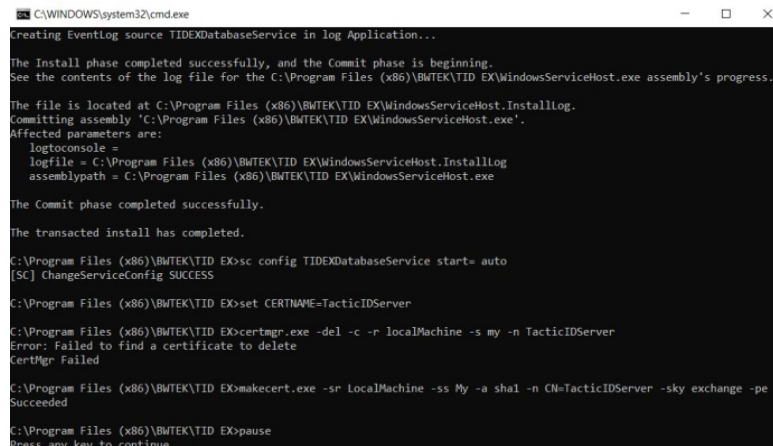


- Read and accept the end-user license agreement. Choose Complete setup type and default installation location: C:\Program Files (x86)\BWTEK\TID EX\.

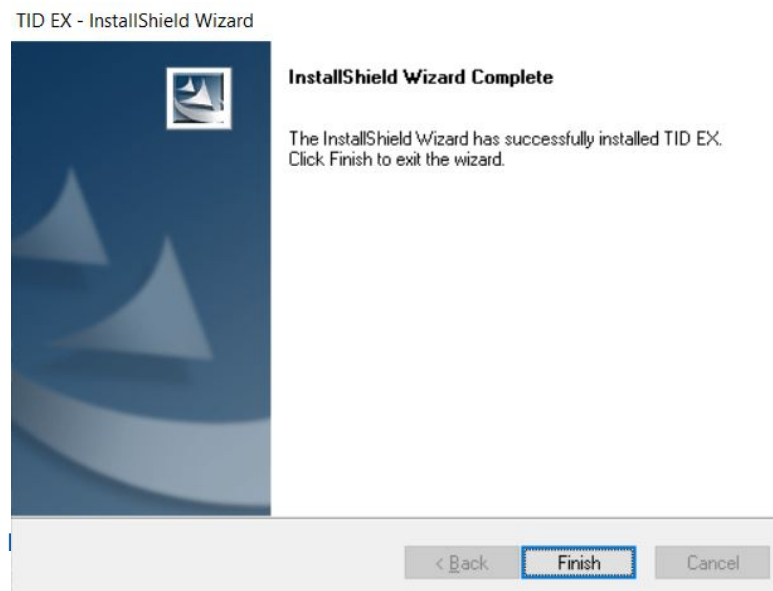




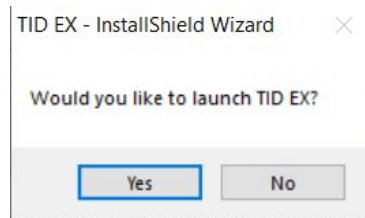
- During the installation, the following screen may appear and installation may temporarily be held. Press any key to continue.



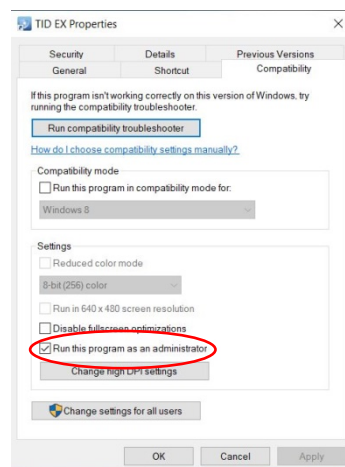
- When the installation is done, Click Finish.



- The message box shown below will appear. For first-time installation, click “No” to exit; if this is a software upgrade, click “Yes” to finish.



- Installation of TID EX software is successful on the PC. The icon for **TID EX** will appear on the PC desktop. Right click **TID 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.



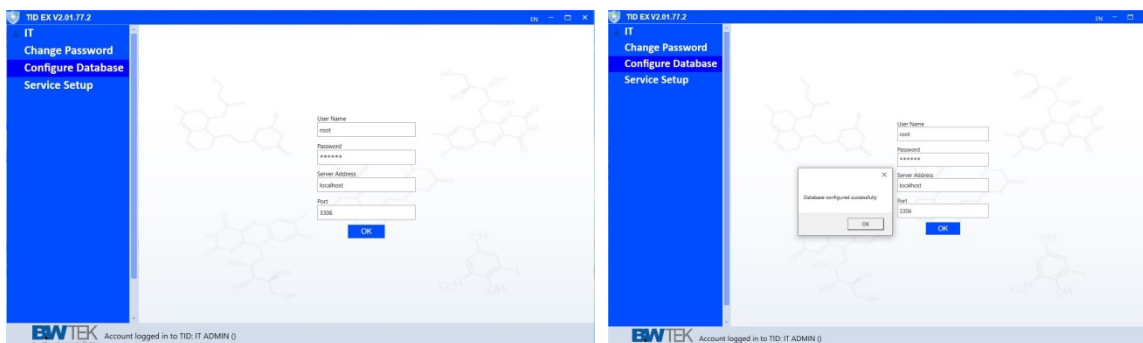
- Launch TID EX software from the Desktop, and the TID EX login screen appears. Enter username: “IT ADMIN” with default password “999999”; click **Login** to continue. Device SN is not required for “IT ADMIN” account login.



- “Configure Database”: this is for first-time configuration on this computer, if not, skip this step and move to the next.

Enter information as shown below and the password created for MySQL Server before. Click “OK” to save the configuration. A message “Database configured successfully” will appear. Click “OK” to finish.

User Name: root
Server Address: localhost
Port: 3306

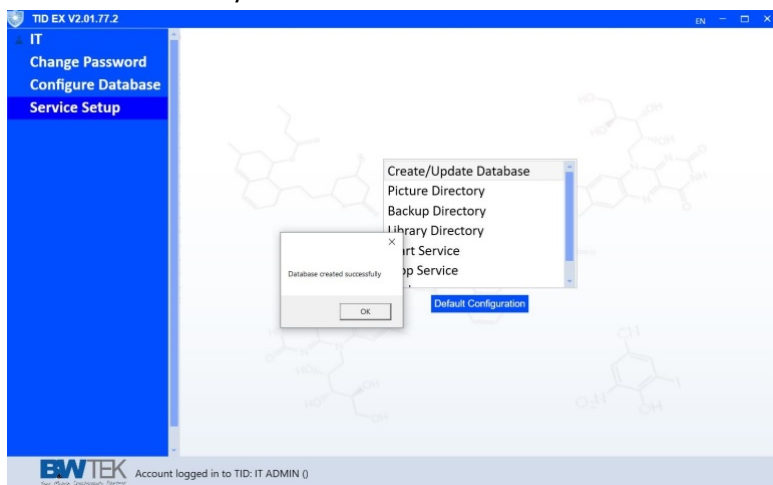


If configuration failure occurs, contact B&W Tek support.

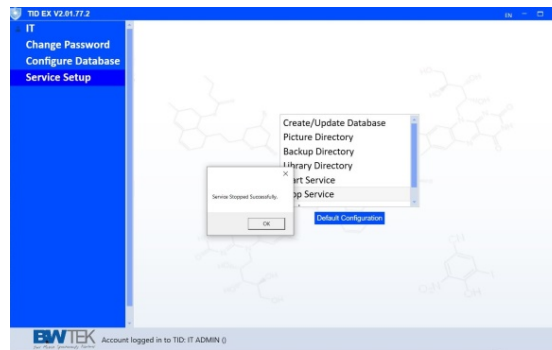
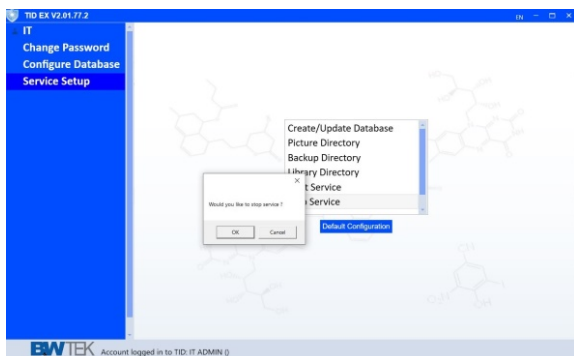
- “Service Setup”: there lists functions for database service setup and configuration:



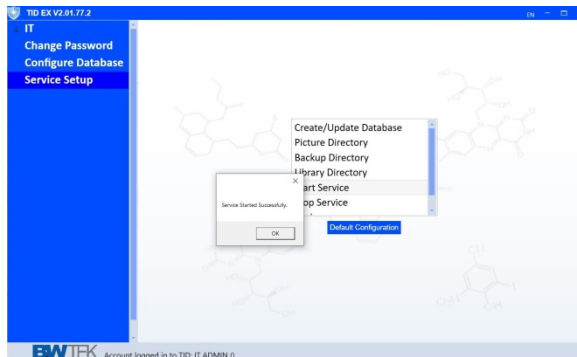
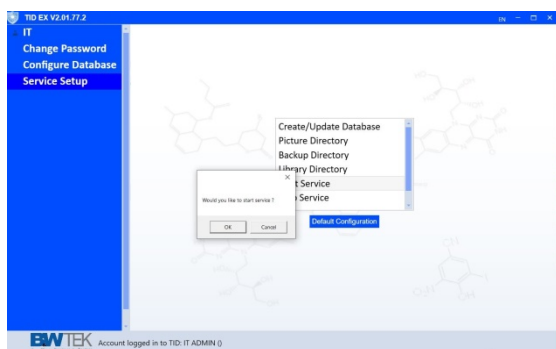
- “Create/Update Database”: Click this menu and wait until message shows up: “Database created successfully”. Click “OK” to finish.



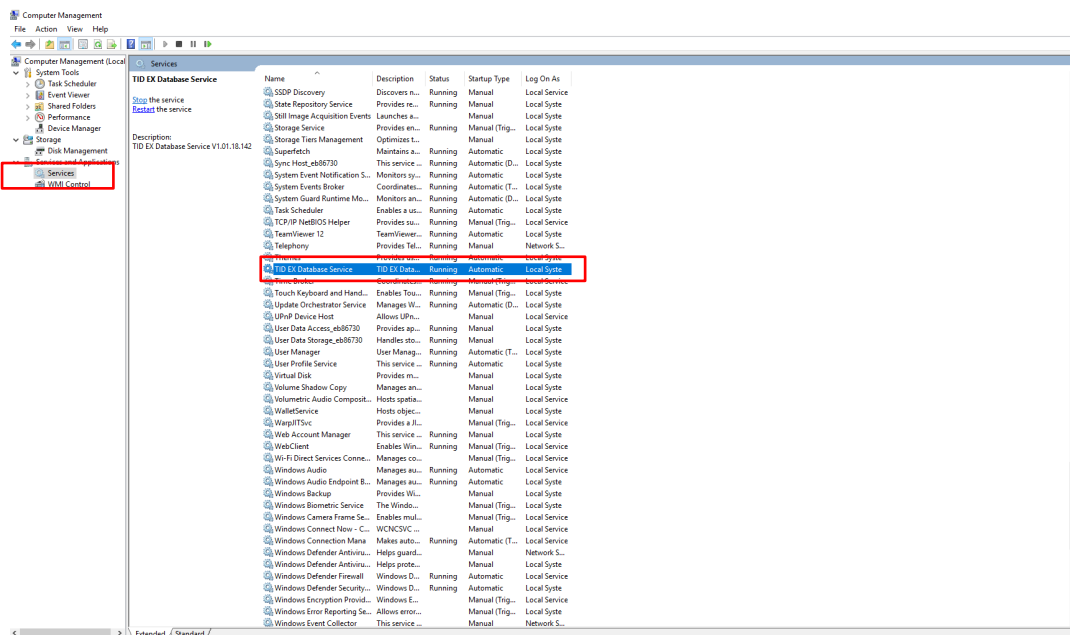
- Select “Stop Service”. A message “Would you like to stop service” appears. Click OK.



- Select “Start Service”. A message “Would you like to start service” appears. Click OK.



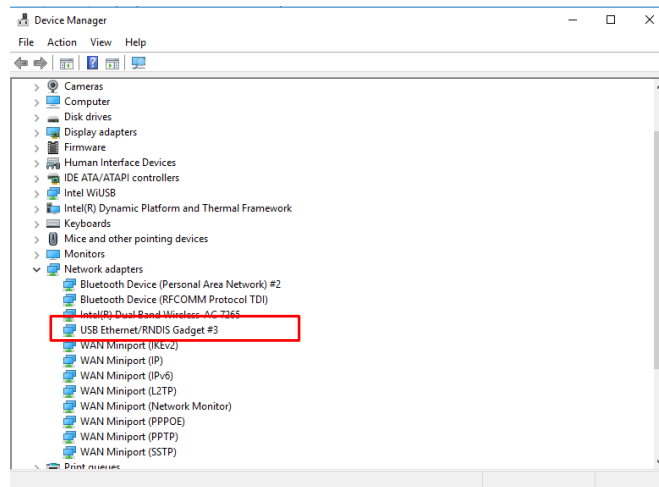
- Exit the TID EX IT Configuration window by clicking “X” on the top right.
- Optional: In Windows Search Bar, type in “Computer Management”. In the “Services and Applications” panel to the left, click on “Services or directly search “Services”. In the services list, find “TID EX Database Service” and confirm it is running.



8. Device USB Driver Installation (for USB connection only)

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

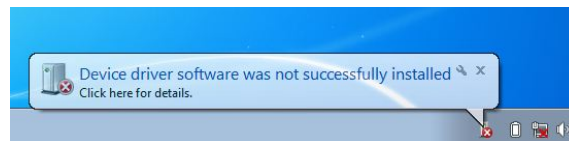
1. Power on the TacticID-1064 device;
2. Insert one end of the USB cable into the MicroUSB port of the TacticID-1064 device and insert the other end into a USB port on the PC;
3. A message “a device is plugged in and may need further configuration” may appear. Wait until the driver is installed automatically 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 Windows Search Bar and type “Device Manager”. The device driver is installed successfully when “USB Ethernet/RNDIS Gadget” is listed under Network Adaptors.



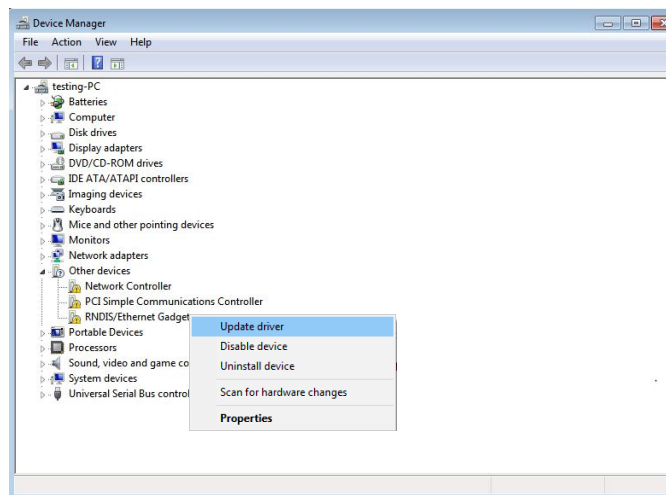
6. Manual driver installation:

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:

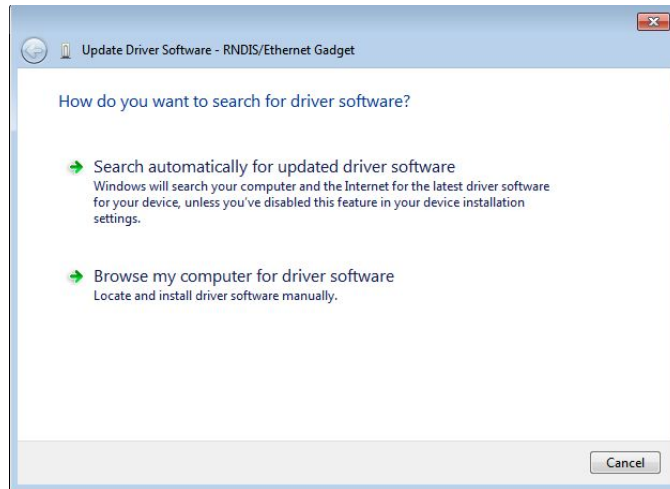
If the USB driver cannot be installed automatically, perform operation steps 1-3 listed above to make the physical connection of the TactiID-1064 to the PC.



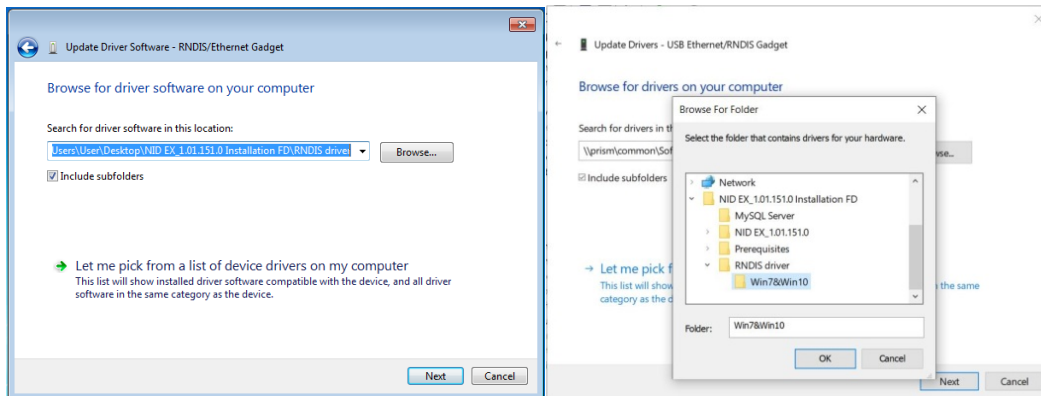
- a. In the Windows search bar, type “Device Manager” and find the malfunctioning USB device “RNDIS/Ethernet Gadget”. Right click this device and select **Update Driver**.



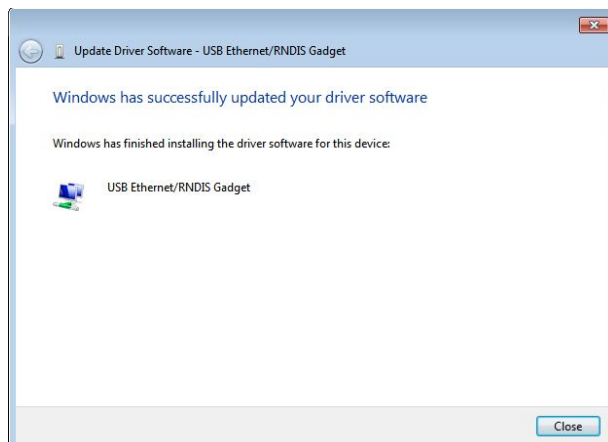
b. Select **Browse my computer for driver software**;



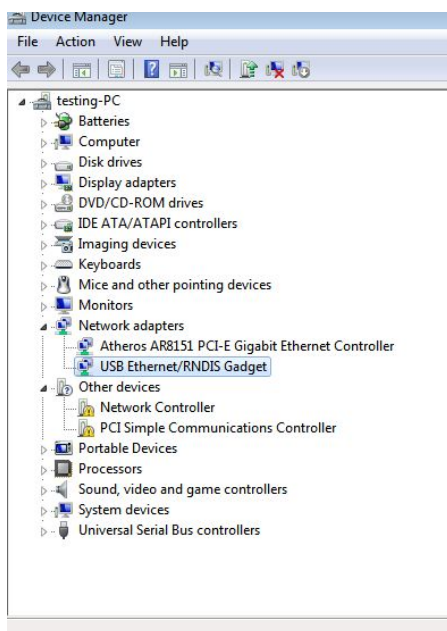
c. Click “Browse” and navigate to the folder of “RNDIS driver” in the TID EX installation folder:



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 your IT administrator. Use the procedures to check or set firewall configuration only when the connection cannot be established between TacticID®-1064 device and PC where TID EX is installed.

This procedure is to ensure proper communication can be established between the TacticID®-1064 device and TID 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 TacticID®-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:

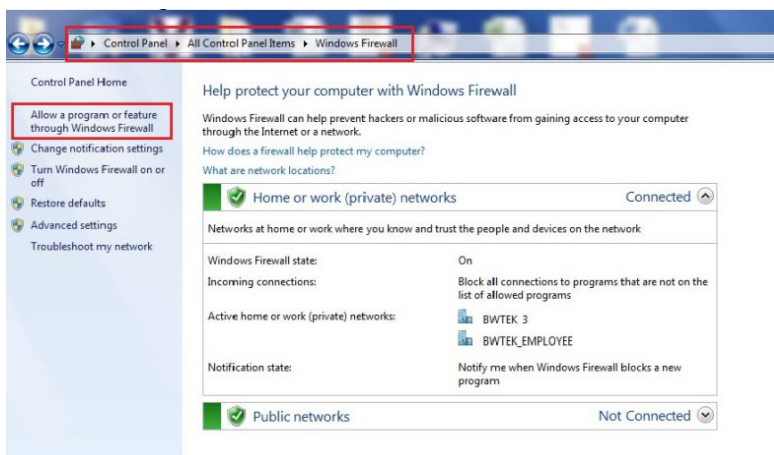
MySQL Server:

- TCP: 33060

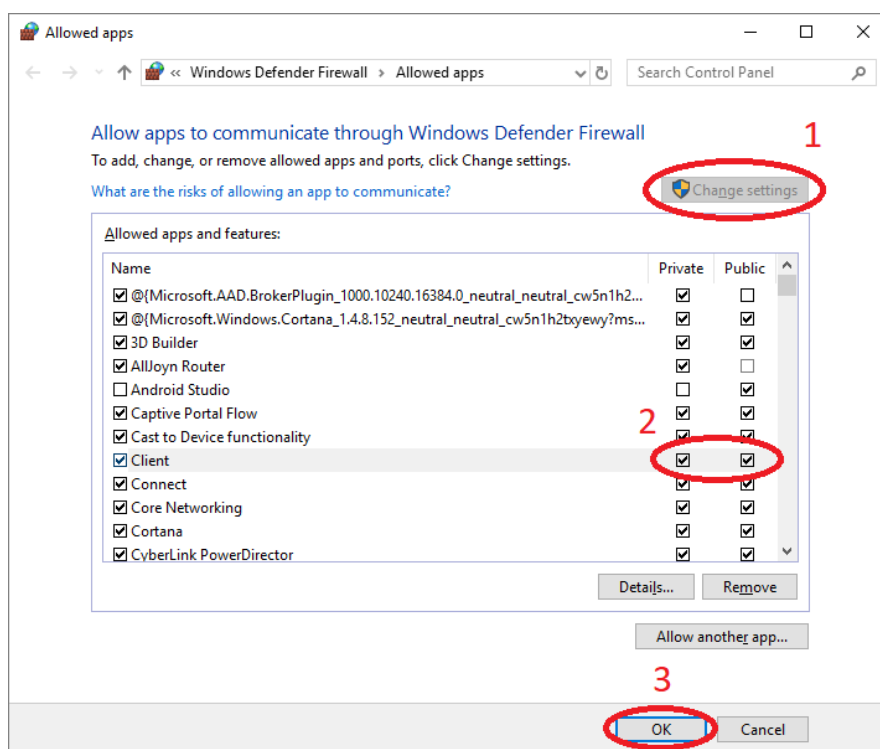
TID EX:

- TCP: 12301, 8733

- UDP: 12302, 12303
- Allow Programs in Windows Firewall
 1. Open Windows Firewall in Control Panel. Click on Allow a program or feature through Windows Firewall.

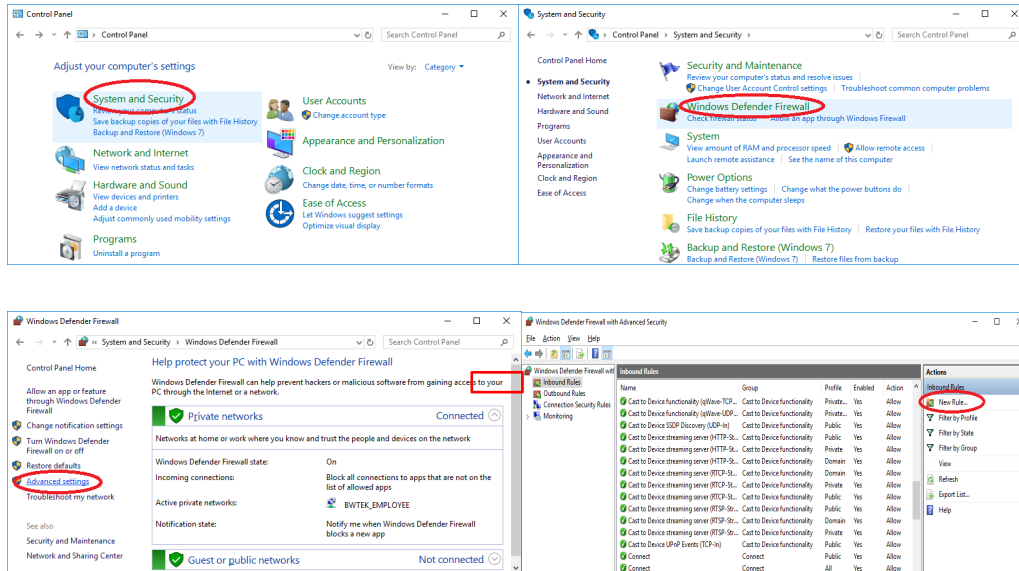


2. Click on Change settings, and then find **Client**. Enable both Home/Work (Private) and Public categories, and check the checkbox. Click OK to exit.

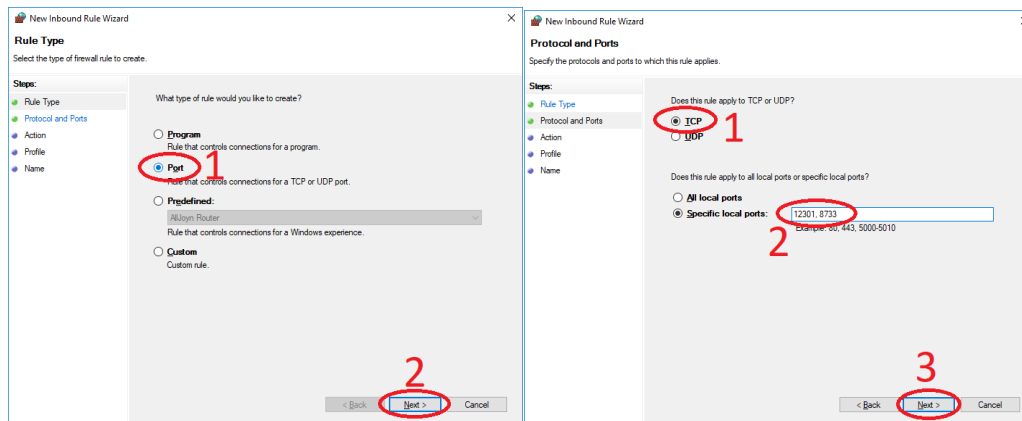


NOTE: In a scenario where “Client.exe” is not listed, the program will need to be added manually. Click **Allow another app**. Find the program in the following directory: “C:\Program Files (x86)\BWTEK\TID EX\TID EX.exe”. Click **Add** and follow step 2 above.

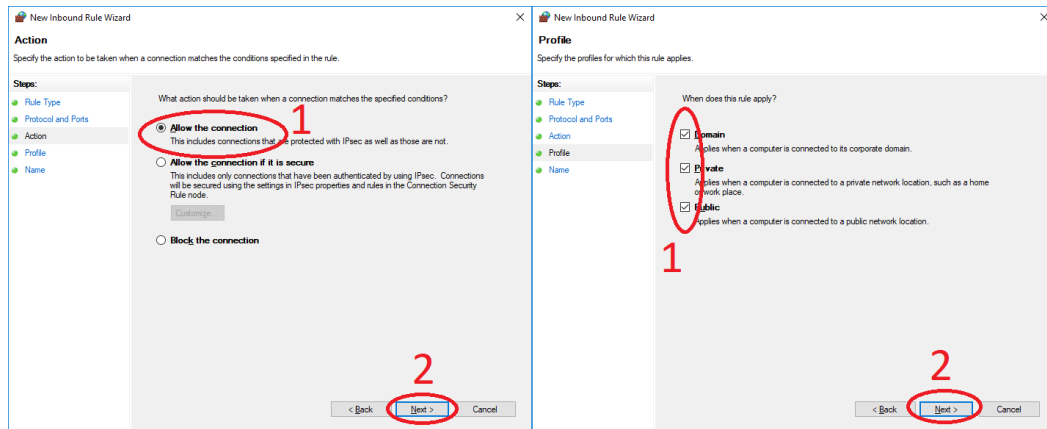
- Windows Firewall Rule Configuration
 - Navigate to “Control Panel” (Category View) -> “System and Security” -> “Windows Defender Firewall” -> “Advanced settings” -> “Inbound Rules” -> “New Rule”.



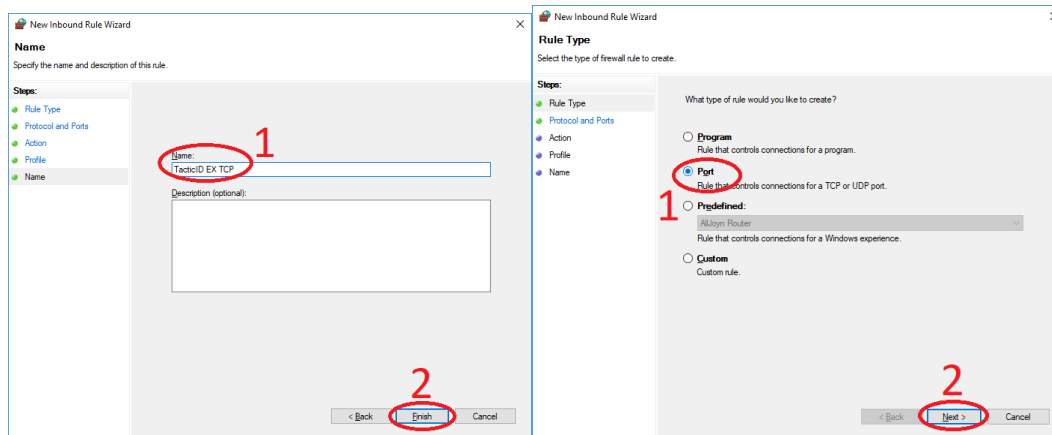
- “Rule Type”, select “Port” and click Next.
 “Protocol and Ports”: choose “TCP”. In “Specific local ports”, enter: “12301, 8733” and click Next.



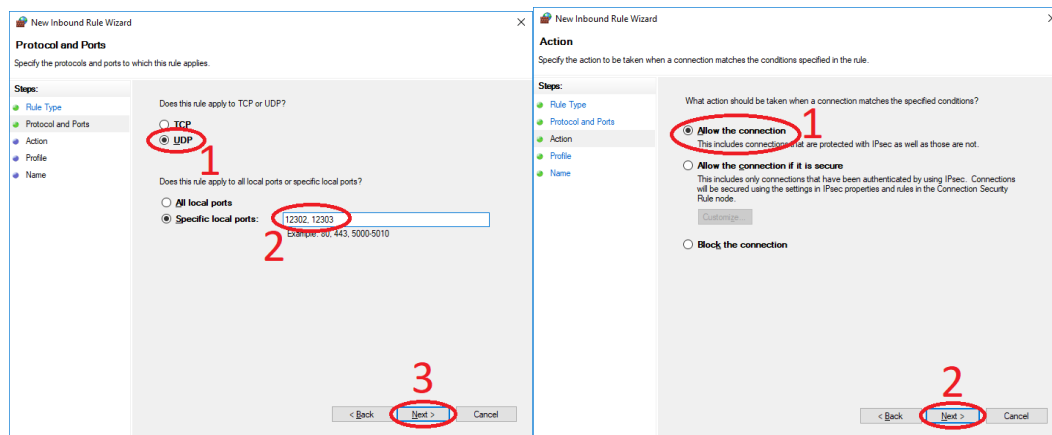
- “Action”: choose “Allow the connection” and click Next.
 “Profile”: check “Domain”, “Private”, “Public” and click Next.



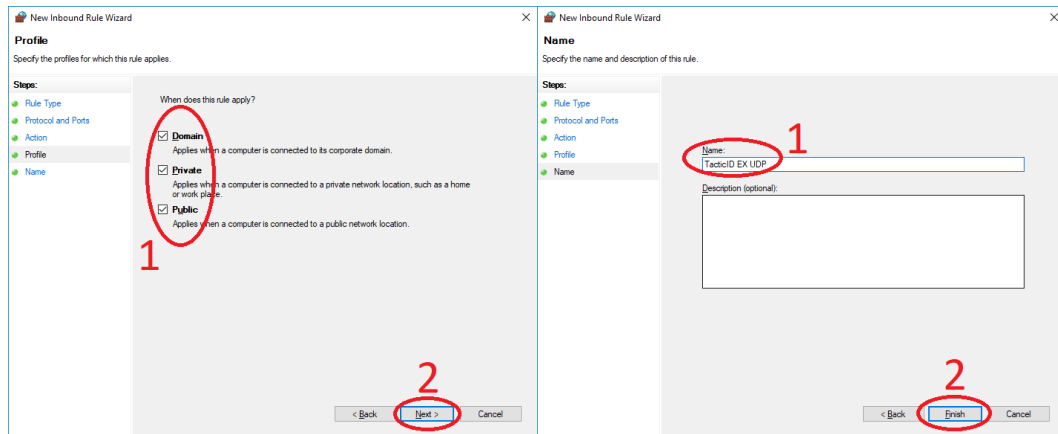
4. "Name": use name "TacticID® EX TCP" and click Finish. Then "Create" another "New Rule". "Rule Type: select "Port" and click Next.



5. "Protocol and Ports": choose "UDP". In "Specific local ports", enter: "12302, 12303". Click Next.



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



10. TID Login

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



- Username: IT ADMIN (including space)
 Default Password: 999999
 Offers functions of IT management. “Device SN” can be blank.
- Username: TID ADMIN (including space)
 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. “Device SN” can be blank.
- Account of “ADMIN” and all other device-created user accounts are accepted for user login to TID EX. These are not available until first synchronization with “TID ADMIN”

account is complete. User must select “Device SN” in addition to the appropriate login credentials.

11. IP address configuration

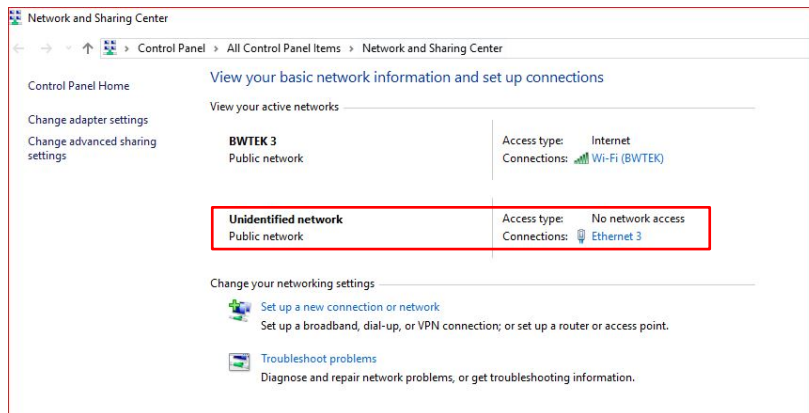
Make sure the device is powered on and connected via USB cable to the PC where TID EX is installed. Start TID EX and login using the “TID ADMIN” account for the first time, or another device account. After a successful login, the screen below should appear:



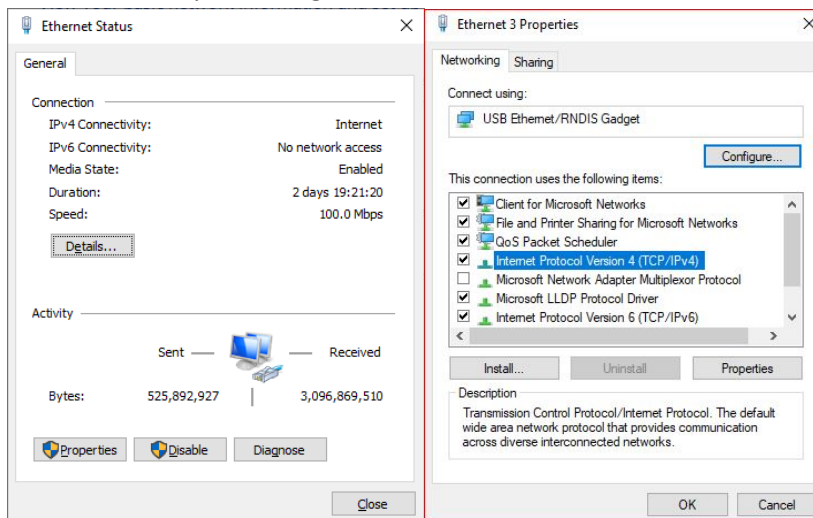
The “Check USB” button is activated when the device is detected. Click this button and the IP address of this connection will be configured automatically.

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:

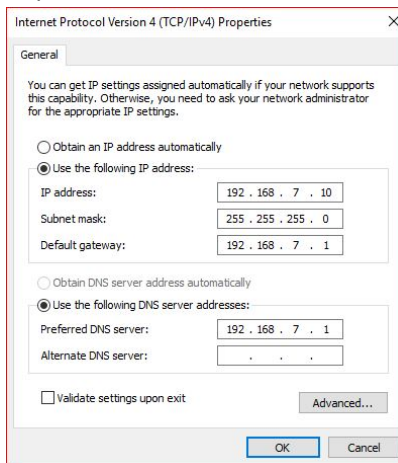
1. Go to the “Network and Sharing Center” in Windows 10 or equivalent program in Windows 7 or 8. Find the network connection which is associated with this device. Plug in the device while on this window to easily determine which connection to change. It should appear as an “Ethernet” connection:



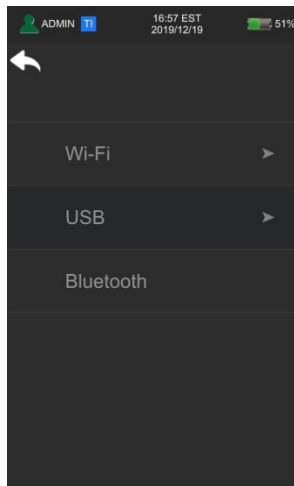
- Click the appropriate “Connections” link, for example “Ethernet 3” as shown above. Click “Properties” on the status window that appears. In the Properties window, select “Internet Protocol Version 4 (TCP/IPv4)” until highlighted and click “Properties” again:



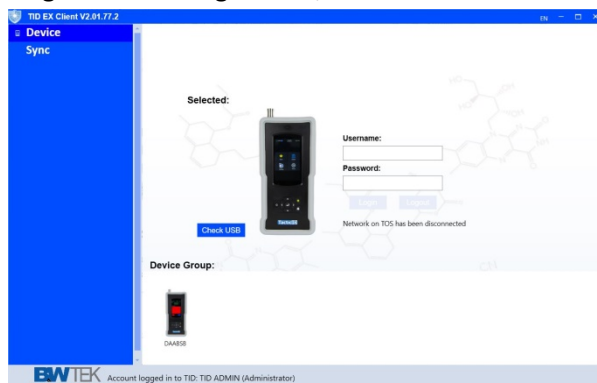
- “Internet Protocol Version 4 (TCP/IPv4) Properties”: select “Use the following IP address” and configure as below:
 - IP address: 192.168.7.10 (increment the 4th digit if unavailable. Ex. 192.168.7.11)
 - Subnet mask: 255.255.255.0
 - Default gateway: 102.168.7.1
 - Preferred DNS server: 102.168.7.1
 - Alternate DNS server: keep blank



4. On the TacticID®-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 TacticID-1064 icon with the device SN will appear under “Device Group” in the TID 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 is 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/

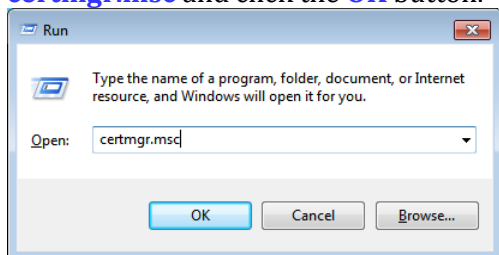
This issue occurs when this certificate MicRooCerAut2011_2011_03_22.cer is missing particularly when you operate in an environment that's disconnected from the Internet or that has a firewall that blocks content from <http://ctldl.windowsupdate.com>. This behavior is due to recent changes to Microsoft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

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

Here is the solution to manually import the missing certificate:

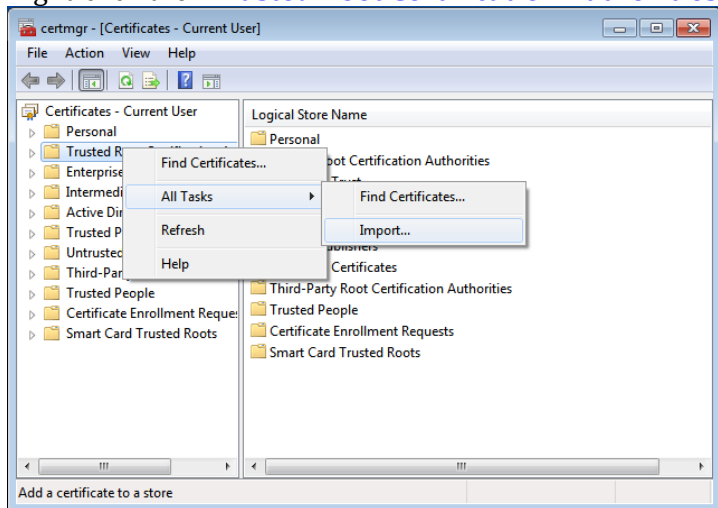
Step 1:

In 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.



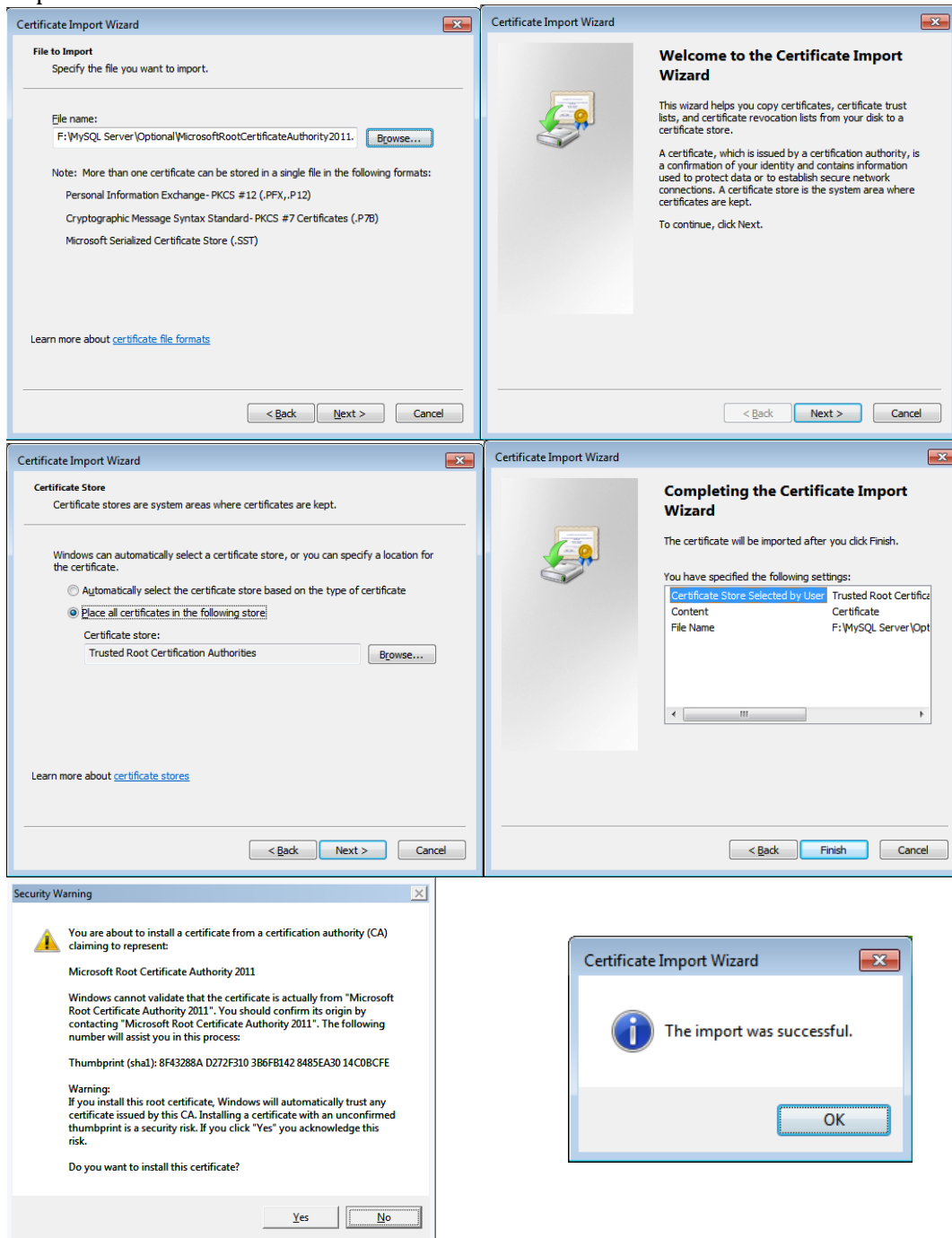
Step 2:

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 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 TID_EX_2.01.xx.x\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 TID_EX_2.01.xx.x \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 TID EX Database Service cannot start in Windows Services?

Solution:

Most of the time this is due to the port conflict between TID EX and other software preinstalled on the same computer. The list of ports used in TID 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 TacticID®-1064 device to PC and logging in to both TOS and TID, 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 TID 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.