

Tool Tracking System Device Service – Installation Guide

This guide outlines the installation of the Tool Tracking System –Device Service, which must be installed to use any Live or Wireless mode on your Android or IOS Device. After this setup is complete, Mobile Android and IOS devices that have downloaded the application will be ready to connect to your Tool Tracking System.

If you have already installed the Mobile Web Portal, skip to the Testing the Device Service section. Use the Web Portal host address as the base for all Device Service tests.

Requirements

- The Tool Tracking System (TTS) is installed and configured to use SQL Server as the database, and the SQL Server database is up and running.
- The Machine that will host the Device Service is on the same network as the handhelds that will be connecting to it.
- Host Operating System is Windows 10, Windows 11, or Windows Server. Hosting on a different operating system might be possible but has not been testing and is not covered in this guide.

Turn on IIS and required Features

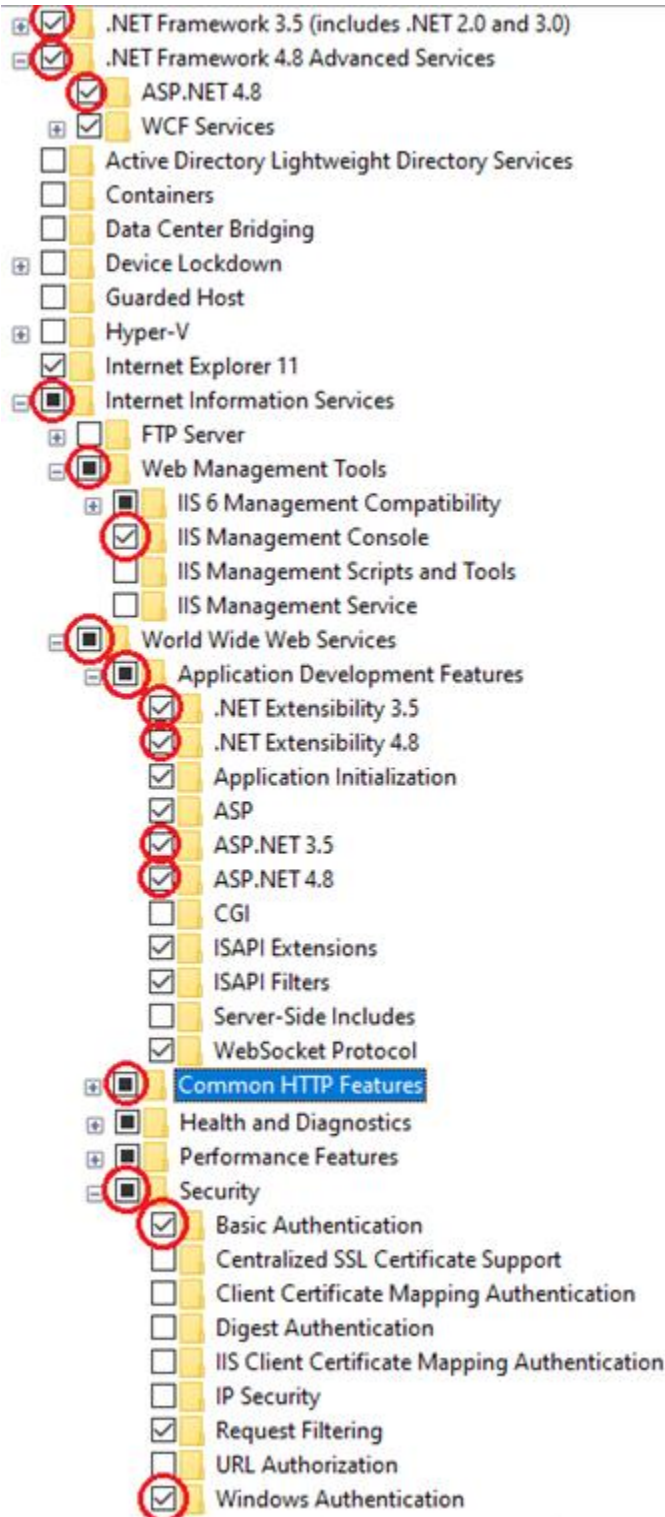
IIS features can be turned on with a PowerShell script included in the software package, or manually through the Turn Windows Features on or off application built into Windows.

Turn on Features using Script (Windows 10, 11, or Windows Server)

1. Open the IIS folder from the software package download link.
2. Run script as administrator. Run script 1a for Windows 10 or 11, or script 1b for Windows Server.
 - a. If you are unable to run the script as administrator by default, go to the start menu and type in PowerShell. Right click PowerShell and select 'Run as Administrator'.
 - b. Right click the 1a or 1b script and select Edit. Copy the text from the script into the elevated PowerShell prompt, then either press Enter or click the green Play button at the top to execute the script, depending on your version of PowerShell.
3. If the script stops and requires you to restart your PC, restart and then run the script again, as administrator.
4. Once the script has finished executing successfully, restart your PC and skip down to the Device Service Installation section.

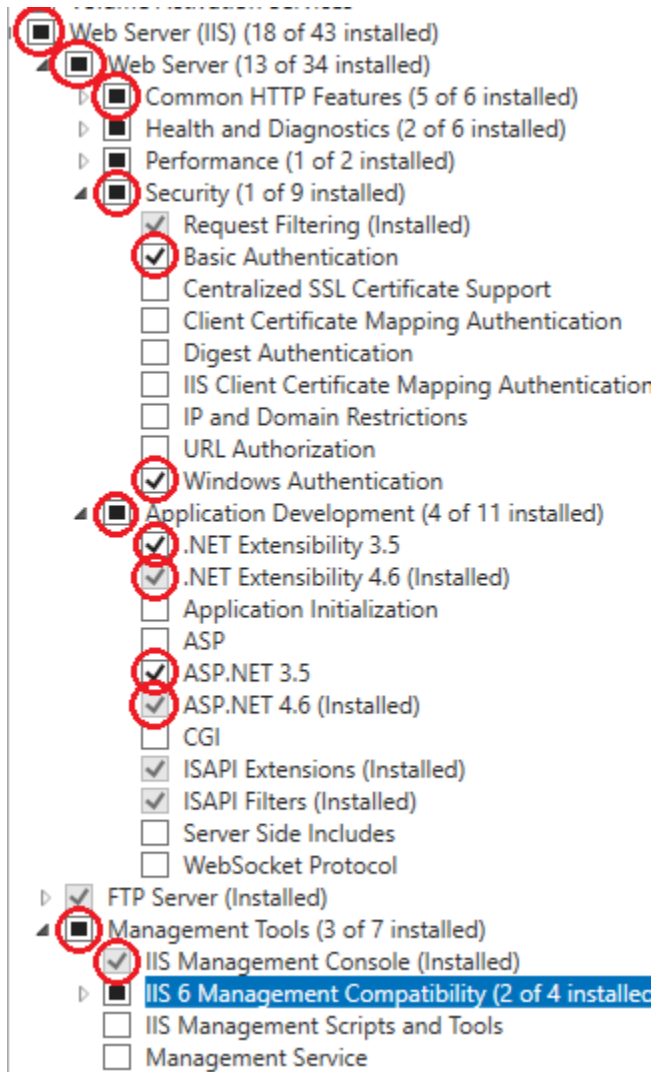
Turn on Features Manually (Windows 10 or 11)

- Click on the start menu in the lower left corner of your PC and navigate to the 'Turn Windows Features on or off' application built into windows.
- Turn on the following features, then skip down to the Device Service Installation section.

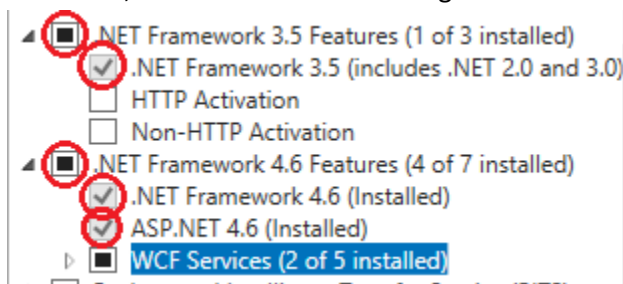


Turn on Features Manually – Windows Server

- Open the Server Manager and in the upper right, go to Manage -> Add Roles and Features
- Click Next through the Wizard until you reach Server Roles
- Turn on the following Roles:



- Click Next, then turn on the following features. Click Install when done.



Device Service Installation

Now that all of the required IIS features/roles are installed, we can create the Device Service within IIS. This can be done using the GigaTrak Device Service Installer program included in the download link, or manually through IIS.

Automated Installation

Open “2. GigaTrak Device Service Installer”, located in the Device Service folder of the download link, select Tool Tracking System, then enter all necessary information.

- **SQL Server Name and Database Name:** Included named instance, when applicable. If you go to the installation directory of the TTS application, there is a win_tts.ini file. The PRODSERVER line will go in the SQL Server Name line, and the DBNAME line will go in the Database Name box.
 - **Use Trusted Connections:** Leave this unchecked unless performing an advanced setup.
 - This will test the connection with the logged in user, but will use the Identity of the App Pool for connecting to the database. Be sure you add the IIS APPPOOL\DefaultAppPool (or applicable) user to the SQL database with ddl_datareader, ddl_datawriter, and ddl_admin permissions.
 - If trusted connections are not used, the default tts_user will be used to log into the database.
- **Parent Site Name:** Leave this as default (Default Web Site) unless performing an Advanced setup
- **Web Application Name:** leave this as default unless performing an advanced setup.
 - This is the root of the service – http://YourServer/**WebApplicationName**
 - For example, the default would be: http://YourServer/tts
- **Path to Images/Documents:** Point each of these fields to the root image and document directory for the Tool Tracking System.
 - Log into the Tool Tracking System as the Admin, then go to File -> Setup Options. If there is anything listed in the Root Image or Root Document folder, use the same on these fields.
 - If you do not have custom Image and Document folders, you are most likely using the default location. Right click the Tool Tracking System application on your desktop and select Open File Location. The default Image and Document folders are located here – enter the path to each folder into the respective box.

Once all fields have been filled out, click the Create Site button. This will create the Device Service site and generate both the test URL (/Device.aspx) and the Host address (/Mobile.aspx). The test URL can be used to test the connection, and the Host address can be entered into the PC or Mobile application once the test is successful.

Manual Installation

Once IIS and all features are installed, follow these instructions to manually host the Device Service through IIS, without running our automated application.

1. Create a new folder on the web server to contain the web application files. (For example, **C:\Data\Web\TTS**)
2. Copy the contents of the provided IIS -> Mobile Web Portal to the folder created in step 1.
3. Once copying is complete, edit the web.config file with Notepad.
 - a. Edit the line in the <connectionStrings> section with the values for your SQL Server database connection.
 - Enter your SQL Server name (with named instance, if applicable) into the Data Source variable. For example: Data Source=**YOURSERVER**. If you are using a named instance, add it with a backslash, such as Data Source=**YOURSERVER\INSTANCE**
 - Change the Initial Catalog to your database name.
For example: Catalog=**win_tts**.
 - b. Edit the lines in the <mailSettings> section with the values for your SMTP server. (This is currently used only for emailing application error reports back to GigaTrak Support.)
 - Change the from="sender@gigatrak.com" parameter to an email account on your server capable of sending email from the web server, such as from="**sender@yourcompany.com**".
 - Change the network parameters to the values for your SMTP server, such as host="**yourserver**". Some servers may require a username/password, SSL, etc.
 - c. Save and Close the file.
4. Open Internet Information Services (IIS). On the left, expand Sites, right-click Default Web Site, and click Add Application. (Other web sites may be used, or new one created, but is again beyond the scope of this document).
 - a. Enter an Alias. (For example, **tts**). This will become part of the URL that the employees will use to access the application (For example, **http://yourserver/tts**)
 - b. Select the Physical path to the folder that was created in step 1. (For example, **C:\Data\Web\TTS**)
 - c. Click OK.
5. On the left side of IIS under Default Web Site, right-click the new application (**tts**), and click Add Virtual Directory.
 - a. Enter the alias **tool_images**.
 - b. Select the Physical path to the folder that contains all of the tool images. This is the folder that the main Tool Tracking System PC application points to. By default, this is **C:\GigaTrak\Tool Tracking System\Images**. This may or may not be on the same physical server, or the same path.
 - c. Click OK.

- d. *Additional note:* The Mobile Web Portal application creates larger thumbnail images of the tool images as needed. Therefore, you must ensure that the application pool identity has read and write access to this folder.
 - You can add your application pool identity to the images folder by going to the security of the folder and searching for IIS APPPOOL\ApplicationPoolName.
 - For example: "IIS APPPOOL\DefaultAppPool" is a valid windows user that can be added to folder security if the default app pool is being used.
6. On the left side of IIS under Default Web Site, right-click the new application (**tts**), and click Add Virtual Directory again.
 - a. Enter the alias **tool_docs**.
 - b. Select the Physical path to the folder that contains all of the tool documents. This is the folder that the main Tool Tracking System PC application points to. By default, this is **C:\GigaTrak\Tool Tracking System\Docs**. This may or may not be on the same physical server, or the same path.
 - c. Click OK.
 - d. *Additional note:* The Device Application creates Documents in this folder from the application as needed. Therefore, you must ensure that the application pool identity has read and write access to this folder.
 - See step 5d for additional information on the Application Pool Identity in regards to permissions.

Testing the Device Service

1. On the host PC, open a web browser, and type in **http://localhost/tts/Device.aspx** in the address bar. This will test the connection and make sure everything is operational with the Device Service.
2. Once you can reach the Device Service Test successfully from the server, we need to test the connection from a handheld.
 - a. The handheld is not able to use 'localhost'. We instead need either the Host Name or IP Address of the host.
 - b. To get the Host Name or Ip Address, first open a command prompt by going to the start menu and typing in 'cmd'.
 - i. To get the host name, type hostname into the command prompt.
 - ii. To get the ip address, type ipconfig into the command prompt. The correct IP Address is usually the ipv4 address of your Local Area Connection.
3. On your handheld, enter either the host name or IP Address instead of localhost.
For Example: **http://HostName/tts/Device.aspx** OR **http://IpAddress/tts/Device.aspx**
If the Host Name does not work, try the Ip Address and vice versa.
4. To test the images, locate or place an image in the TTS Images folder, which was set in step 5b.
This defaults to C:\GigaTrak\Tool Tracking System\Images
5. Open a web browser and enter the Image Name and extension (ImageName.jpg) into the following address: **http://HostName/tts/tool_images/ImageName.jpg**



GigaTrak Device Service Test

Service Connection completed successfully.
Database Connection completed successfully.
Service Version: 1.14.2
Service Status: Ready For Use
PC Version: 1.42.4
Device service ready.

Mobile Device Setup

There are now two ways of setting up the device – manually within the TTS Mobile app, or with a generated barcode. Once the TTS Mobile application has been downloaded (Using the Google Play store on Android Devices or the Apple Store on Apple devices), follow the instructions below to finish setting up your device.

- Manual Setup
 - Within the TTS Mobile application, select On-Premise Solution.
 - When prompted for a Service Location, enter: <http://yourIPAddress/tts/Mobile.asmx>, substituting yourIPAddress with your Host Name or IP Address.
 - If you do not want to use your default Device Name, you can edit it here.
 - If you do not include your Device Pin (Found on the PC menu under File -> Device Administration), you will have to manually activate the device from Device Administration page.
- QR Code Setup
 - Log into the PC as the Admin and go to File -> Device Administration.
 - Click on QR Generator, and enter <http://yourIPAddress/tts/Mobile.asmx> as the Host Name, substituting yourIPAddress with your Host Name or IP Address. Click on Generate QR Code.
 - On your mobile device, go to the TTS Mobile application. From the first page, tap the QR code at the top to open your phone's camera, then scan the generated barcode to connect to the Device Service.

Troubleshooting

Error / Symptom	Handheld is not able to reach /Device.aspx site, but host PC can
Cause	SQL Server may need features turned on or may need to be let through the firewall Or Handheld is not connected to the same network as the host
Resolution	Refer to page 6 of the TTS Install document to Enable TCP/IP and Add Firewall Exceptions Or Connect the handheld to the same network as the host

Error / Symptom	HTTP Error 500.19 - Internal Server Error The requested page cannot be accessed because the related configuration data for the page is invalid.
Cause	The installation of Internet Information Services (IIS) may be incomplete.
Resolution	Make sure to install Internet Information Services / World Wide Web Services / Application Development Features / ASP.NET. This will automatically check several other options as well.

Error / Symptom	HTTP Error 500.21 - Internal Server Error Handler "PageHandlerFactory-Integrated" has a bad module "ManagedPipelineHandler" in its module list
Cause	The Microsoft .Net Framework version 4 may have been installed BEFORE Internet Information Services (IIS).
Resolution	Run the following command from an elevated Command Prompt (right-click, Run as administrator): <pre>%windir%\Microsoft.NET\Framework64\v4.0.30319\aspnet_regiis.exe -i</pre>