



# AVLS Server 2.0 Manual

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## ***Introduction***

This manual provides information related to the installation and use of the Track Star AVLS Server application, one of the components of the Track Star AVLS software system. Contained in this manual is a description of the operation of the application, information related to the computer requirements imposed by the application, steps required to successfully install and configure the application and user instructions and information.

## ***Operation***

The Track Star AVLS Server application serves as the central host application for the Track Star AVLS system. This application receives location information from vehicle devices, most frequently in UDP packet form, on a specified port number. Hosted on a computer that has a fixed IP address, the AVLS Server application is the destination for positional data generated by GPS based modems and other devices.

The AVLS Server is responsible for writing the data being received from the vehicle devices into the SQL database for storage purposes. The AVLS Server application relies upon TCP/IP connectivity with the SQL server for this purpose. The AVLS Server requires knowledge of the location of the SQL server, which can be co-resident with the AVLS Server application or located on another computer resource.

The AVLS Server also forwards location information to individual instances of the Track Star AVLS Client application. The transmission of this data is via TCP/IP protocols. Each instance of the Client provides the AVLS Server with a list of vehicles to which the logged on user has visibility rights. The AVLS Server forwards information received from vehicles to the Client(s) only when the user has rights to view information related to that vehicle.

The AVLS Server also controls the number of concurrent instances of the Client application based upon the licensure of the product. Connection attempts by instances of the Client which exceed the number of purchased concurrent licenses are denied by the AVLS Server.

The AVLS Server is a service application intended to operate in the Microsoft Windows XP and Microsoft Server 2003 operating systems. The AVLS Server is provided with an agent for the purposes of user interaction with the service. As a service, the AVLS Server can be configured to initialize and execute without user logon to the host computer and can also be configured to automatically execute when the host computer is booted up.

## ***Requirements***

The AVLS Server application imposes host computer requirements that are largely based upon overall system configuration. There are requirements that exist that are not affected by system configuration as well. These basic requirements are:

- Installation on a host computer that has been provisioned with a fixed IP address and with access to UDP packet data on a specific port (249 by default)
- TCP/IP connectivity with the SQL server, either through local host when the AVLS and SQL servers are co-resident on the same host, or externally when the two servers are located on discreet computers using port 1433 (default)
- Installation on a host computer equipped with Microsoft Windows XP Professional or Microsoft Server 2003 operating system. The host computer must meet all of the minimum requirements expressed for the operating system selected as well as be equipped with 1 gigabyte of RAM. If installing Microsoft SQL Server Express 2005 (supplied by Track Star) or Microsoft SQL Server co-resident with the AVLS Server, the host computer must meet the minimum requirements for the operating system and SQL Server installed. Co-resident installations require 2 gigabytes of RAM and 160 Gigabyte minimum hard drive size.
- TCP/IP connectivity with the AVLS Client software instances using fixed or dynamic IP addressing and access to port 250 (default).

While the AVLS Server has been tested in multi-processor environments, use of the multi-processor based host computer is not required. Configuring AVLS Server co-resident with SQL Server for fleets of more than 500 vehicles is not recommended. Note too that database size grows linearly with system age. For fleets of more than 500 vehicles, minimum hard drive capacity is 250 GB.

It is worth noting that the Track Star system performance is affected by a number of significant factors including

:

- Number of vehicles in fleet
- Number of Clients logged in
- Number of Vehicles visible to each Client
- Reporting frequency of devices

De-rating charts are available to provide guidelines as to the effects of these factors on overall system performance. These are helpful in determining optimum balance between reporting frequency, number of clients and number of vehicles visible to each user.

### ***Installation***

The installation process is quite straight forward. The AVLS Server application is provided on CD-ROM or in electronic form depending on the method of delivery chosen at the time of ordering. In either case, the installation is initiated by running the installer program.

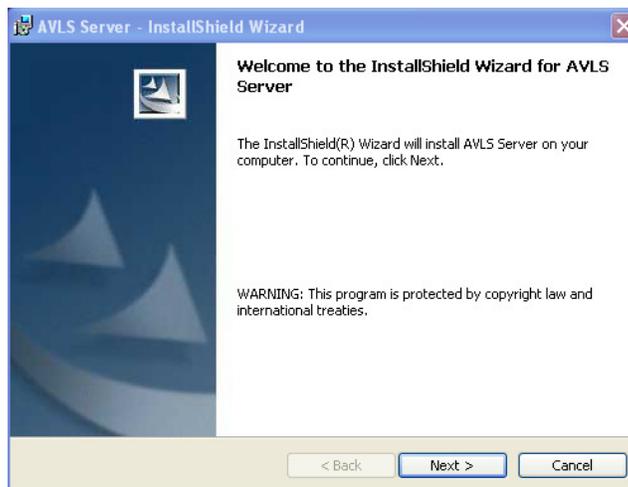
## CD ROM Installation

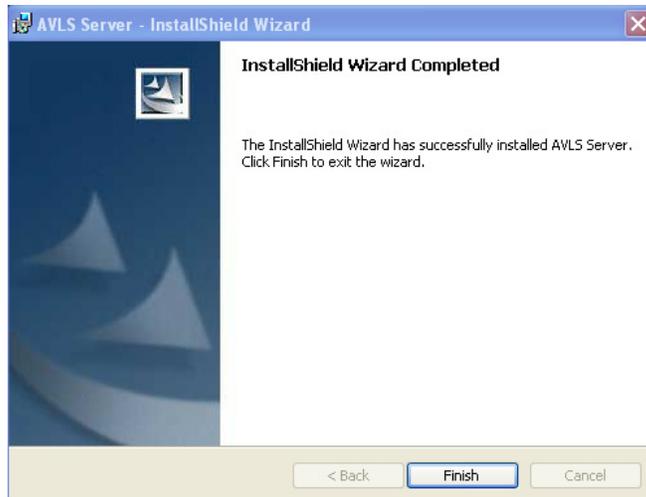
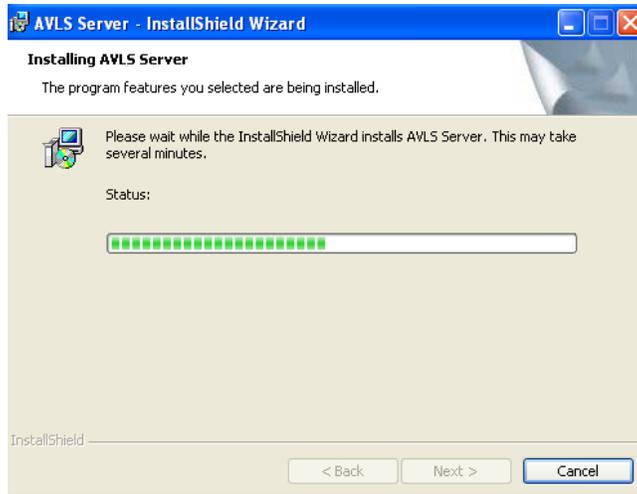
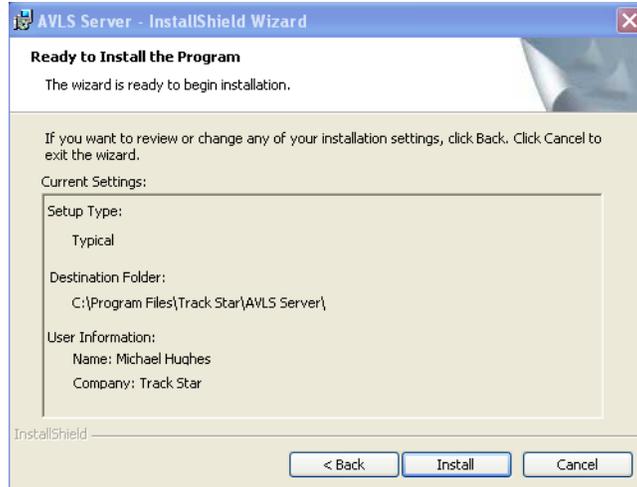
Place the CD ROM into the CD-ROM drive on the target computer and close the drawer. Open My Computer and select the CD-ROM drive. *This manual assumes that you have completed installation steps 1 and 2 (Install SQL Server and Create the Track Star Database Schema). To complete these steps follow the instructions provided in each folder.* Open the folder labeled “Step 3 - Install AVLS Server” and double click InstallAVLSServer.exe.

## Electronic Distribution (downloaded file)

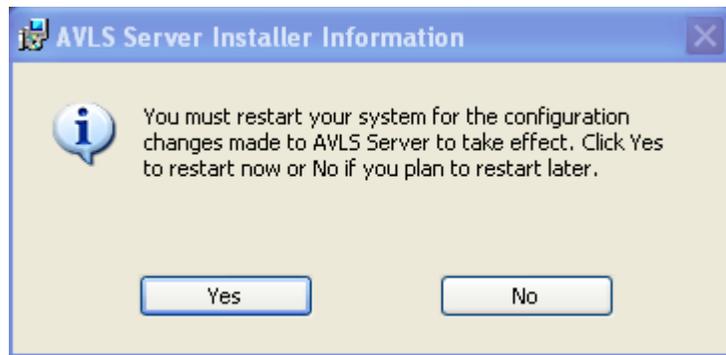
Follow the directions provided in the email announcing the file availability, saving the file to a known location on the target computer. When complete, open My Computer and select the location in which the file was saved. Double click the mouse on the file setup.exe to begin the installation process.

The installation process proceeds through a series of informational dialog boxes as follows.





At the conclusion of the installation process, the computer must be restarted. The following dialog box will be displayed and a series of scripts will execute. Click on YES when you are ready to restart the computer.



Once the computer restarts, it is possible to check to see if the service has been installed by opening Control Panel and accessing the Administrative Tools, Services. The Track Star AVLS Server service should be listed in the local services list.

### AVLS Server Licensing

After your computer has restarted you will need to copy the avlserver.license to the installation directory. The default is *C:\Program Files\Track Star\AVLS Server*. After copying the license file you will need to restart AVLS Server through the AVLS Server Agent. **If you have not received an AVLS Server license you can obtain one by e-mailing [support@trackstar.com](mailto:support@trackstar.com).**

Client \ Vehicle Licensing – The number of concurrent client connections and available vehicle licenses are each set by license keys provided by Track Star. Since the vehicle licenses are date sensitive, you must contact Track Star to request these license keys when you are ready to install the system. To add these license keys to the system you must start the AVLS Client, go to the Admin menu, Select System Tools and enter each license key in the appropriate section. This only needs to be completed once and can be done from any client connected to the system.

### Using the Server

The functions of the AVLS Server are accessed through an agent. The Agent is accessible through the Start button, All Programs sequence of mouse clicks. In the group called Track Star International, Inc. is an application called AVLS Server.

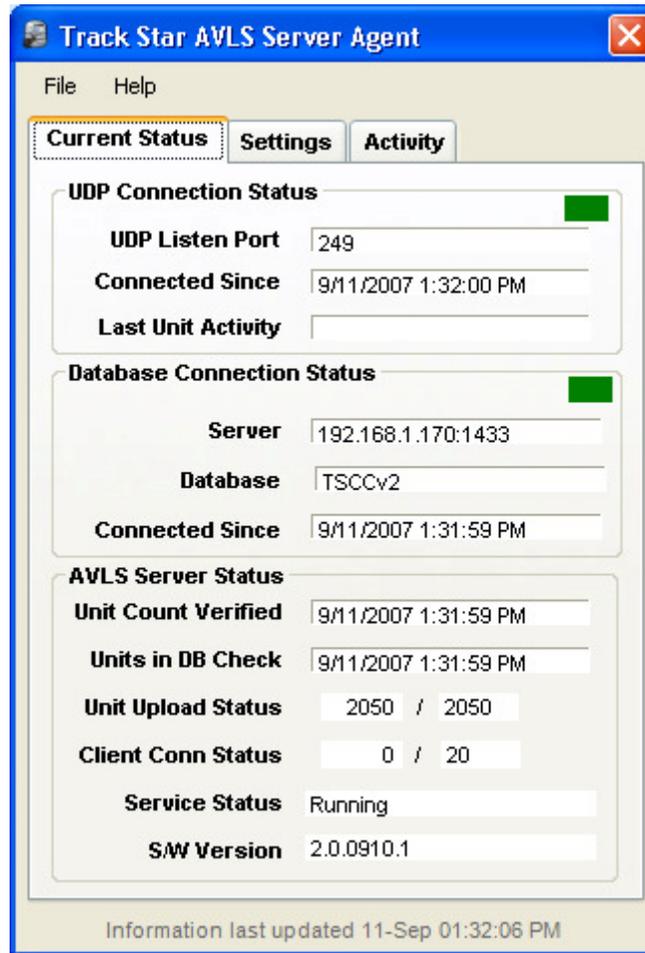
This icon can be moved to the Start Up group to automatically run when the computer is started up.

To start the Agent, double click on the AVLS Server application. In the task tray

the AVLS Server icon will appear and the agent dialog will appear.



## Current Status Tab



The first tab of the Server Agent screen shows the Current Status of the service. Displayed are: (colored boxes are red when not connected and green when connected)

**UDP Listen Port** - port number on which UDP location packets from vehicles are received

**Connected Since** - date and time indicating the time that the service was connected to the database

**Last Unit Activity** - indicating the date and time of receipt of the most recent positional data packet from a vehicle

**Unit Count Verified** - showing the date and time that the service gathered a vehicle count from the database

**Unit Upload Status** - shows the number of vehicles uploaded from the database compared to the total in the database

**Units in DB Check** - representing the date and time at which the last check for vehicles in the database was conducted

**Connection Status** – number of vehicles reporting data vs. number of vehicles in the database.

**Server** – the IP address of the SQL database server

**Database** – the name of the database to which the service is connected

**Connected Since** – the date and time at which the connection to the database was made

**Service Status** – stopped or running depending on the state of the service

**S/W Version** – the release version of the service

## Settings Tab

The settings tab allows the user access to the configuration of the service through the following data entry fields.

**UDP Listen Port** – enter the port number on which data packets from vehicle devices will be received

**Server** – enter the IP address of the SQL server hosting the database

**Port Number** – enter the port number used to access the SQL database

**Database** – enter the name of the database to be used

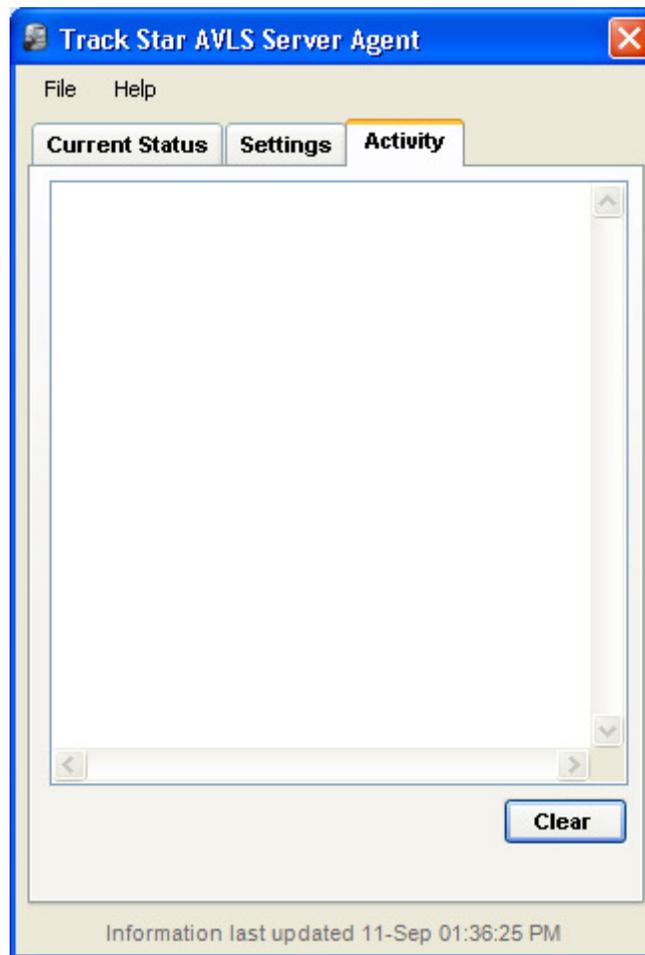
**Login** – enter the login name for the database to be used

**Password** – enter the password associated with the Login name above

The Track Star AVLS Server Service box show the present status of the service and allows the user to **Stop** or **Start** the service, depending on its present state by clicking on the desired button.

The **Apply and Restart** button allows the user to apply and changes made to the settings and restart the service, while the **Apply** button simply applies any changes made to the configuration of the service. The **ReSynch** button allows the user for force a resynchronization with the database.

### Activity Tab



The Activity Tab allows the user to view traffic to and from the service application.