StarMOBILE™ Network Configuration Guide

A guide to configuring your StarMOBILE™ system for networking

Introduction

This guide outlines the configuration process for enabling and connecting your StarMOBILE device to a network infrastructure. Given the complexity of configuring secure networks, it is recommended that your *Network Systems Coordinator* perform your StarMOBILE network configuration.

The StarMOBILE is designed to operate in a typical dealership networking environment. This document is not intended to make recommendations regarding network setup, as network infrastructure is under the independent control of each dealer. Please refer to the *STAR™ Dealership Infrastructure Guide* located at http://www.starstandards.org for network infrastructure recommendations and setup guidelines.

Before You Begin

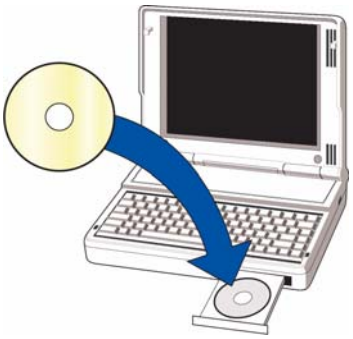
Before you begin, please ensure that the following has been completed:

1) Confirm you have the latest software

You can confirm that you have the latest version of software by visiting the DealerCONNECT website (http://dealerconnect.chrysler.com) and navigating to *Service > Repair > StarSCAN and StarSCAN Tools > Latest News*. This information is also available in the *Latest News* section at http://www.dcctools.com.

2) Install the StarMOBILE Desktop Client software

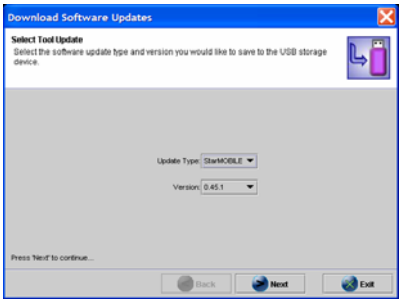
Using the latest StarSCAN & StarMOBILE Update CD, install the *StarMOBILE Desktop Client* software on a network connected PC.



3) Verify StarMOBILE device operating system software level

Note: This step is only necessary when initially setting up your StarMOBILE for wired networking out of the box.

If your StarMOBILE device software is below 0.29.7, use the StarSCAN & StarMOBILE Update CD to upgrade the StarMOBILE device.



Once initial networking is set up, your StarMOBILE Desktop Client will upgrade your StarMOBILE device software automatically when it connects to the StarMOBILE device.

4) Gather Network Information

You must understand your network and obtain the required information shown in the Network Information Worksheet (see following page) to configure your StarMOBILE for networking.

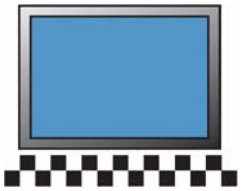
We recommend that you consult your *Network Systems Coordinator* when filling out the worksheet. Refer to Appendix B (Supported Network Configurations) and Appendix C (Filling out the Network Information Worksheet) if you require assistance in understanding your network or filling out the worksheet.

StarMOBILE Network Configuration Worksheet	
Connection Settings	
Connection Type	WIRED WIRELESS
If Wireless	
Wireless SSID	
Encryption Type	
Encryption Key	
Encryption Authentication Type	Open System Shared Key
IP Settings	
DHCP Present	yes no
If No DHCP	
Static IP Address*	
Subnet Mask	
Gateway Address	
Primary DNS	
Secondary DNS	
Proxy Settings (if you use proxy)	
Proxy Server IP address	
Proxy Server Port	
Proxy Username	
Proxy Password	
DealerCONNECT Settings	
DealerCONNECT™ UserID	
Dealer Code	
Password	
*** If DHCP is not present, you will need to contact your Network Systems Coordinator to obtain a unique IP address for your StarMOBILE.**	

5) Ensure Pass-Through Mode

You must be in *Pass-Through* mode in order to network to your StarMOBILE device. Pass-Through mode is indicated by a computer icon in the top left corner of the screen.

If the icon in the top left corner is a computer screen, you are in *Pass-Through* mode and can proceed to the *Restore Factory Defaults* section below.



If the icon is anything other than a computer screen (for example a tape icon as shown below), you need to change the operating mode of your StarMOBILE device. If the icon is a tape, you are in *Flight Recorder* mode. To exit out of *Flight Recorder* mode, do the following:

1. Press the *Unlock* button,
2. Then press the *Cancel* button within 10 seconds of each other.

6) Restore Factory Defaults

Warning! This step will clear any previously saved network configurations, but is recommended if you are experiencing problems configuring your StarMOBILE device for networking.

Tip: Record previously saved StarMOBILE settings before restoring factory defaults so you can reference them if needed in the future.

To avoid potential problems with previous attempts to setup your *StarMOBILE* device for networking, be sure to reset your device to the factory defaults by performing the following steps.

1. From the main menu on the StarMOBILE device, press the down arrow to *Settings* then press *Select*.
2. From the *Settings* screen, press the down arrow to *Restore Factory Defaults* then press *Select*.
3. Press the *Enter* button.
4. The StarMOBILE device will automatically reboot.

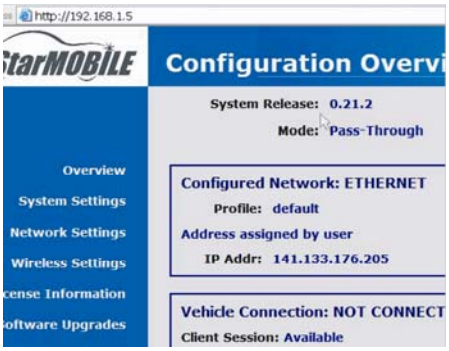
Wired Network Configuration

1) Connect to the StarMOBILE Configuration Web Page

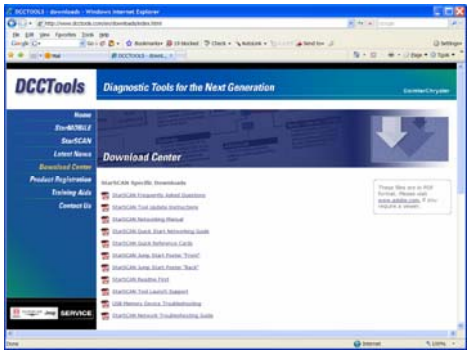
1. Connect StarMOBILE to an active network jack.

2. Go to the *System Status* screen on the StarMOBILE device to find its IP address.

3. On the PC, open a new internet browser such as *Internet Explorer* and type in the IP address of your StarMOBILE device.

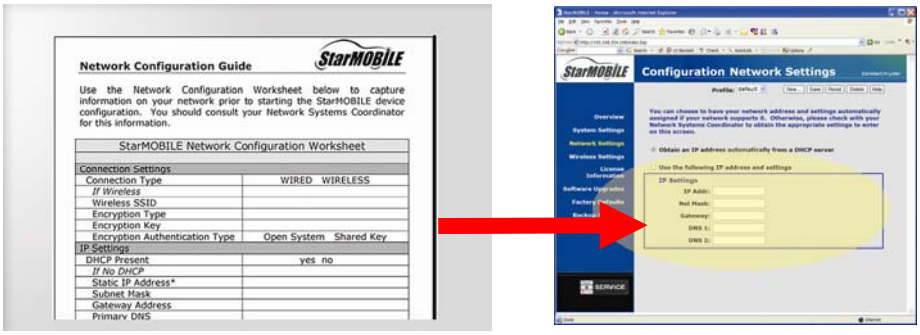


The StarMOBILE Configuration Web Page may not appear on some more complex networks. If the webpage does not appear, walk through the instructions in this guide again, or refer to the *StarMOBILE Network Troubleshooting Guide* located in the *Download Center* section at www.dcctools.com or on the DealerCONNECT website by navigating to *Service > Repair > StarSCAN and StarSCAN Tools*.



2) Transfer Network Settings

1. Select *Network Settings*, and then transfer the wired network settings captured on the *Network Configuration Worksheet* to the StarMOBILE Configuration Web Page.

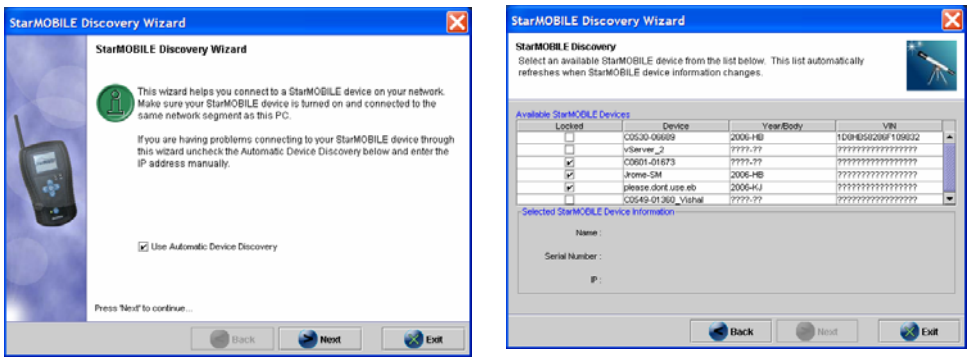


2. Once your network settings are transferred, reboot your StarMOBILE device by powering the device down and then powering it back up again.

3) Launch the StarMOBILE Desktop Client

1. On the PC, double click on the StarMOBILE Desktop Client icon to run the StarMOBILE Desktop Client application.

2. Follow the instructions presented in the StarMOBILE Discovery Wizard. If your network is set up properly, you should see your StarMOBILE device show up in the *Available StarMOBILE Devices* window.



If you do not see your StarMOBILE device show up in the *Available StarMOBILE Devices* window (as shown below), review *Appendix D: Network Discovery*.

Further assistance can also be obtained by referring to the StarMOBILE Network Troubleshooting Guide located in the *Download Center* section at www.dcctools.com or on the DealerCONNECT website by navigating to *Service > Repair > StarSCAN and StarSCAN Tools.*

3. Your StarMOBILE system should now be ready for use as a *Pass-Through* device.

Wireless Network Configuration

The instructions below assume you have successfully configured your StarMOBILE device for wired networking. If you have not done so already, perform the steps in the *Before You Begin* and *Wired Network Configuration* sections of this document before proceeding with your wireless configuration.

To configure your StarMOBILE for wireless networking, navigate to the *Wireless Settings* section of the StarMOBILE Configuration Menu and transfer the wireless

network settings captured on the *Network Configuration Worksheet* to the StarMOBILE Configuration Web Page.

Note: You must click on the *Save* button to save your changes to the tool. The saved changes will take effect when you reboot your StarMOBILE device.

Once you have saved your settings using the web browser, you can choose which profile you want by setting it on the StarMOBILE device. From the StarMOBILE device's *Main Menu*, navigate to *Settings*, then *Choose Network*. Choose the specific profile you want to use for the network connectivity.

You can verify your network configuration by viewing status information on the *System Status* screen, available by navigating to *System Status* screen from the StarMOBILE device's *Main Menu.*

Appendix A: Network Requirements

Wired Network Requirements

The StarMOBILE device will operate in a 10/100 Mbps Ethernet environment. The StarMOBILE device network interface card is set for 10 Mbps network speed. Hub or switch gear connecting the device to the rest of the network must have the ability to auto-sense the connection speed or communicate at 10 Mbps. Environments with switch gear that require 100 Mbps will need to be set to auto-sense the connection speed on the port the StarMOBILE is connected to. In most environments this is not an issue.

Wireless Network Requirements

The StarMOBILE device will participate in an 802.11b/g wireless network. Make sure the access point layout maintains adequate coverage area for optimal tool operation.

We recommend that you connect a wireless enabled PC to your wireless network first to ensure proper access point configuration, as troubleshooting access point and wireless infrastructure configuration problems is easier with a PC than it is with a StarMOBILE device.

We recommend the use of WPA encryption for securing the StarMOBILE system in the wireless environment. For further recommendations on wireless encryption and infrastructure setup, refer the STAR™ Dealership Infrastructure Guide.

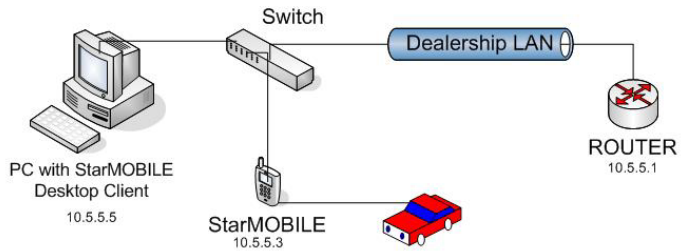
Appendix B: Supported Network Configurations

The supported wired network connection methods are:

- Wired with Static IP Addressing
- Wired with DHCP
- Wired with a Link-Local Network and a Cross-over Cable

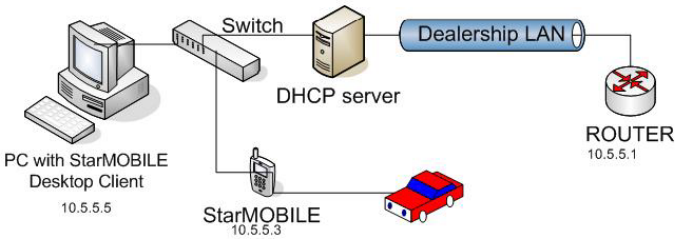
StarMOBILE Wired Configuration Options

Wired Network using Statically Assigned Addressing - STATIC



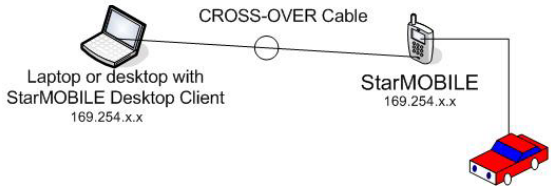
StarMOBILE can participate in a static addressed network where IP addresses are manually assigned to the devices on the network.

Wired Network using a Dynamically Assigned Addressing- DHCP



StarMOBILE can participate in a dynamically addressed network where IP addresses are assigned by a DHCP server to the devices on the network.

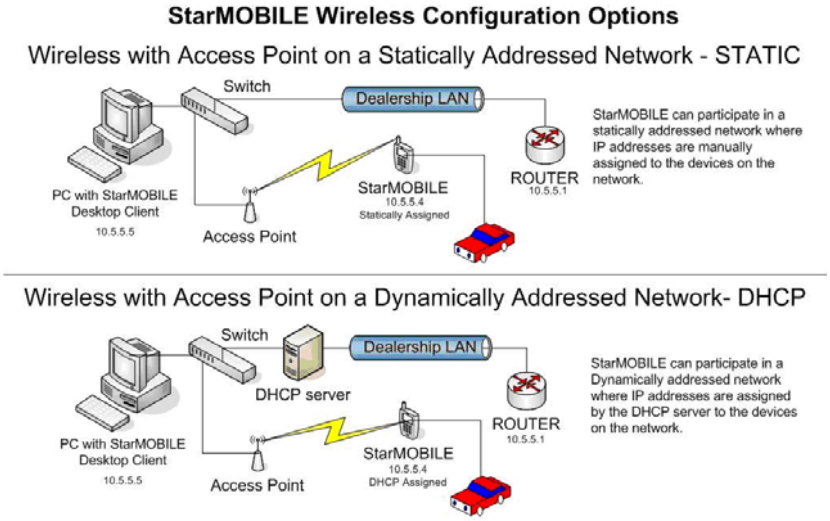
Wired Link-Local Network



StarMOBILE can communicate with another device in an Wired Link-Local Network
(no true network present)
This configuration uses a cross-over cable.

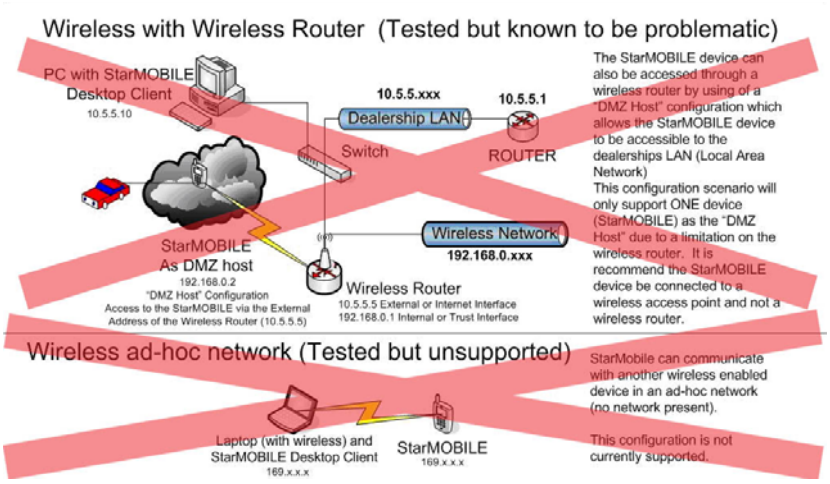
The supported wireless network connection methods are:

- Wireless with Static IP Addressing and an Access Point
- Wireless with DHCP and an Access Point



The following wireless connection methods are NOT supported:

- ~~Wireless with either Static or DCHP addressing behind a Wireless Router~~
- ~~Wireless Adhoc with a PC~~



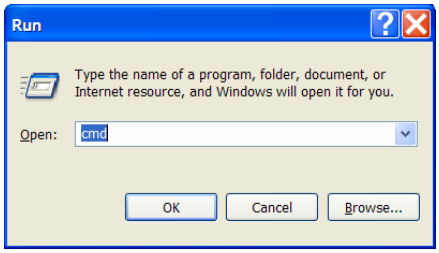
Appendix C: Filling out the Network Information Worksheet

To setup your StarMOBILE for networking, you will need detailed information about our dealership's computer network. The easiest way to get this information is to ask your dealership's *Network Systems Coordinator* to fill out the *Network Information Worksheet* found in the *Before You Begin* section of this guide.

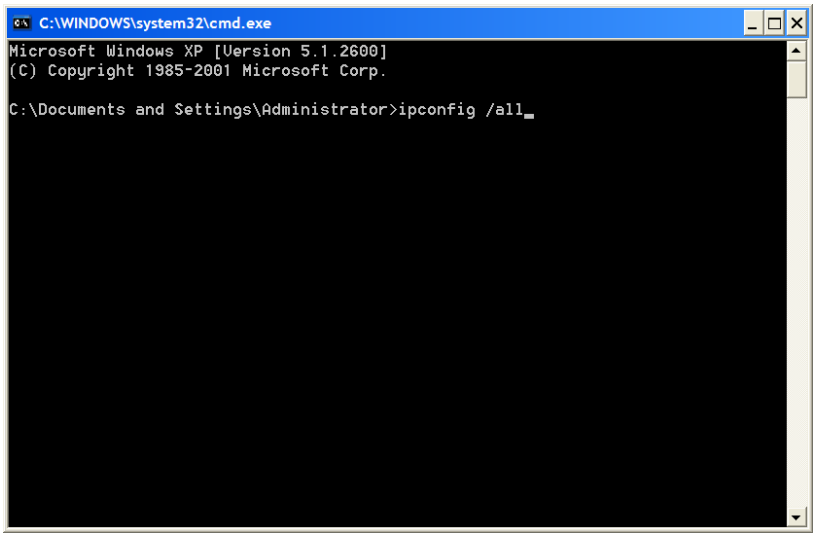
If your dealership's Network Systems Coordinator filled out the Network Information Worksheet for you, you can skip the steps in this appendix. Otherwise, you will need to look at a TechCONNECT PC to determine the correct settings for your dealership's network. Depending on how your network is set up, you still might need to ask your *Network Systems Coordinator* for additional information.

1) Determine IP settings

   a) On the TechCONNECT PC, click the *Start* menu and then choose *Run*. Type *cmd* into the field and press *OK*.

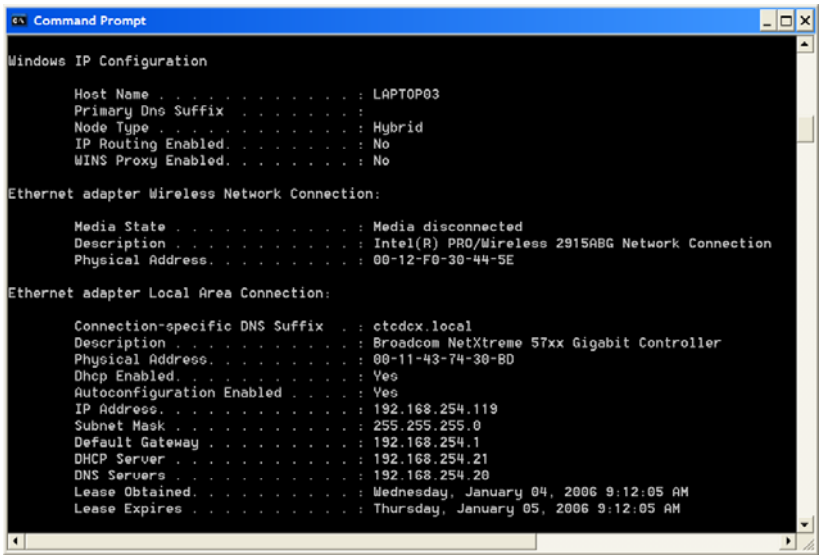


   b) Type **ipconfig /all** into the window that appears and press Enter.



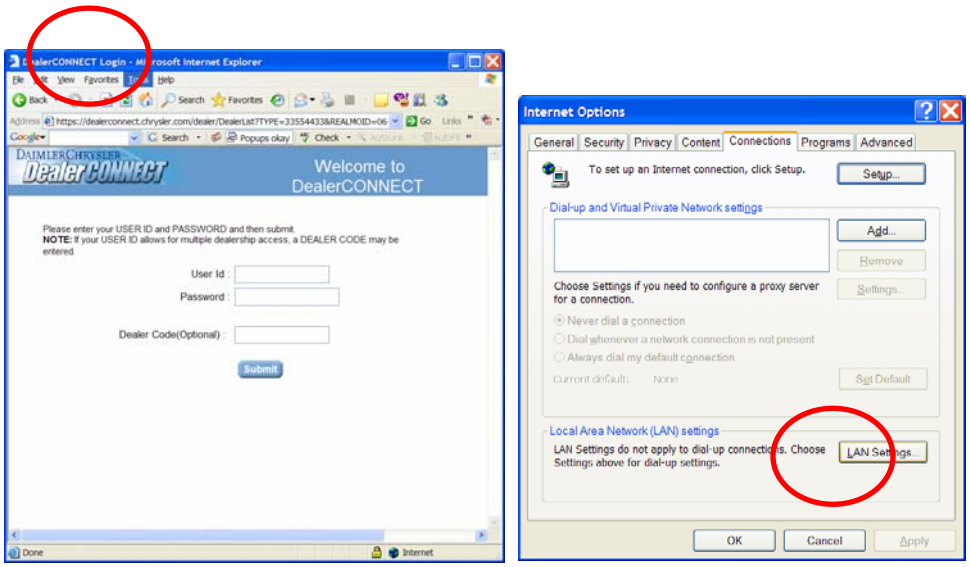
   c) If it says *Yes* next to *DHCP Enabled*, then your network uses DHCP to assign IP addresses. Fill out the worksheet indicating your network uses DHCP and

skip to step 2. Otherwise, your network uses manually assigned IP addresses. Copy the Subnet Mask, Default Gateway, and any DNS information to the worksheet, but not the IP address. Close the command window and call your *Network Systems Coordinator* for an available IP address and note it on your worksheet.

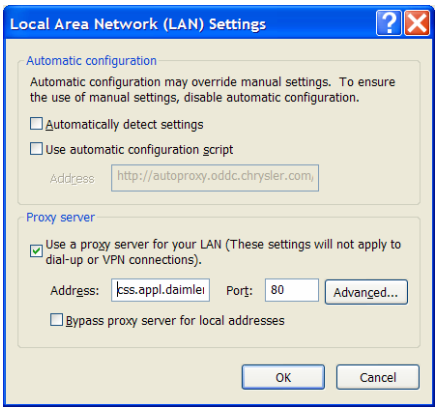


2) Determine Proxy Settings

a) Open an *Internet Explorer* window and from the *Tools* menu, select *Internet Options*, the *Connections* tab, and then the *LAN Settings* button.



b) If the *Use a proxy server for your LAN* is checked, transfer the *Address* and *Port* information to your worksheet. You will need to consult your Network Systems Coordinator if you do not know your proxy *User Name* and *Password*.



Appendix D: Network Discovery

The StarMOBILE system uses a unique protocol to discover the StarMOBILE devices on the local Ethernet segment. Ethernet networks are divided into segments. Segments can be defined as two or more machines sharing the same base and broadcast address. For example, a machine having an IP address of 192.168.100.5 with a subnet mask of 255.255.255.0 would have an Ethernet base address of 192.168.100.0 and a broadcast address of 192.168.100.255. Any machine in the range between the base and broadcast address could see broadcast/multicast traffic from all other machines on that segment.

Typically, a Microsoft Windows machine, upon boot-up will broadcast to all the machines in its local broadcast domain (range from the base address to the broadcast address) a “hello” message. All the machines sharing the broadcast domain would see that “hello” traffic and know that the specific Windows machine has booted. The StarMOBILE communication system uses a process similar where the StarMOBILE desktop application, upon initialization, broadcasts an mDNS query asking for all mDNS responders to answer with their IP address. The StarMOBILE tool has an mDNS responder built-in and responds to the query with its IP address.

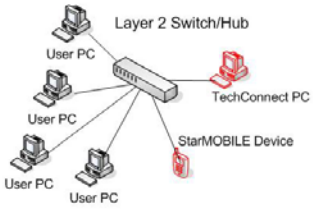
mDNS is a common discovery protocol and is in use with many applications today. In order for mDNS discovery to work, machines must be on the same network segment (broadcast domain). In this way, when an mDNS query is broadcast from a machine, all of the machines in the broadcast domain will see the query and if a device has a built-in mDNS responder, will respond.

The StarMOBILE discovery protocol is a method of easily connecting the StarMOBILE Desktop Client application with the StarMOBILE device. In more complex network environments with routers and firewalls that may separate the desktop application and the device, the discovery protocol cannot be used. This does not in anyway prevent communication or normal operation of the system. The discovery mechanism is a feature for convenience and can be superseded by direct connectivity via IP address to a device on a non-local network segment.

Below are examples of possible network configurations where the StarMOBILE Discovery Protocol will and will not function. Please use these examples and consult your Network Systems Coordinator for specific information regarding your environment.

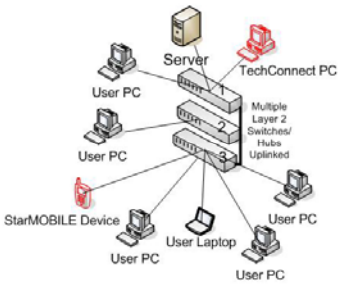
StarMOBILE Wired Configuration Scenarios

Network Sharing a Broadcast Domain
StarMOBILE Discovery Functions Properly



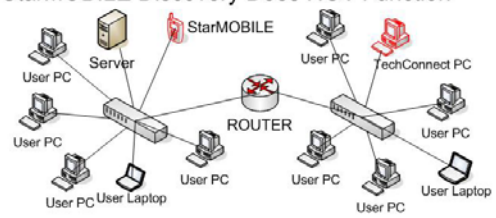
This network setup shows a number of PC's connected to a switch or a hub. The TechConnent PC as well as the StarMOBILE are connected to the same switch. All devices on the same Layer 2 network gear share the same broadcast domain. When the PC running the StarMOBILE Desktop Client broadcasts the mDNS request, all devices on the broadcast domain (in this case the same network gear) are able to see the request.

Large Network Sharing a Broadcast Domain
StarMOBILE Discovery Functions Properly



This network setup shows multiple Layer 2 Switches or Network Hubs uplinked together. Each switch/hub will share its broadcast domain with the other switches/hubs via the uplink cable connect the devices. The TechConnect PC and StarMOBILE are connected to the gear although on different switches. Multicast/Broadcast traffic sent from a device connected to switch #1 will be seen by devices connected to switches #2 and #3. When the PC running the StarMOBILE Desktop Client broadcasts the mDNS request, all devices on the broadcast domain (in this case the same network gear) are able to see the request.

Large Network with Distinct Broadcast Domains
StarMOBILE Discovery Does NOT Function



This network setup shows the TechConnect PC and the StarMOBILE on different segments (or subnets). The segments are seperated by a router. Broadcast/multicast traffic DOES NOT pass beyond a router. The TechConnect PC and the StarMOBILE do not share the same broadcast domain. mDNS requests will stop at the router connecting the two segments.