

Supervisor 10 Remote Access User Guide

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Remote Access describes a procedure by which a user running Supervisor 10 (Svr10) can connect to, and monitor, AnaCom devices which are otherwise inaccessible because they are on a private network that is separate from the network that the user is running on.

Background

When Svr10 is used to access AnaCom devices, it is typically running on a local, private network which is behind a firewall. This local, private network will usually have a non-routable network address, which means that it cannot be accessed from the Internet even if the firewall was not present. For both of these reasons (the firewall and the non-routable network address), there is no trivial method to allow a user to monitor these devices from another network, nor from an arbitrary location on the Internet.

To solve this problem, AnaCom has created a mechanism within it's Supervisor 10 application, that allows a user using a copy of Svr10 running anywhere in the world, to connect to another copy of Svr10 which is running on a private network, and monitor the devices that the latter is connected to.

This connection process is called *Remote Access*, and this document will describe how to set up the necessary machines to use it.

Overview

The *Remote Access* system involves **three** copies of Svr10, running on computers on different networks. These three copies are referred to as the **Host**, **Server**, and **Monitor** instances, which will be described presently. Figure 1 will illustrate the connections between these instances.

- **Host instance** – This is the copy of Svr10 which is running on a private network, and is directly connected to the AnaCom devices. It will connect to the Server instance, and transfer to the Server a list the devices that it controls.

There may be one or more Hosts connected to a single Server at any time.

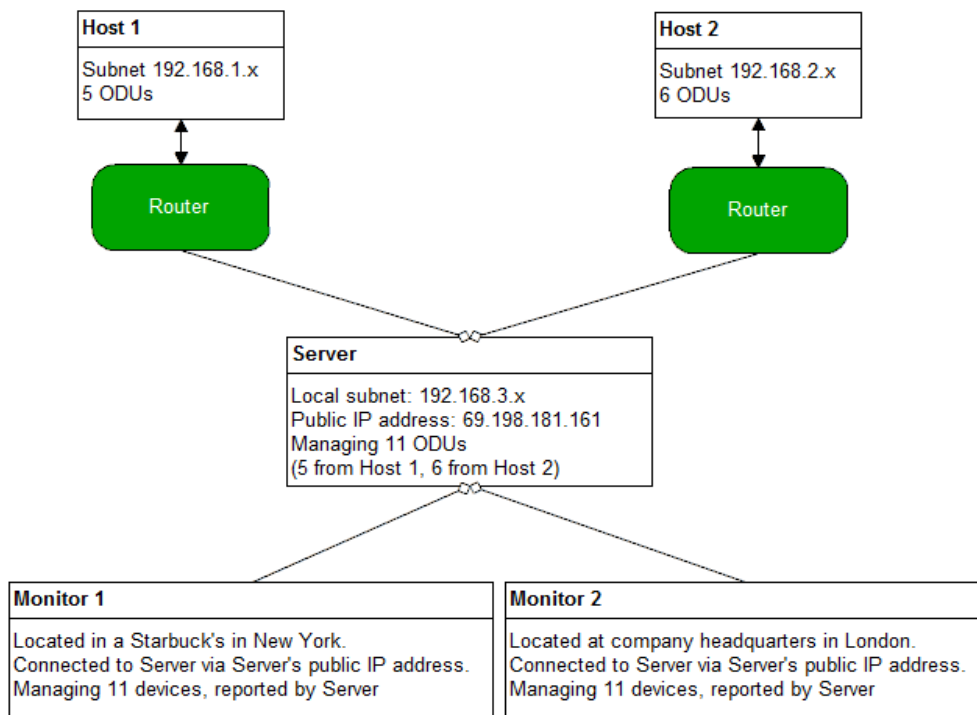
- **Server instance** – The Remote Access Server must be located on a publicly-accessible IP address, so that it can be accessed from elsewhere on the Internet. The Server handles communications between all of the Host and Monitor instances of a Remote Access network.

There is exactly one Server in a given Remote Access network.

- Monitor instance** – A Remote Access Monitor connects to a Server, and then displays a list of all devices that the Server is managing. This will include all devices that have been reported to the Server by any Hosts which have connected to it. The Monitor will display the same data as the Host instances display, and will have almost all of the management capability that the Hosts have.

There may be one or more Hosts connected to a single Server at any time.

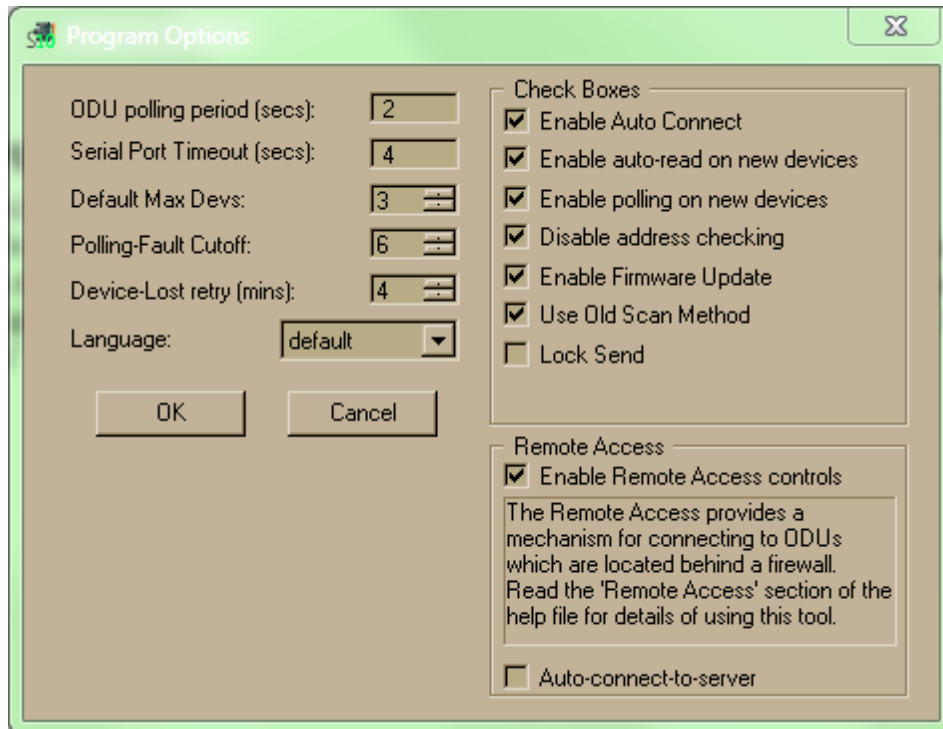
Remote Access network example



Getting Started with Remote Access

1. Enabling the Remote Access controls

When Svr10 is first installed, the controls for Remote Access are disabled. To enable these controls, click on the **Options** menu item on the main window, and notice the **Remote Access** block in the lower-right corner, shown in the image below. Click the box labeled “Enable Remote Access controls”, then click the **OK** button. For now, leave “Auto-connect-to-server” box unchecked.

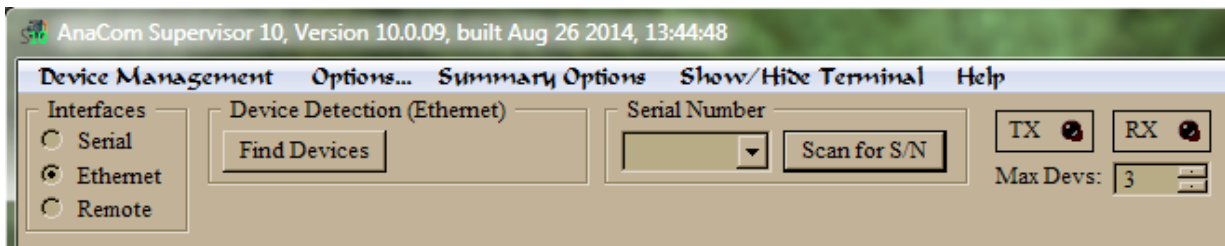


2. Set up the Server

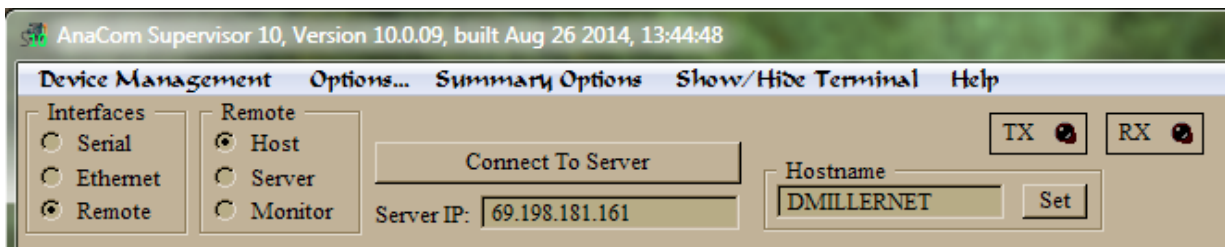
We recommend that the Server machine be set up before any Hosts or Monitors. One reason for this is that the Server must be running before a Host or Monitor can be set up for Remote Access. Also, the Server is the easiest machine to set up!

The Server needs to be located on a publicly-accessible network, with a public IP address. This is required so that Host(s) and Monitor(s) can connect to the Server.

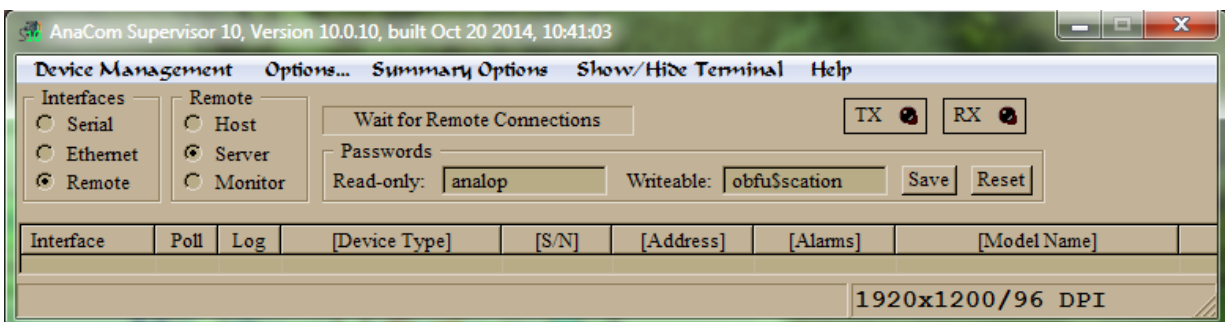
When Svr10 is first started it will display a main window displayed, and either Ethernet or Serial interface selected; the controls portion of the window will look like this:



To place the program in Remote Access Server mode, select the **Remote** item in the **Interfaces** block on the left side – you will then see this:



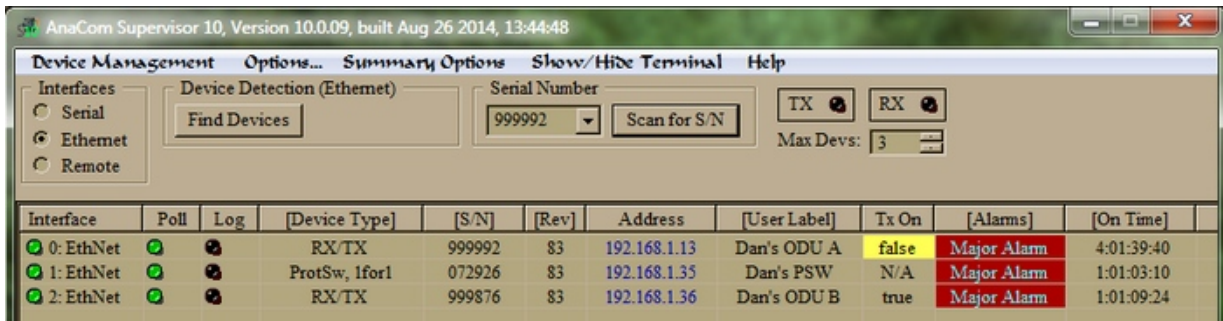
Next, select the **Server** item on the **Remote** block, which will display this:



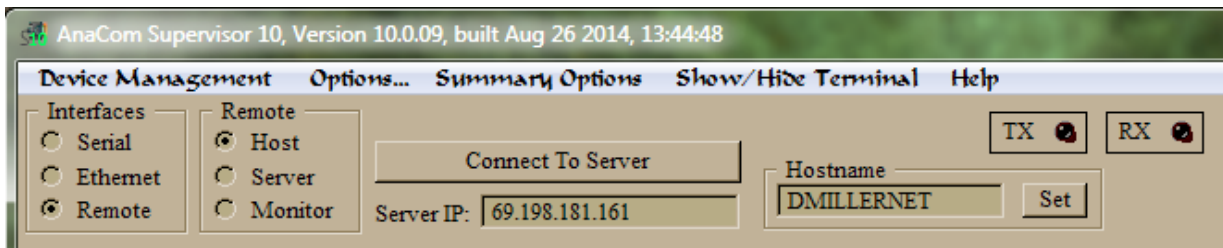
The Server is now ready to accept connections from Hosts and Monitors.

3. Set up a Host and connect to the Server

The first step in setting up a Host machine is to connect to the various Anacom devices that are to be monitored. That process is discussed elsewhere and will not be covered here. The following image shows the Svr10 main window after it has discovered three Ethernet devices.



To put Svr10 in Remote Host mode, select the **Remote** item in the **Interfaces** block, then select the **Host** item in the **Remote** block. The program will now look like this:



Note that **Server IP** field shows an IP address of 69.198.181.161, which is the address of AnaCom's Remote Access demo server. You should type in the IP address of your Server, which you configured in the previous step. Finally, click the **Connect To Server** button. At this point, the Host will connect to the Server, and the Server will read the device list from it.

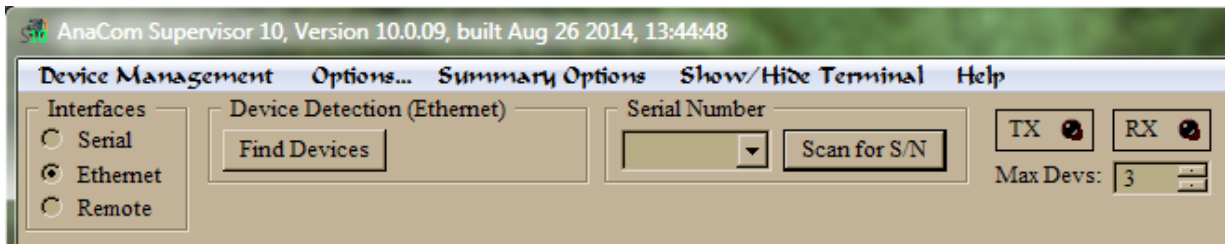
In the Options dialog that was discussed earlier, we mentioned a Remote Access option called **Auto-connect-to-server**; if this option is checked, and if the Host is connected to the Server, it will remember the connection; the next time Svr10 is closed and restarted, it will automatically re-connect to the server (after it has finished attaching to its local devices).

Notes on Managing the Host site

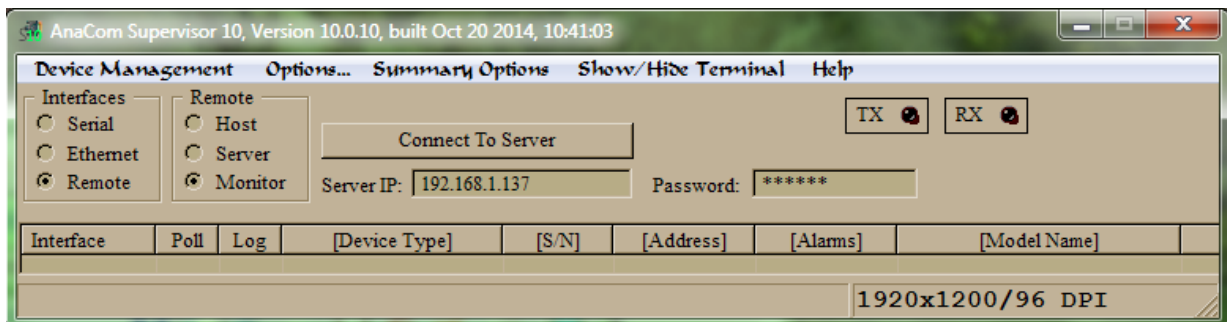
After the user has connected the Host to the Server, they are free to continue managing their site as they normally would. They can add or delete devices, even connect to additional interfaces, with no problems. Any configuration changes which occur on a Host instance will be automatically communicated to the Server, and to any connected Monitors.

4. Set up a Monitor and connect to the Server

This process is very similar to setting up the Server; when Svr10 is first started it will display a main window displayed, and either Ethernet or Serial interface selected; the controls portion of the window will look like this:



To put Svr10 in Remote Monitor mode, select the **Remote** item in the **Interfaces** block, then select the **Monitor** item in the **Remote** block. The program will now look like this:



At this point, type in the IP address of the Server and enter an appropriate password, then click the **Connect To Server** button, and Svr10 will read and display all devices which are being monitored by the Server. Note: passwords are discussed separately, later in this document.

In the Options dialog that was discussed earlier, we mentioned a Remote Access option called Auto-connect-to-server; if this option is checked, and if the Monitor is connected to the Server, it will remember the connection; the next time Svr10 is closed and restarted, it will automatically re-connect to the server.

Advanced Topic – passwords

When connecting a Remote Access Monitor to the Server, you may need to enter a password in order to complete the connection. There are two passwords defined in the Server; a ***read-only*** password and a ***read-write*** password:

- A ***read-only*** password permits only monitoring the hardware; all commands and fields which could write to the devices will be disabled. If the read-only password field in the Server is blank, any password will be accepted; otherwise, the correct read-only password must be entered. If an incorrect password is specified, the Server will close the connection.
- A ***read-write*** password not only allows the Monitor to read data from the devices, it also enables Write operations which can change device configuration. If the read-write password field in the Server is blank, Write operations are completely disabled for all Monitors; otherwise, the correct read-write password must be entered.

Passwords are 15 characters maximum, and cannot contain the following characters: # , =

Advanced Topic – Server Firewall Issues

When Supervisor 10 is started for the first time on a machine running Windows OS, the system will ask the user if he will grant permission to make additions to the system's firewall necessary for the proper running of Supervisor. It is important to say **yes**.

Supervisor running in Server Mode listens on TCP port 49876 for connections from both Hosts and Monitors. If the machine running Supervisor 10 in Server Mode is also behind a router running a firewall, then port 49876 will have to be forwarded to the machine running the server as well.