

## Using Virtual Network Computing (VNC) to remotely access ODB

VNC is remote control software. This means that while running this software it is possible to interact with another computer over the Internet. Not just to access files but to actually be able to affect the screen of another computer -- whether the other computer is across town or across the globe.

This means that if you are in a remote location you can lookup or enter data into your ODB database at the office; walk someone else through the process of setting up ODB; or access any other information on the remote computer.

### How does VNC work?

VNC software comes with two applications. The first application is the Server. The server application is run on the computer that needs to be accessed. The second application is known as the "Viewer" or "Listener." The Viewer application is run on any computer that wishes to access the Server. When running the Viewer the user is prompted for the IP address (explained later) and password of the remote Server. With this address, the Viewer now has full access to the Server's files – including its ODB database. The Viewer allows the user to manipulate the mouse and the keyboard of the Server remotely.

### Setting up VNC

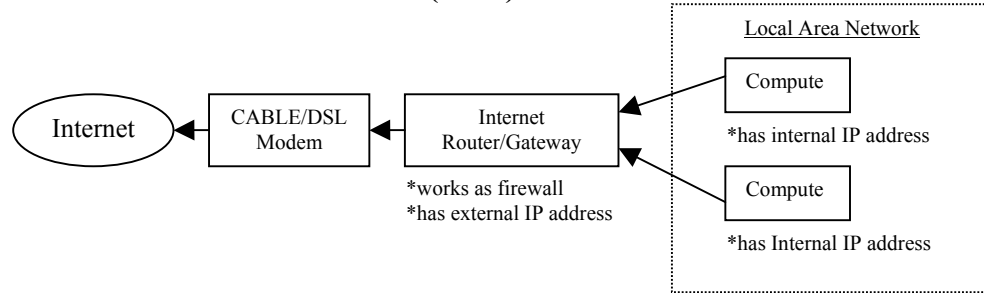
The first step in setting up your remote connection is installing the software you wish to use on the server. There are several VNC applications available to you over the Internet, such as RealVNC, TightVNC, and the newly developed UltraVNC. The instructions below are tailored for RealVNC ([www.realvnc.com](http://www.realvnc.com)) which is fairly easy to set up.

The next step in setting up your remote connection is determining how your computer is attached to the Internet or outside line. Case A is that your Computer is connected directly to a cable or DSL modem, which is connected to the Internet (a dial-up modem could be used but it would be extremely slow). This setup makes finding your IP address less complex. Case B is when your computer is connected first to a router, then to the Cable or DSL modem, and then to the Internet.

#### Case A:



### Case B (LAN):



### *Setting up VNC Server using Case A*

- 1) Run the Server Application
- 2) Start → Programs → RealVNC → run VNC server  
\*\*NOTE that if you are not using RealVNC your server application will have a different path.
- 3) After clicking on the run VNC server application a box should appear in the lower right side of your screen, this box should have a Green “V” inside. Right-click this box and choose the Properties item from the popup menu.
- 4) In the properties window, edit your password (this is the password that a remote user must enter to gain access to the server). Your password should not be a common word to prevent unauthorized access.
- 5) By default the box labeled Server Accepts Socket Connections should be checked. This means that your server is allowing a remote user to access its information. You have now setup the server and as long as your computer remains on and connected to the Internet others who have the password will be able to use VNC to access it.  
\*note leave the box labeled “Remove Desktop Background” checked to increase transfer speeds
- 6) For someone to remotely connect to your computer they must know your computer’s IP. You may go to [www.whatismyip.com](http://www.whatismyip.com) to find it. However, in this case you can simply move your mouse pointer over the VNC box in the lower right corner of your screen. The server’s IP should appear, the IP address will be a set of numbers like 123.456.7.89. Make a note of this IP address to make it easier when setting up the Viewer. Note: Some DSL connections have a IP Address that changes every few days or when you reboot your computer. If this is the case with your DSL connection, you can obtain a “Dynamic Domain Name” from a company like DYNDNS.com that will automatically adjust to whatever your dynamic IP happens to be.

### *Setting up VNC Server Using Case B*

The major difference in setting up the Server when using Case B is the Router used to access the Internet. A router serves as a firewall to protect your network’s files and information from outside sources, and also provides access to the Internet for a group of computers. VNC uses IP Addresses to access the server. With a router, accessing a certain computer on a network is a little different.

The router itself has its own external IP address, and needs to be configured to relay requests for information to the correct computer on the network. Requests for information on the Internet always include a number from 0 to 65,535 known as the “port number” for that request. You must set your router to relay all requests that have a specific port number to one internal computer. This is known as “Port Forwarding” or “IP Forwarding.” (Most small organizations do not run a web server on their local networks, but larger organizations that do this will often set “port 80”, used for web page requests, to automatically forward to a web server.) Most routers have this option but refer to the documentation provided with your router for more understanding. (The default port for VNC is 5801, and you can change it to any number from 5800 to 5899 if you want.)

If you are using a router,

### **Setting up VNC on a Viewer computer (in a different location)**

- 1) Install RealVNC and run the Viewer application:
- 2) Start→Programs→RealVNC→Run VNC Viewer
- 3) After clicking the Run VNC Viewer application, a box entitled “Connection Details” appears.
- 4) Enter the IP address of the Server. This number is the IP address the Viewer needs to enter for the “Connection Detail.” For case A, this is the number in step 6 of the setup procedure listed above. For case B, this is the external IP address of your local network (what you would get by going to <http://whatismyip.com> from any computer inside your router) followed by a colon and then the port number. For example, if your external IP is 123.456.789.012, and the port number assigned to VNC is the default, 5081, you would access the server by typing 123.456.789.012:5081 into the box.
- 5) After entering the password for the session, you should immediately see the desktop (screen) of the server. It is now possible to access the Server’s ODB database directly.  
\*note: it may be useful to keep ODB on the desktop so that remote users don’t need to search for it.

### **About Security**

VNC communication is not completely encrypted, though the password you use to control your computer, is encrypted. This might not be a concern from your organization; after all, standard email and web access is not encrypted either, and it would take considerable skill for someone to intercept your VNC communications (which records mouse movements and screen updates) and gain useful information. But if it is a concern to you, it is possible to encrypt VNC if you have someone with strong technical skills (see <http://www.evidentdata.com/2003/EvidentData%20Remote%20Desktop%20with%20Secure%20Tunnel%20V1.pdf>). Or you could purchase PCAnywhere, which includes an encryption add-on as of version 10.