

# Remote Support - VPN



## Preparing for Remote Support, Administration & License Sharing

This document addresses setting up a VPN (Virtual Private Network) client. See the document [“Remote Support – VNC”](#) for instructions on setting up VNC Server to complete full remote support capabilities.

For some time now, we at Acuity have been testing remote access to perform some of the I-DEAS & Pro/ENGINEER installation, troubleshooting and administrative tasks that have traditionally been done on site. After considerable success using these techniques, we are ready to provide details explaining how you can set up your systems to take advantage of this service. In addition, setting up this same VPN service to your company, rather than Acuity, will enable you to use your CAD (or any other “floating license” application) license from home, subject to your company’s policies. For more information on the types of services that can be remotely administered, please see our [Remote Support Services](#) document.

If your purpose in reading this document is to set up application license sharing from your company, you can skip to [“Making a New VPN Connection on Windows 2000”](#), or, [“Making a New VPN Connection on Windows NT”](#).

## Overview of remote support using VPN and VNC

Here is an overview of how things will work once everything is set up.

First, a remote connection between your site and Acuity will be established using VPN (Virtual Private Network). This is very similar to making a connection with a modem. Then, once the connection has been made, Acuity will use VNC (Virtual Network Computing) to open a session on the computer that needs to be accessed. VNC will put the entire desktop of this computer in a window on our screen and allow us to use our mouse and keyboard to control the computer (and, if you desire, you may watch everything we do on your computer’s monitor). Depending on your specific support request, we may ask you to insert and remove CDs on the computer. Except for the fact that we can’t physically touch the CD drive in your machine, it will be just like we are sitting right at the computer. When the support tasks are finished, the VNC session will be closed and the VPN connection will be closed.

## Details of VPN

VPN Server is the software that runs on the computer that is being connected to. VPN Client is the software that runs on the machine making the connection

## VPN Connections and security

There are 2 ways to make the VPN connection; each will have different implications for the support we can provide and your perception of your network’s security.

In one case, you will initiate the connection using the DialUp Networking function to connect to Acuity. (To accomplish this, you will need to install VPN Client and Acuity will need to install VPN Server.) When the connection is made, you will be prompted to enter a username and password (which we will provide) to log on to the Acuity domain. Your login account will not

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have permissions to do anything on Acuity's network except make the connection. Once you have made the connection, we will run VNC Viewer and open a session on a computer on your network which is running VNC Server (you will provide us with the computer name(s) and VNC password). Once the VNC session is established, we will be looking at the desktop of your computer. If you have previously logged in to an account which has enough privileges for us to do the administrative work, we will start right in. If not, we will be looking at the login screen of that computer and will log ourselves in with a username and password which you provided us. When the work is complete, you will close the VPN connection. This type of arrangement would be suitable for having Acuity perform occasional tasks at your specific request.

The other case is where you would like Acuity to perform regularly scheduled administrative tasks, most of which need to be done when nobody is using your CAD tool (to avoid impacting your users it will be to your advantage to have this type of work performed after hours). In this case, Acuity will initiate the VPN connection. (To accomplish this, you will need to install VPN Server, and Acuity will use VPN Client to make the connection.) We will be prompted to enter a username and password to log on to your domain. Once on your domain, we will start VNC Viewer and connect to the computer on which we will be doing the administrative work by entering the computer name and VNC session password. (Note that VNC Server must be running on this computer.) We will then be looking at the desktop of that computer, which would normally show us the login screen since the last user would have logged off before going home. We will enter a username and password (which may or may not be the same as we used to make the VPN connection) and at that point we will be ready to start working. When finished, we will log off that user account, close the VNC session to the computer, and close the VPN connection to your domain.

There is one subtlety about the domain security issue. By default, all ports on a server will be open, so that once a connection is made, any type of operation (mapping drives, transferring files, etc) will be possible (provided that the user account has the required permissions). If you are running VPN Server to accept connections, you have the option of closing down ports to restrict the types of things that can be done; the tightest control would be achieved by closing down all TCP/IP ports except ports 5800 and 5900 (this would allow only the "mouse clicks" of the VNC session to go across). Other protocols are not needed by Acuity and can be disabled at your discretion. The subtlety is that you can achieve this control only when Acuity is initiating the connection to your VPN Server. You may think that you will achieve a higher level of security by initiating the connection to Acuity rather than allowing Acuity to initiate the connection to you, and in a certain sense this is true. However, when you initiate the connection to Acuity's VPN server, it will be the settings that we have made on our ports which will determine what will be allowed to go across, so you will be giving up that level of control.

toggle OFF “Require data encryption”. On the Networking tab, highlight Internet Protocol (TCP/IP) and click Properties. Click Advanced, then toggle OFF “Use default gateway on remote network”. OK 3 times to finish.

### **Making a new VPN connection on Windows NT4**

First, install VPN Client (actually, “Point To Point Tunneling Protocol” in NT4). From Control Panel, choose Network. On the Protocols tab, choose Add, then select Point To Point Tunneling Protocol and click OK. Make sure the NT4 CD is in the CD drive and click Continue. On the PPTP Configuration screen, click OK to select the default of 1. Click OK to install Remote Access Services. Click OK to Add RAS Device. (If nothing is listed on the Remote Access Setup screen, click Add to create VPN1.) Click Continue to finish. Click Close. Say No to reboot. Reinstall whatever service pack you are running, then reboot. (Note: depending on which Service Pack you have installed, the exact sequence and prompts may be slightly different.)

Next, create the new connection. Double click My Computer, then Dial Up Networking. If you have existing connections, click New. Enter an appropriate name for the new connection. On the Server screen, toggle ON the last option – “The non-Windows NT server I am calling .....”. On the Phone Number screen enter “vpn.acuityinc.com” (without the quotes). On the IP Address and Name Server Addresses screens choose Next to accept the default choices. Finish.

Now configure the new connection. In Dial Up Networking, select the VPN phonebook entry you just created and click the More button. Select “Edit entry and modem properties”. On the Server tab, click “TCP/IP Settings” and toggle OFF “Use default gateway on remote network”. OK. On the Security tab, toggle ON “Accept any authentication including clear text”. OK. Close.

### **Connecting to Acuity via VPN**

On win2k, use Control Panel / Network and Dial Up Connections, and double click the connection. On NT4, use My Computer / Dial Up Networking, select the correct connection and click Dial. In both cases you will be prompted for Username, Password and Domain. The domain is acuitynt. We will notify you of your username and password ahead of time.

To close the connection on NT, right click the Dial Up Networking Monitor icon in the system tray (bottom right corner of screen) and choose Hang Up, then select the connection. On win2k, right click the connection icon in the system tray and choose Disconnect.

### **VPN Client vs VPN Server**

The steps just discussed describe how to install VPN Client and initiate a connection. The installation of VPN Server is a complex task that will need to be done by your system administrator, the company you contract with to provide you with network support, or by Acuity personnel (an on-site visit is required).

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