

Virtual Network Computing (VNC) Connection

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MPA systems support up to ten (10) simultaneous VNC Viewer connections and is the preferred method of remotely controlling the MPA system's Graphical User Interface (GUI) software, in preference to the Windows® OS based Remote GUI application.

Changes in the [8.3.x Feature Set](#) provides greater security and improved connectivity to the VNC Server running on MPA systems with an [SCM-210](#) controller module.

For MPA systems with a [SCM-210](#) system controller, simultaneous VNC connections can be made to the same IP Address without the need for VNC port number; but each user login requires **a different Username**.

- Usernames can be created in the GUI's System tab Security screen. Refer to [Adding a New User](#) section in the MPA's User Manual for details
- Usernames are synchronized for the following applications: MPA GUI, VNC, SCPI, Python and FTP

For MPA systems with the [AM4022](#) processor card, simultaneous VNC connections require the IP Address be followed by a colon and a unique VNC port number from 1 to 10, with one user per VNC port.

- Example: [192.168.0.10:1](#) to [192.168.0.10:10](#)

Advantages of using the VNC viewer to remotely control an MPA system:

- VNC viewers are supported on multiple OS platforms including; Windows, Mac OS X, iOS, Android, and Linux, and are available for most portable products such as; Laptops, Tablets, and Smartphones
- Remote Control operation without the need to install a dedicated Remote Client application
- No interference from Firewall software or other network restrictions
- Remote GUI client within VNC viewers can effectively operate at any desirable viewing size
- VNC viewer applications such as [RealVNC](#), [Tight VNC](#), [Tiger VNC](#), or whichever VNC viewer application is supported by your PC/device, can typically be downloaded from the Internet for free

VNC connection to MPA with a SCM-210 controller:

- Verify that the MPA's [IP Address](#) has been configured, and you can [Ping](#) the IP Address
- Verify each concurrent VNC user has a unique login [Username](#), and its associated password
- The default VNC Username for the MPA is [Admin](#) and the default Password is [Admin1](#)

VNC connection to MPA with an AM4022 processor:

- Verify that the MPA's [IP Address](#) has been configured, and you can [Ping](#) the IP Address
- Verify each concurrent VNC connection to the same MPA uses a different [VNC Port #](#) (from 1 to 10)
- VNC viewers only require a login Password. A Username is not required
- The default VNC password for the MPA is [Admin1](#)

For [Optimal Performance](#), verify that your VNC viewer settings are configured for the following:

- Picture Quality should be set to the Highest setting available
- Scaling should be set to Automatic or Window Size
- Toolbar should be disabled

Below are recommended settings options for a few of the most popular VNC viewers.

Real VNC: version 6.1.x

1. Select **New Connection** from the **File** menu.
2. From the **Options** tab, select the following options:
 - Set the **Picture Quality** to **High**
 - Disable (uncheck): **View-only**
 - Set the **Scaling** to **Automatic**
 - Enable (check): **Preserve Aspect Ratio**
 - Enable (check): **Pass Media Keys ...**
 - Enable (check): **Pass Special Keys ...**
3. From the **Expert** tab, scroll down and highlight the **Enable Toolbar** parameter.
 - Set the **Value** to **False**.
4. Select the **General** tab and enter the MPA's **IP Address** in to the **VNC Server** field.

- MPA with a **SCM-210** controller:

Example:

VNC Server: 192.168.0.10

For Real VNC, multiple connections to the same IP Address only require separate VNC Port #'s (from 1 to 10) added after the IP address when connecting to the same MPA unit from one PC

- MPA with an **AM4022** processor:

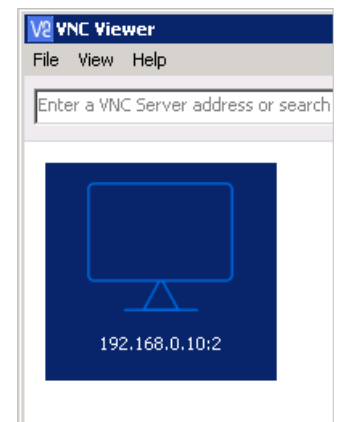
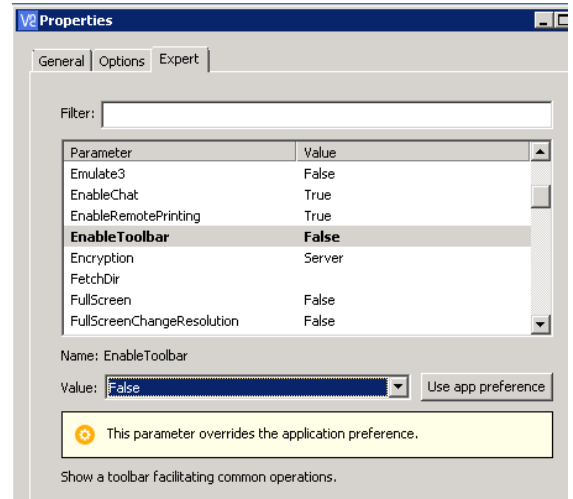
After the **IP Address** add a colon (:) and the **VNC Port # (from 1 to 10)**.

Verify the VNC Port # being entered is not being used by another user

Example:

VNC Server: 192.168.0.10:2

5. Leave the **Name** section empty in order for shortcut icon to be labeled as the **IP Address**, or enter a "**Friendly Identifier**" name, associated with this MPA.
6. Click **OK** to add the newly created VNC shortcut icon to the VNC viewer's desktop section.
7. Double-click the **VNC shortcut icon** to connect to the MPA.
8. If an **Unencrypted Connection** message appears select (check) **Don't warn me about this again**, and click **Continue**.
9. Login to the MPA.



TightVNC: version 2.8.x

1. Select **Options** from the main menu.
 - Disable (uncheck): **256 colors** in the **Format and Encodings** section, if enabled
 - Set the **Scale By** to **Auto** in the **Display** section
 - Select **Track Remote Cursor Locally** in the **Mouse Cursor** section
 - Select **Do Not Show** in the **Local Cursor Shape** section
 - Leave the remaining options as set by default
2. Select **Configure** from the main menu.
 - Disable (uncheck): **Show Toolbars by Default**, in the **User Interface** section
 - Leave the remaining options as set by default
3. From the **Main Menu**, enter the MPA's **IP Address** in the **Remote Host** field.

- MPA with a **SCM-210** controller:

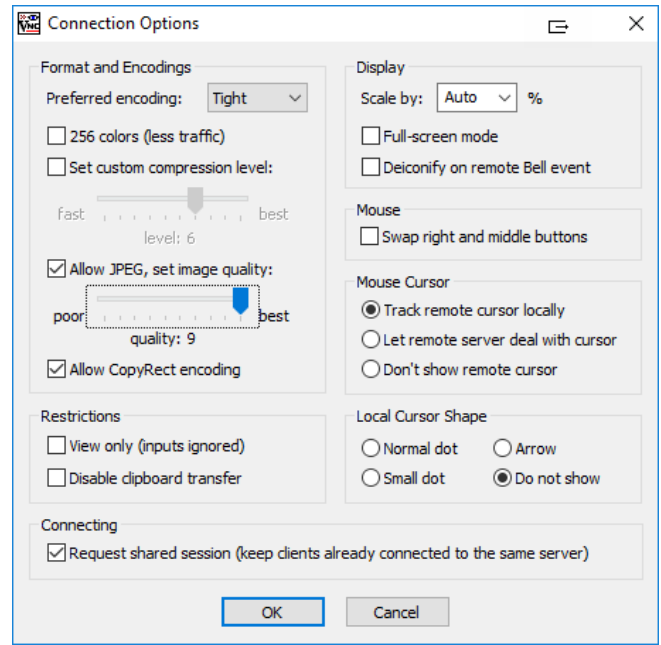
Example: Remote Host:

- MPA with an **AM4022** processor:

After the **IP Address** add a colon (:) and the **VNC Port # (from 1 to 10)**.
Verify the VNC Port # being entered is not being used by another user

Example: Remote Host:

4. Click on **Connect** and login to the MPA.

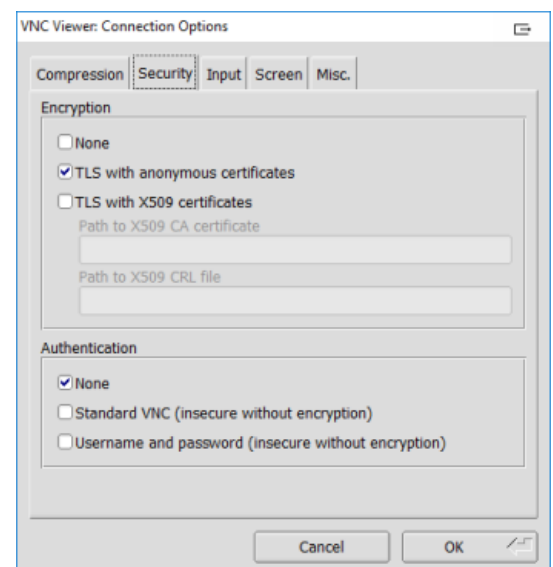


TigerVNC: version 1.9.x

The TigerVNC viewer support the **TLS encryption** option, which is also supported on the **SCM-210** card

MPA with a SCM-210 controller

1. Select **Options** from the main menu then select **Security** tab
2. **Enable** only the **TLS with anonymous certificates** setting, and set **Authentication** to **None**.
3. Select the **Screen** tab.
 - TigerVNC does not support **Scaling** or resizing/maximizing the MPA GUI client, so for optimal display disable (uncheck) all settings on the **Screen** tab
4. Select **Ok** then enter the MPA's IP Address, click **Connect** and login to the MPA.



Multiple VNC connections to an MPA with an AM4022 processor:

When connecting to an MPA that has the AM4022 processor, each **VNC port # (1 to 10)** has its own virtual desktop that includes an **MPA Remote GUI** icon, which can be launched and run independently of the other VNC port # connections.



1. Double-click the **MPA Remote GUI** icon to launch the Remote Client from the VNC desktop.
2. Enter the GUI's **User ID** and **Password** and click **OK** to login.
 - The GUI's default **User ID** is **Admin** and the default **Password** is **Admin1**. However, any User ID created on that MPA can also be used to login to the Remote GUI.
 - See the MPA User's Manual for details on **Adding a New User**.
3. The GUI will appear, filling the VNC viewer window.
 - See the MPA User's Manual for details on using the Remote GUI application.

Resizing the Remote GUI

Note: Notice that the initial size of the VNC window may have reset to a default size upon launching the Remote GUI application.

Since the Remote GUI runs in full-screen mode within the VNC viewer window, users can now resize the GUI to any desired viewing size by grabbing and dragging any of the four corners, stretching the size of the VNC window and making the GUI appear proportionately larger or smaller.



Closing the Remote GUI

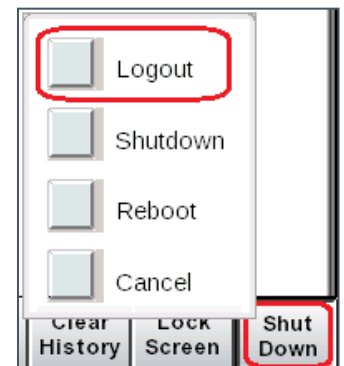
Just closing the VNC connection to the MPA does not automatically terminate the Remote GUI application running on the VNC's remote desktop.

Because the Remote GUI runs on a remote desktop, it will continue to run even when you close the VNC connection to that remote desktop, taking up valuable resources which could be used by other users.

When you are ready to close your Remote GUI session to the MPA, you should first close the Remote GUI application by logging out of the application, and then close the VNC viewer.

To **logout** of the MPA, select the **Shut Down** button from the bottom right corner of the GUI, then choose **Logout** from the shutdown menu.

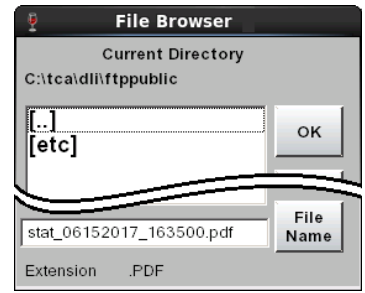
- **Logout** closes your Remote GUI session without affecting other users.
- You will need to confirm your selection from a "**Are you sure?**" prompt.
- The **Shutdown** and **Reboot** options will also close your Remote GUI session, before shutting down or rebooting the MPA's Processor.
- The **Shutdown** and **Reboot** options are not available if another Remote GUI user has one or more GUI tabs "locked".



Retrieving Saved Reports

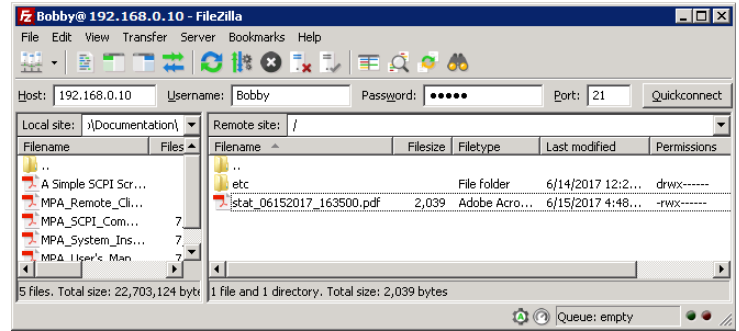
Test Reports, Screen Captures, Setup Configuration Settings and other files that are saved using the Remote GUI from a VNC connection are all saved to the default FTP folder on the MPA.

- Screen Captures and reports that are automatically generated from Action After Duration timed-tests are saved to the [etc] subfolder.

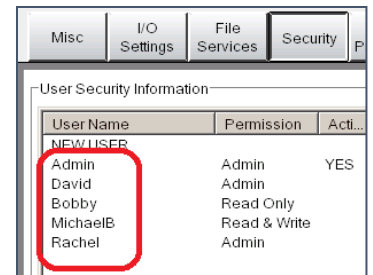


Users can then easily transfer their saved files from the MPA to their local PC, using any FTP client program.

To retrieve saved files with an FTP client program, such as FileZilla or WS-FTP, enter the MPA's IP Address followed by the same Username and Password that was used to login to the Remote GUI.



- The default FTP Username is Admin and the default Password is Admin1. However, any Username created on that MPA can also be used to login with FTP.
- See the MPA User's Manual for details on Adding a New User.
- If a TCP Port # is required, the default Port # for FTP is 21.



Troubleshooting:

| Issue: | Resolution: |
|---------------------------------|---|
| Unable to connect to VNC server | <ul style="list-style-type: none"> • Verify the MPA's IP Address is valid, and that there are no IP Address conflicts on the network. • Verify the software version on the MPA is Feature Set 8.1.45, or later • Verify the MPA unit is fully functional and can either be logged into with the Remote GUI application software, or operational as a stand-alone unit using an external monitor connected to the DisplayPort and a USB mouse and keyboard connected to the USB port. |
| Password Authentication Failed | <ul style="list-style-type: none"> • The wrong password is being entered. • If the "root" user authentication password has been changed or forgotten, you can enter a new VNC Authentication Password from the VNC Config window in the Security settings screen. |
| Low Color Resolution | <ul style="list-style-type: none"> • From the VNC viewer's options screen, change the Color settings to the highest setting available (or Full Color resolution). |

About VeEX

VeEX Inc., a customer-oriented communications Test and Measurement company, develops innovative test and monitoring solutions for next generation telecommunication networks and services. With a blend of advanced technologies and vast technical expertise, VeEX products address all stages of network deployment, maintenance, field service turn-up, and integrate service verification features across Copper, Fiber Optics, CATV/DOCSIS, Mobile 4G/5G backhaul and fronthaul, next generation Transport Network, Fibre Channel, Carrier & Metro Ethernet technologies, WLAN and Synchronization.

