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Tech Note 6

Aug. 10, 2005

Installing the eMerge™ without a network

Why would I install an eMerge Security Platform without using a pre-existing network?

- The building is not yet networked but will be.
- Desire to keep the security system isolated from the building network.
- The eMerge is the first networked device to be deployed.

Since there is no network, there are no DHCP, DNS, or other net services. All IP addresses must be static.

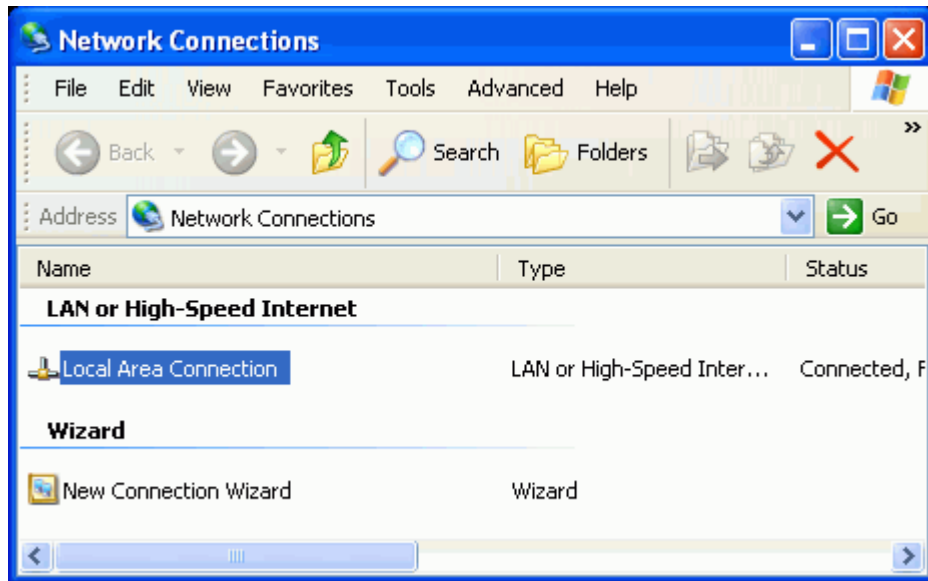
Set the PC to an appropriate static IP address

The default IP address setting for the eMerge is 192.168.0.250. Therefore the PC must have an address of 192.168.0.xxx. This gives both the PC and the eMerge IP addresses on the same subnet and allows network communication between them without the use of a router, DHCP services, or port forwarding. The following steps show you how to assign to your PC running Windows™ XP, a static IP address on a "0" subnet.

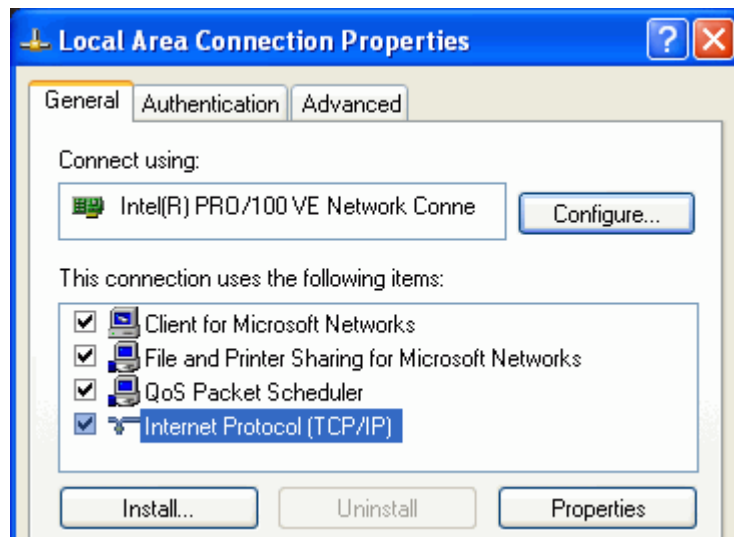
1. In Windows™ select from the **Start** menu, **Settings : Control Panel**.



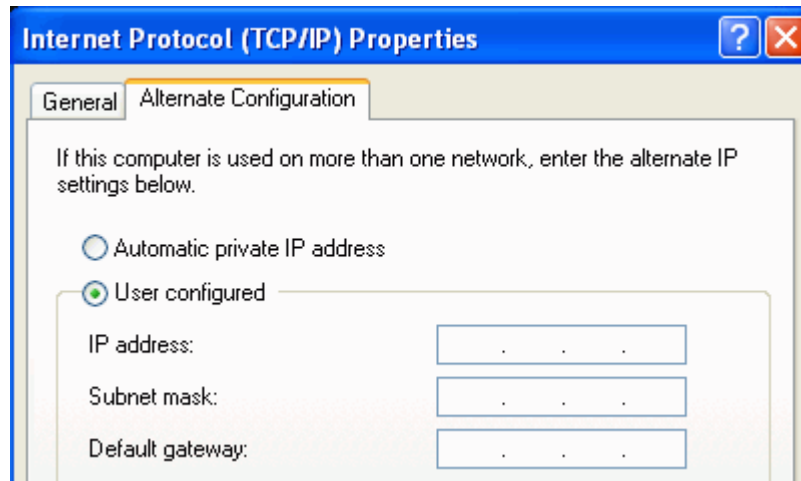
2. In the **Control Panel** window double-click **Network Connections** to open it.



3. In the Network Connections window double-click **Local Area Connection** to open it and click the **Properties** button.



4. In the **Local Area Connection Properties** dialog box select **Internet Protocol (TCP/IP)** and click the **Properties** button.



5. In the **Internet Protocol (TCP/IP) Properties** dialog box click the **Alternate Configuration** tab and select **User configured**.
6. Enter the **IP address** (192.168.0.100), **Subnet mask** (255.255.255.000), and **Default gateway** (192.168.0.1)

NOTE: All three entries are required.

7. Click **OK**.

Install the Microsoft™ .NET Framework v 1.1 and nconfig.exe:

Because you have no network device to provide addresses to your Nodes by DHCP, it is necessary to assign static IP addresses to them. To do this it will be necessary to use of nconfig.exe to set static IP addresses for any and all nodes in the system. Nnconfig is a .NET Framework application and requires that the runtime .NET Framework v1.1 be installed on the PC.

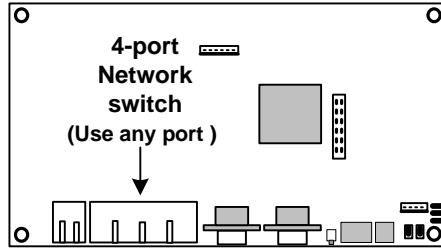
8. From the CD provided with your eMerge run **dotnetfx.exe** to install the .NET v1.1 Framework to your PC.

NOTE: Alternatively you can go to the Microsoft download website and install .NET Framework v 1.1 from there.

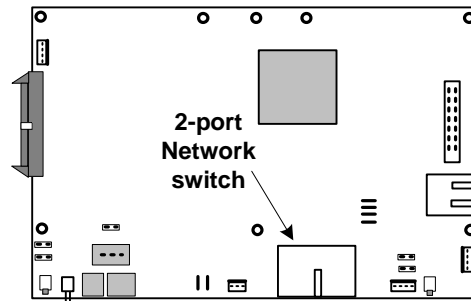
9. From the CD provided copy **nconfig.exe** to your PC.

Connect PC and eMerge switch with CAT 5 network cable

10. Pull the Ethernet cable through a knockout in the eMerge cabinet. Cable specification: CAT 5 or better with an RJ-45 connector wired straight through.
11. Plug the RJ-45 connector into any of the 4 network switch ports on the Series 1 Network Controller mounted inside the eMerge cabinet door, or into either of the 2 network switch ports on the Series 2 Controller/Node module mounted in slot 0 of the eMerge cabinet. See the diagram below.



Series 1 Network Controller

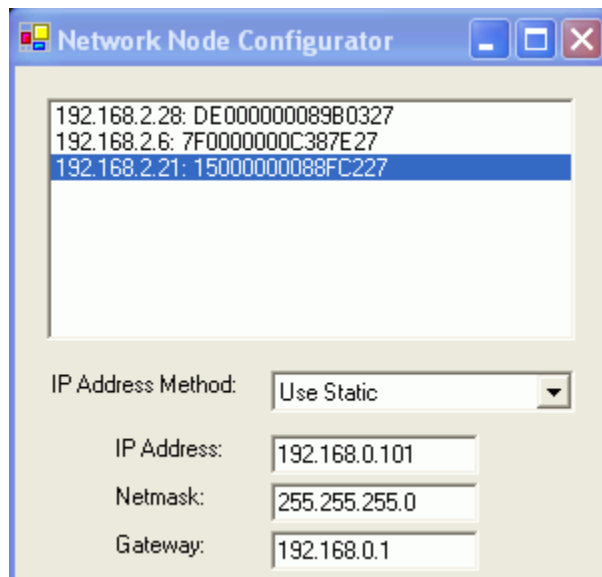


Series 2 Network Controller/Node

12. Plug the other end of the Ethernet cable into the network port on the PC.

Run nconfig.exe and set static node IP address(es)

13. Double-click **nconfig.exe** to launch the application.



14. Nnconfig.exe listens for the node(s) multicast message and lists all nodes that it hears in the large list box. Allow nnconfig.exe several moments to discover the Network Node(s) that exist on the subnet.

15. From the large list box, select the node you wish to assign an IP address to.

16. From the **IP Address Method** drop-down select **Static**.

17. Enter the **IP address** (192.168.0.101), **Subnet mask** (255.255.255.000), and **Default gateway** (192.168.0.1).

18. Click **Save**. This node now has a static IP address that will not change.

NOTE: If the system has more than one node repeat this process for each one, adding one to each IP address so that each is unique.

Set static IP addresses on other IP devices such as cameras

Network switches on the eMerge Controllers are 2 or 4 ports only. If more IP devices need to be connected, connect an external network switch with sufficient ports to one of the ports on the eMerge controller switch. Additional IP devices can then be connected to the external network switch.

19. Set static IP addresses on the "0" network (192.168.0.xxx) for all other IP devices in the security system. Check the manufacturer documentation for specific procedures for setting these static IP addresses. Continue to add one to each IP address so that each is unique.