**Data Comm For Business, Inc.**
Phone: 217-897-6600
Email: Support@dcbnet.com
Web: http://www.dcbnet.com

LLEA Quick Setup Guide

Thank you for your purchase of the **LLEA** Link Layer Encryption Appliance. This quick setup guide will walk you through the minimum steps necessary to configure the device in a typical application.

The **LLEA** devices are used in pairs to secure a layer-2 Ethernet segment. An example application is shown below. The insecure network segment could consist of a simple wire or include additional devices such as hubs, switches and wireless bridges. The only requirement is that the insecure network segment must reside in the same broadcast domain. No layer-3 devices, such as a router, may be in the path.


Before

After
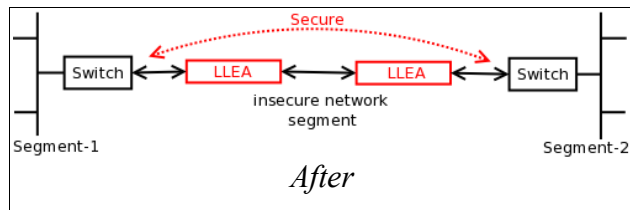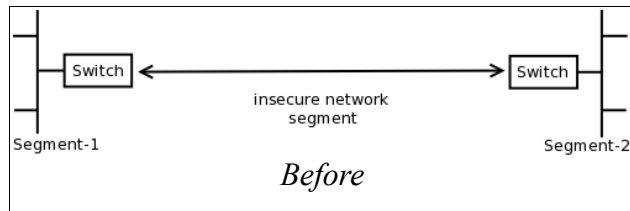
The **LLEA** is configured through the LAN1 Ethernet interface using a web browser. It has a default IP address of 192.168.0.100 and a subnet mask of 255.255.255.0. If this address is not compatible with your PC, temporarily configure your PC with an address on the 192.168.0.x subnet. For example, use the address 192.168.0.99.

Start your web browser and enter https://192.168.0.100 as the web address. Please notice the "s" in https. When you first connect to the **LLEA**, you will receive a security warning. This is because the device uses a self-signed certificate. Please choose to "continue to this website" or to "add an exception". If you are using Firefox, it will also be necessary to "get the certificate" and to "confirm security exception".

When prompted, enter **admin** as the User Name. Leave the Password field blank.
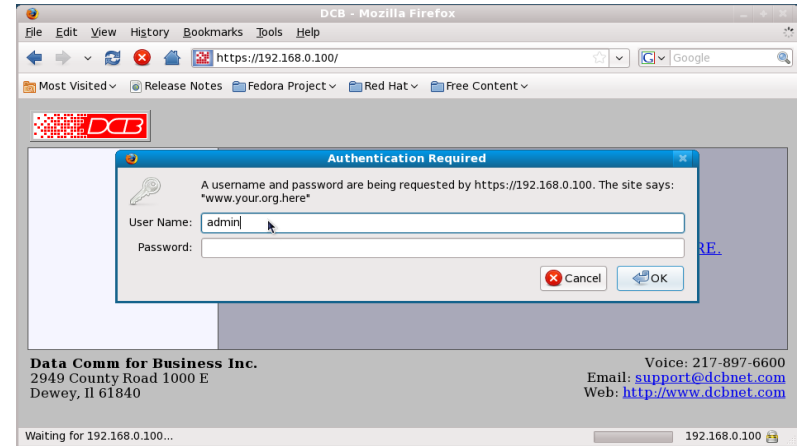

Go to the **LAN1_IP** configuration page. Select the **Static Configuration** button and configure the **IP Address** and **Subnet Mask**. The other items on this page are optional. If you know the correct values, go ahead and enter them. However, they are not required in a minimal configuration. Press the **Submit** button when done.
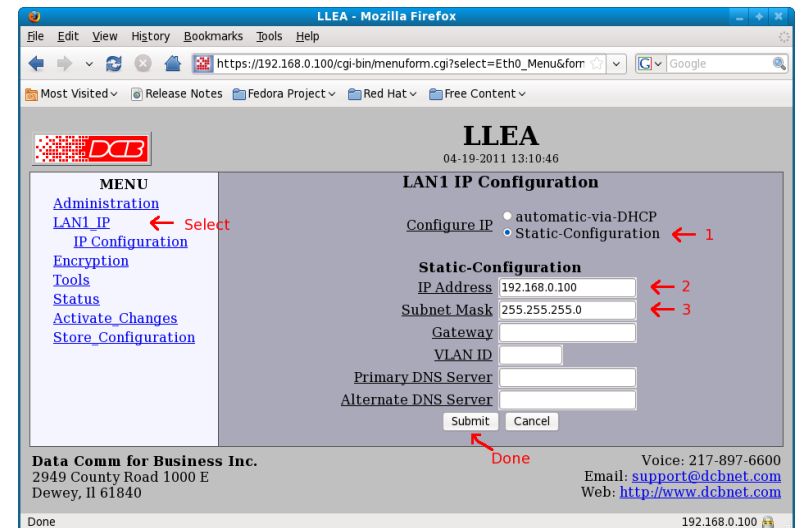
Next, go to the *Encryption* configuration page. Enter a *Shared Secret* and choose an *Encryption* method. The shared secret can any combination of letters, numbers, spaces, and most symbols. It is case sensitive. Remember your settings. When you set up the second **LLEA**, you will need to enter the same values. The other items on this page are optional and not needed in a typical configuration. Press the *Submit* button when done.
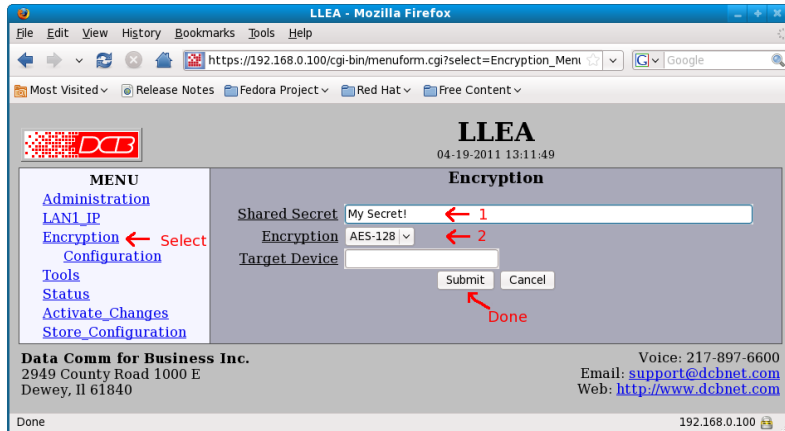

Finally, store and activate your changes. To store, select *Store Configuration* and confirm the operation by pressing the *Store Config* button. To activate, select *Activate Changes*. Once you active the changes, the new IP address will take effect. To access the device again, you will need to enter the new IP address in the web browser address field.
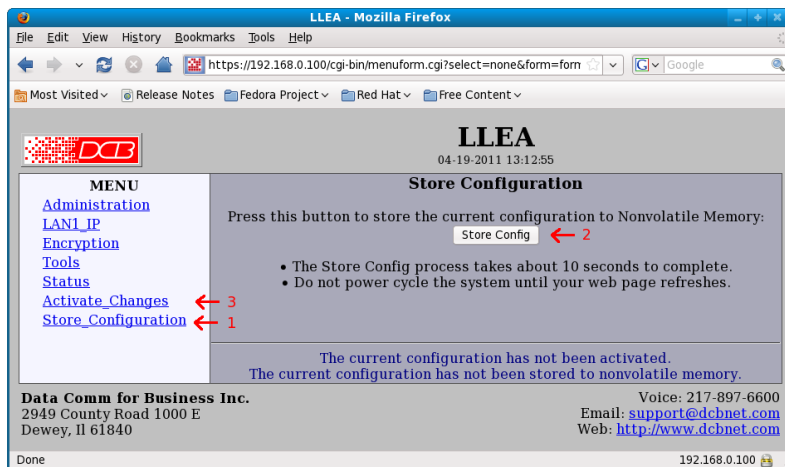
Repeat the above operations for the second **LLEA**. Make sure to use a unique IP address, but use the same Shared Secret and Encryption method.

The **LLEA**s are ready to deploy. Attach the LAN-2 Ethernet interfaces to the insecure network segment and the LAN-1 Ethernet interfaces to the secure network segments as shown below.
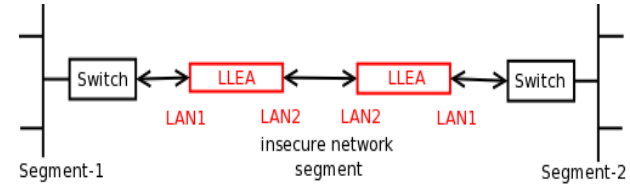
Troubleshooting

If you are unable connect to the **LLEA** using the web browser, check the following:
- Verify that you are plugged into the LAN1 interface and that it is showing a valid link indication (LAN1 LEDs illuminated).
- Verify that your PC and the *LLEA*are connected on the same LAN. To be sure, plug a cable directly between your PC and the **LLEA**.
- Verify that your PC is configured with an IP address on the same subnet as the **LLEA**. On Windows you can do this by opening a command prompt and running the command "ipconfig". Your Local Area Connection should show an address on the 192.168.0.x network with a subnet mask of 255.255.255.0.
- Verify that your Web Browser is not configured to use a proxy. For Internet Explorer, open "Tools Internet Options". Select the "Connections" tab. Press the "LAN settings" button. Uncheck "Use a proxy" or check "bypass proxy for local addresses". For Firefox, open "Edit – Preferences". Select the "Network" tab. Press the "Settings" button. Make sure "No Proxy" is selected.
- If you are still unable to connect, the **LLEA** may not be configured to the default address. You can check the IP address and/or reset it using the **LLEA**'s serial port or by attaching a PS2 keyboard and VGA monitor. If you use the serial port, configure your terminal emulator for 9600 baud, 8-bits, 1-stop, no parity, and no flow control. You will need to use a null modem cable.

Free technical support is available by phone during central time zone office hours at 217-897-6600. Please call out technicians if you have any problems installing the **LLEA.**