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IEI eMerge™ Enterprise and Enterprise Ultra Install and Setup Guide

Contents

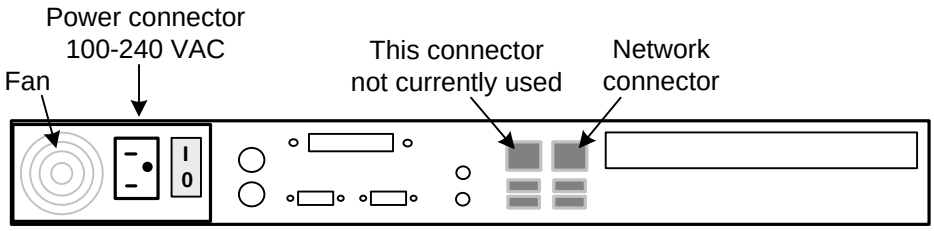
Version 3.1 and above

Configuring Your eMerge Enterprise

Connecting Power and the Network to the eMerge Enterprise

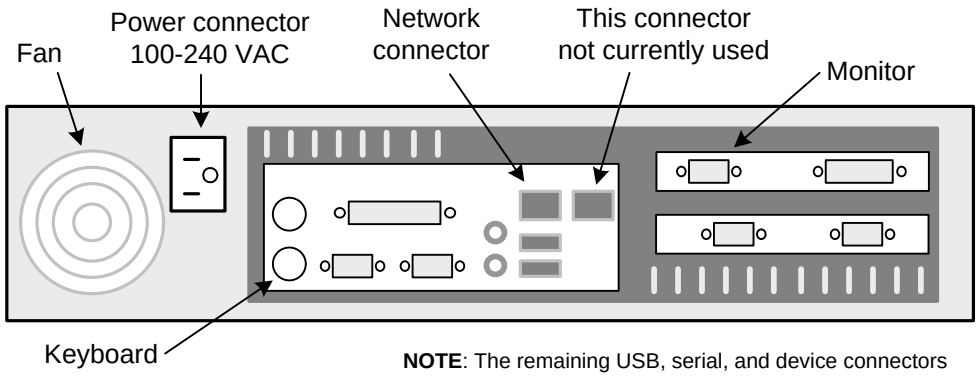
Connecting Power and the Network

1. Connect a grounded power cord to the power connector on the back of the eMerge Enterprise or Enterprise Ultra. See the images below.
2. Connect the network cable to the network connector on the back of the eMerge Enterprise or Enterprise Ultra. Be sure the place the cable in the correct connector as shown below.



NOTE: The remaining USB, serial, and device connectors are not generally used in NetBox applications.

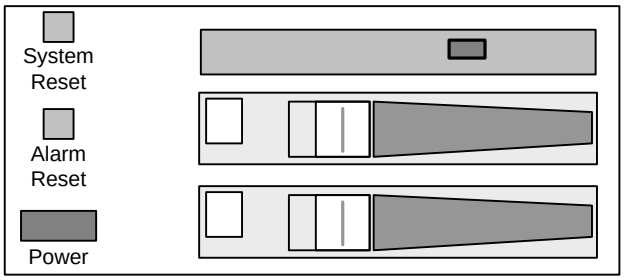
The back panel of the Enterprise, 1U rack mount.



NOTE: The remaining USB, serial, and device connectors are not generally used in NetBox applications.

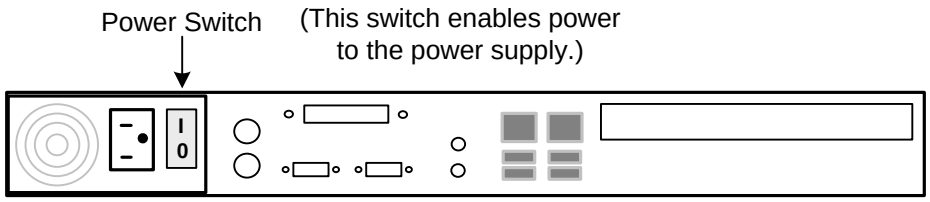
The back panel of the Enterprise Ultra, 2U rack mount.

3. For the Enterprise Ultra (2U), open the drive door on the front panel and press the power switch. See diagram below.

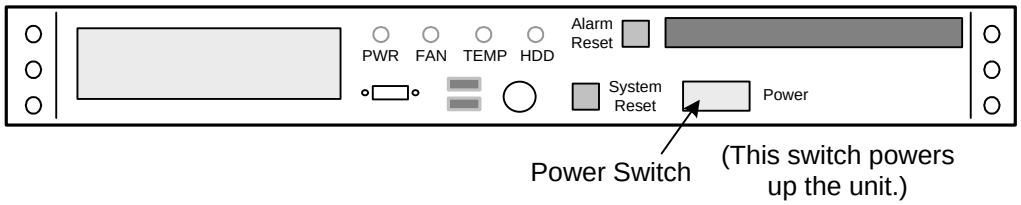


Inside the drive door on the Enterprise Ultra

4. For the Enterprise (1U), press the power switch on the back panel to enable power to the power supply. Then press the power switch on the front panel to power on the Enterprise system. See the diagrams below.



The back panel of the Enterprise, 1U rack mount.



The front panel of the Enterprise, 1U rack mount.

Configuring IP Settings

Configuring IP settings through the web interface

1. Open your browser and in the address field enter 192.168.0.250. This is the Network Controller default IP address. Press the Enter key. The Init Mode page should now display allowing you to set network IP settings.

   NOTE: If the Init Mode page does not display select **Setup : Site Settings : Network Controller** and click the link in the **Initmode Settings** section.

2. You can edit any of the settings on this page.

   NOTE: If you change the IP address of the eMerge Enterprise be sure to take note of the new address as you will need it to log in later.

3. In the **Initmode Settings** section select **No** from the drop-down. This ensures that Init mode will not redisplay when you reboot. You can redisplay the Init mode page at any time from the security application by selecting **Setup : Site Settings : Network Controller** and click the link in the **Initmode Settings** section**.**
4. Click **Save**.
5. Click **Reboot**. The application may take several minutes to shut down and restart. You will hear two beeps when it shuts down, followed by a single beep when it restarts.
6. Open a browser window on a computer connected to the router and in the Address box, enter the IP address that you set for the Network Controller.
7. On the page that appears, the **Activation Key** and **Product Key** boxes should contain the correct keys for your system. If these boxes are empty, you will need to enter this information manually. The activation and product keys are included on a license label that is shipped with the system.

8. After reviewing the license agreement, click the **Apply** button to accept it.

IMPORTANT: Click the **Apply** button only once

9. At the Login page, enter the User name “admin.”
10. Enter the Password “admin.”
11. Click **Go**. The security application will now display.

Logging in to your eMerge Enterprise

Login

NOTE: The default IP address of an eMerge Enterprise is 192.168.0.250. If you changed this in previous steps then enter the new address here.

1. Open your browser and enter the Enterprise IP address into the address line. Press the **Enter** key
2. At the Login page enter the **User name** “admin.”
3. Enter the **Password** “admin.”
4. Click **Go**. The security application will now display.

Connecting Nodes and Configuring System Resources

Configure and Enable the Nodes.

1. In the application select **Setup : Site Settings : Network Nodes**.
2. Select from the **Name** drop-down the node you wish to enable.

NOTE: If there are many nodes it is recommended that you power up one node at a time. This will help avoid confusion.

3. Click the **Rename** link under the drop-down and enter a name that will help you to identify it, e.g. "Office node," “Parking Garage node.”

NOTE: Do not change the **Unique Identifier** field.

4. Click to check the **Enabled** box to the right of the **Name** drop-down. This allows the communication of security data between the Network Controller and the Node.
5. Click **Save**.
6. Repeat steps 2 through 5 with each node in the system.
7. Select **Setup : Site Settings : Network Controller**.
8. Check that the nodes are now connected to the Enterprise controller. Each node should appear in green with the word **Connected**.
9. If any nodes are not yet connected to the Enterprise controller, return to step 1 in this procedure and ensure that all nodes are enabled.

10. If some nodes still will not connect it may be necessary to adjust port forwarding on routers and gateways to allow the nodes on different subnets to communicate with the controller. See **Tech Note 1** for details.

NOTE: It may also be necessary to use nnconfig.exe to assign a specific controller IP address to each remote node, rather than to allow nodes to Auto Discover the controller.

Configure system resources

You can now begin configuring system resources such as time specifications, inputs, outputs, card formats, access levels, etc.

1. Click the **Help** link in the upper right of the eMerge application page.
2. In the Help window click the **Contents** link at the top.
3. On the Contents page click the second link called **Initial System Setup Checklist**.

NOTE: This topic provides a good sequence in which to configure system resources.

4. Alternatively, you can use **Tech Note 2** for a Quick Start to get a door up and working.
5. Test the access control functions.

Specifications

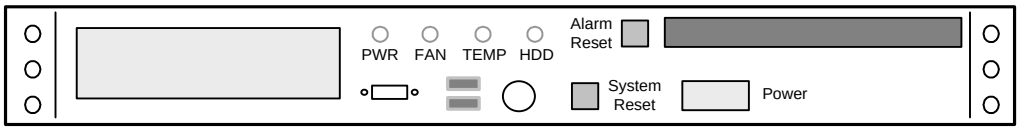
The IEI eMerge Enterprise is a 19” 1U rack mount disk-based network appliance that gives you greater capacity for applications of greater scale and complexity than a standard solid-state eMerge controller.

The Enterprise Ultra is a 19” 2U rack mount network appliance that gives you maximum capacity for applications of greater scale and complexity.

Power Input Rating: 100~240 VAC @50 ~ 60 Hz

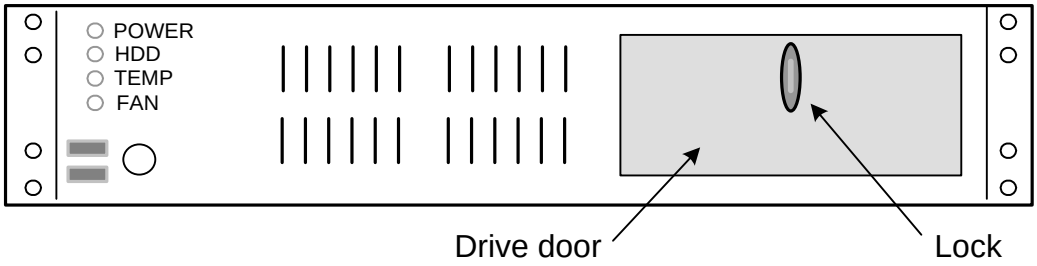
Front Panel LEDs

The front panel of the **eMerge Enterprise** has LEDs, switches and connector ports. Open the front cover to see the panel. The table beneath explains the functions of the LEDs.



Inside the Enterprise front cover.

The front panel of the **eMerge Enterprise Ultra** has LEDs, connector ports, and a lockable hard drive door. The table beneath explains the functions of the LEDs.



The front plate of the Enterprise Ultra.

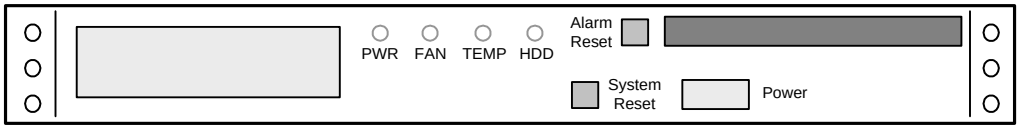
POWER	On Green: Power is supplied to the unit. On Red: Redundant power supply failure. Off: No power.
HDD	Flashes Yellow when drives are accessed.
TEMP	On Green: Unit temperature is OK. On Red: Unit is too hot.
FAN	On Green: Fan is functioning properly. On Red: Abnormal. Off: No power to the fan.

If POWER, TEMP, or FAN LEDs turn red an audible alarm will sound. To stop the audible alarm, press the **Alarm Reset** button inside the drive door. See the image below.

Reset Switches and Drive Lights

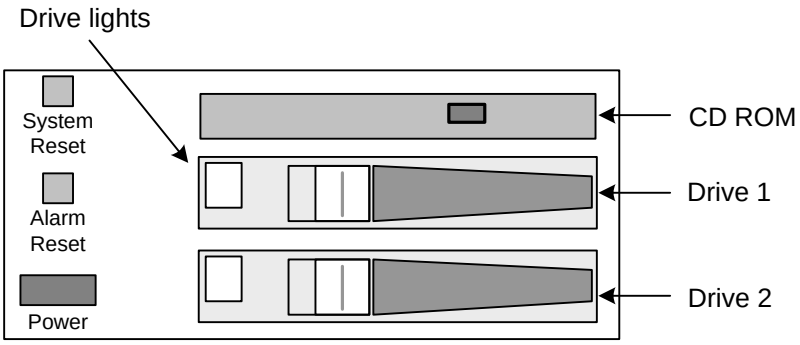
Open the Enterprise Ultra lockable hard drive door, or the Enterprise front cover. See the images below. The table beneath explains the functions of the switches and drive lights.

Behind the Enterprise Front Cover



Inside the Enterprise front cover.

Behind the Enterprise Ultra Drive Door



Inside the Enterprise Ultra lockable drive door.

Drive Lights	On Green: Drive OK. Off or On Red: Drive failure
System Reset	This button restarts the Enterprise controller processes.
Alarm Reset	The eMerge Enterprise has an audible alarm which sounds when the power, temperature, or the fan are in an abnormal state. Press this to stop the audible alarm.
Power	Press and hold for 3 to 5 seconds to force a power off. **NOTE:** It is not recommended that the unit be powered down in this way. To power down the system select **Setup : System Maintenance : Utilities** and in the **System functions** section click the **Shutdown Now** button. The eMerge Enterprise will back itself up and power off.

The eMerge Enterprise Hard Drives

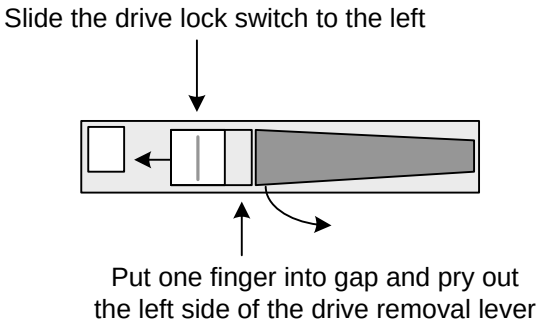
The eMerge Enterprise comes equipped with an 80 gigabyte hard drive. This drive can be replaced but the unit must first be powered down.

The eMerge Enterprise Ultra comes equipped with hot swappable RAID 1 mirrored drives. The drives are 80 Gigabytes each. If a drive is not functioning properly the drive light shows red or does not light up at all. Once a new drive is inserted it will be automatically updated with a mirror image of the other drive.

Removing and Replacing Enterprise Ultra Hard Drives

NOTE: You need not power down the Enterprise Ultra to perform this operation. The Enterprise Ultra will continue to perform its access control functions throughout this process.

1. Open the lockable drive door.
2. Slide the drive lock switch to the left. See image below.
3. Place a finger into the gap to the right of the drive lock switch and pry the drive removal lever out and to the right. This will unseat the drive.
4. Pull the drive out of the Enterprise Ultra.
5. Place the new drive into the Enterprise Ultra and press the drive level all the way in until it snaps into position.
6. The new drive will automatically update itself to mirror the other drive.



Removing a hot-swapable drive

Migrating from eMerge 3.X to eMerge Enterprise 3.X

If you are upgrading your solid-state eMerge system capacity by migrating to a disk-based eMerge Enterprise complete the following procedures. You will need an eMerge Enterprise or Enterprise Ultra and a Node-only blade to replace the Controller/Node blade that is currently in your solid-state eMerge.

Back up the eMerge data

1. Login to the eMerge system.
2. Select **Administration : Utility : Backup System**.
3. Enter a comment to explain the purpose of this backup.
4. Click **Full Backup**.
5. When the backup is complete it is listed in the **Existing Backups** section.
6. Download a copy of this backup to a disk drive by clicking the get link in the **Download?** column.
7. In the File Download dialog click **Save**.
8. In the Save As dialog browse to the location where you wish to save this backup.
9. Click **Save**.

Replace the solid-state eMerge controller with a Node-only blade

1. Select **Setup : Site Settings : Network Nodes**.
2. From the **Name** drop-down select the Node that you will replace.
3. Write down the Node name and Unique Identifier for this node. You will need to know this later to complete your configuration.
4. Select **Setup : System Maintenance : Utilities**.
5. Click the **Shutdown Now** button in the **System Functions** section of this page.
6. Please wait for the system countdown to complete and you will hear two beeps.
7. Remove power from the eMerge.
8. Replace the Controller/node blade with a Node-only blade.
9. Re-power the now Node-only eMerge.

NOTE: By default, nodes come from the factory set to DHCP.

Start the eMerge Enterprise and restore the data backup

NOTE: If you set your eMerge Enterprise IP settings to the same settings as the previous controller then router settings, port forwarding settings, and Node auto-discovery settings will not need to be changed.

1. Connect power and the network to the Enterprise.
2. Open the drive door on the front panel of the Enterprise and press the power switch. The system may need 2 to 3 minutes to launch.
3. Open your browser and enter the Enterprise IP address into the address line. Press the Enter key.

NOTE: The default IP address of an eMerge Enterprise is 192.168.0.250. If you changed this in previous steps then enter the new address here.

4. At the Login page enter the **User name** “admin.”
5. Enter the **Password** “admin.”
6. Click **Go**. The security application will now display.
7. Select **Setup : System Maintenance : Restore System**.
8. Click the link provided to upload the backup you previously made. Browse to the location of the system backup file and click **Save**. The backup should now appear on the **Restore System** page.
9. Click the button in the **Restore?** column next to the backup you wish to restore.
10. Click **Restore Now**.
11. When the system restore has completed you will be logged out.

Login and Swap the Unique Identifiers of the removed and newly installed Nodes

1. Log back in to the Enterprise.
2. Select **Setup : Site Settings : Network Nodes**.
3. Select from the **Name** drop-down the node which you removed.
4. Click the **Commands** tab.
5. Click the **Swap** button.
6. In the dialog box select from the drop-down the newly installed node.

NOTE: If other nodes are powered you may need to know the Unique identifier for this new node to make the correct selection. You can use nnconfig.exe to get this UID.

7. Click **Save** and confirm the swap in the popup.

NOTE: Since resources (inputs, outputs, readers, etc.) are specific to a node unique identifier, the Swap you performed in this procedure has reassigned the old node’s resources to the new node.

8. Select **Setup : Site Settings : Network Nodes**.
9. Select from the **Name** drop-down the old node that you previously removed.
10. Click **Delete**.

NOTE: This node is no longer in the network and deleting it will help avoid confusion.

Enable and connect remaining nodes to the Enterprise

1. Select **Setup : Site Settings : Network Nodes**.
2. Select a node from the **Name** drop-down.
3. Click the **Enabled** box and make any needed changes to the node’s settings.
4. Click **Save**.
5. Repeat steps 2, 3, and 4 for each node in the system.
6. Select **Setup : Site Settings : Network Controller**.
7. Check that the nodes are now connected to the Enterprise controller. Each node should appear in green with the word **Connected**.

8. If any nodes are not yet connected to the Enterprise controller, return to step 1 in this procedure and ensure that all nodes are enabled.
9. If some nodes still will not connect it may be necessary to adjust port forwarding on routers and gateways to allow the nodes on different subnets to communicate with the controller. See **Tech Note 1** for details.

   NOTE: It may also be necessary to use nnconfig.exe to assign a specific controller IP address to each remote node, rather than to allow nodes to Auto Discover the controller.

10. Test system access control functions.

Backup the Enterprise controller

1. Select **Administration : Utility : Backup System**.
2. Enter a **Comment** to explain the purpose of this backup.
3. Click **Full Backup**.
4. When the backup is complete it is listed in the **Existing Backups** section.