# LiveWire Grid

QUICK GUIDE

## About Grid

Grid is an SaaS based cloud service provided as part of the LiveWire maintenance subscription for managing, configuring, and monitoring certain aspects of LiveWire devices, both physical appliances and virtual. Grid is the preferred way to manage and configure one or more LiveWire appliances from a single pane of glass in the cloud.

This guide describes how Grid works in conjunction with your network and LiveWire device. Additionally, instructions for setting up and using Grid with your LiveWire device are also included.

Grid is a completely new implementation of the DMS (Device Management Service) SaaS offering.

### Grid Portal

Grid portal is hosted in the cloud at *https://grid.liveaction.com/*. Grid portal displays all of a customer's LiveWire devices, both physical and virtual, in an interactive list. From the Grid portal many aspects of the LiveWire devices can be configured individually, as well as in bulk.

### Grid on LiveWire

The DMS service running on the LiveWire device is the liaison between Grid portal and the LiveWire device. The DMS service is enabled by default, but can be enabled or disabled from the LiveAdmin Utility on the LiveWire device. See *Enabling Grid Support* on page 26.

### Grid Communications

The diagram below illustrates how communication flows between LiveWire and Grid.

LiveWire and Grid portal both communicate through a well-defined REST-API over HTTPS. If necessary, LiveWire can also be configured to use a proxy server using LiveAdmin.

All communications between LiveWire devices and Grid portal are initiated by the device. In other words, from the LiveWire point of view communication is outbound only. This is more secure, and practical, since most enterprise networks allow connections to be done from the inside-out, but not from the outside-in. This means that all actions initiated by the user through Grid portal are queued up until the device connects to Grid and requests the

configuration. The default interval for how often LiveWire checks the Grid for configuration changes is 10 minutes. The interval can be changed using the LiveAdmin utility.

**DMS - Communication Overview**



www.websequencediagrams.com
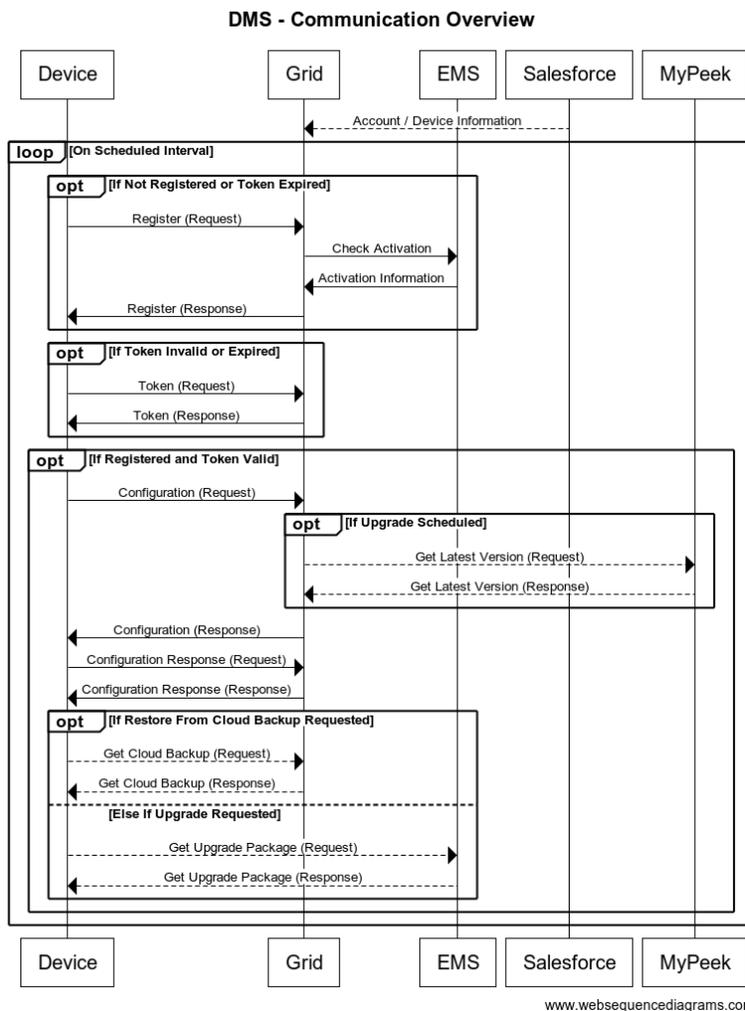
## Grid Registration

When a LiveWire is purchased, it is entered into Grid automatically, and associated with the customer account. If it is the first LiveWire the customer has purchased, the account is created, and an email invite will be sent with a link to login to the Grid portal account.

When a LiveWire device is first connected to the network and either gets an IP automatically through DHCP or is given a static IP address, it will reach out to Grid portal and register itself. During the registration process, Grid will attempt to activate the LiveWire, and Grid will return any configuration changes that were made using the DMS portal.

When a user logs in to Grid portal they will see all of their LiveWire devices. Even if the devices have not been connected to the network, configuration changes can still be made to the device. When the device does connect to Grid portal, the configuration changes will be applied to the LiveWire.

## Grid Automatic Activation

During the registration process, Grid portal will automatically activate the LiveWire. The result of the activation is a license file that is installed onto the device. With the license installed, the user will not have to perform this process manually the first time they connect using Omnipeek. Instead, the user will be able to go right to work on creating a capture and using LiveWire.

If the LiveWire is factory reset, it will lose the activation file. In this case, when the LiveWire is given an IP address and registers with Grid portal, it will be given the license file again, and become activated.

# Using Grid

## Managing and Configuring LiveWire Devices

If you have one or more LiveWire devices, you can use Grid to manage and configure these devices from the cloud. In order to use Grid for the LiveAction appliance, you must first enable the *Enable Centralized Management* option in the LiveAdmin utility as described in *Enabling Grid Support* on page 26.

| | |
|---|---|
| **Note** | When *Centralized Management* is enabled, you can make local changes to the LiveWire device using the LiveAdmin utility; however, changes made with Grid will overwrite any local changes made with the utility. |

| | |
|---|---|
| **Note** | All Grid communications require that the LiveWire device has Internet access and is able to access various websites including *https://grid.liveaction.com* and *https://mypeek.liveaction.com* using TCP over port 443. If necessary, configure a DNS server to resolve the URLs above. |

Additionally, all Grid communications are initiated by the LiveWire device, so it is not necessary to open a port in the firewall for communications.

To use Grid to manage and configure your LiveWire device:

1. Login into Grid at *https://grid.liveaction.com.*

   A LiveWire device record is added to Salesforce and it calls the register call. If the user does not already exist in the associated Okta Org a user is created and the credentials are sent out. Second, when an existing Grid user adds a new user to their account, credentials will be sent out.
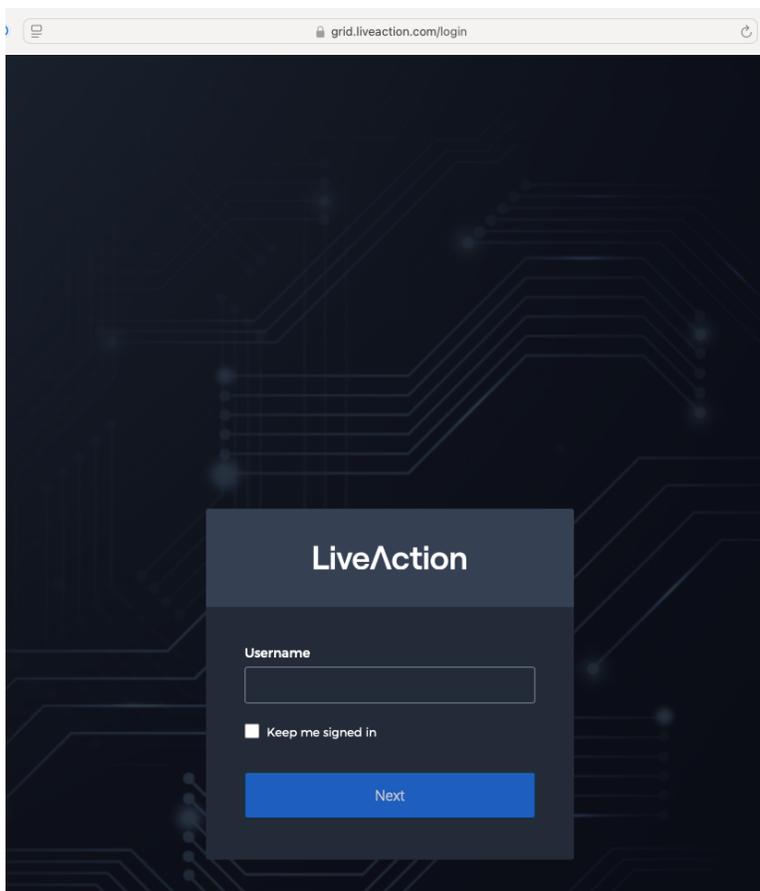
# Grid Devices Tab

Grid Devices tab displays the LiveWire devices associated with your account. A description of the available options and settings in the Devices tab is provided below.



## Device State

The *Device State* displays whether the device is able to connect to the DMS portal.

- *Up*: Displays the number of devices that were able to connect to the Grid portal
- *Down*: Displays the number of devices Grid has not heard from in the last two intervals. The default interval is 10 minutes.
- *N/A*: Displays the number of devices that are not available to the DMS portal.

## Registered Devices

The *Registered Devices* displays the number of devices that have registered with Grid.

- *Present*: Displays the number of devices that have registered with Grid.
- *None*: Displays the number of devices that have not registered with Grid.

## Activation Status

The *Activation Status* displays the number of devices that have been activated.

- *Present*: Displays the number of devices that have been activated with Grid.
- *None*: Displays the number of devices that have not been activated with Grid.

## Template

Click the *Template* button to select a template to apply to the selected devices. Templates allow you to apply version-specific settings to one or more devices. To create a template or modify an existing template, see *Grid Templates Tab* on page 19.
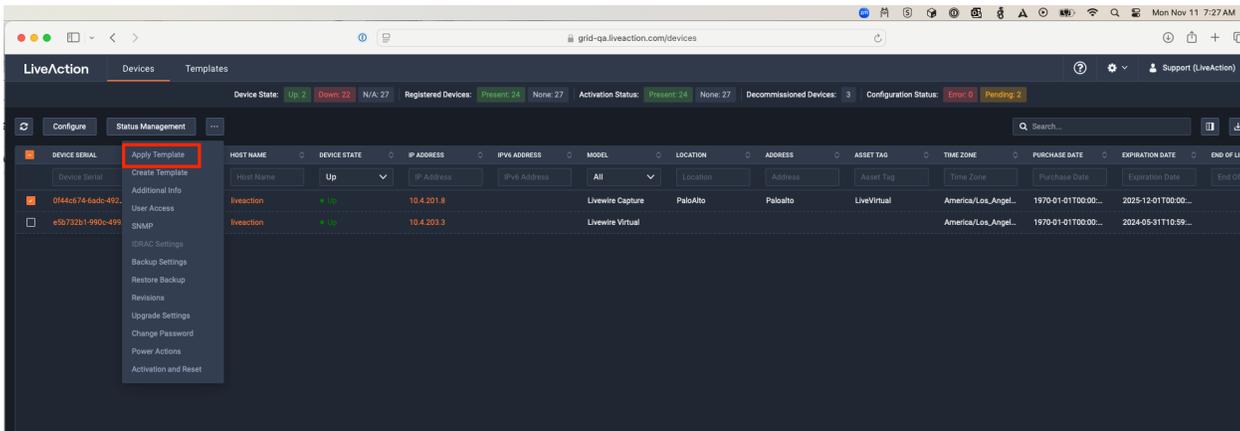


## Configure

Click the *Configure* button to configure the selected devices. If multiple devices are selected, certain configuration options will not be available and greyed out; for example, the *Device Name*. There are tabs available for configuring *Settings*, *Time Settings*, and *Authentication*.

### Settings
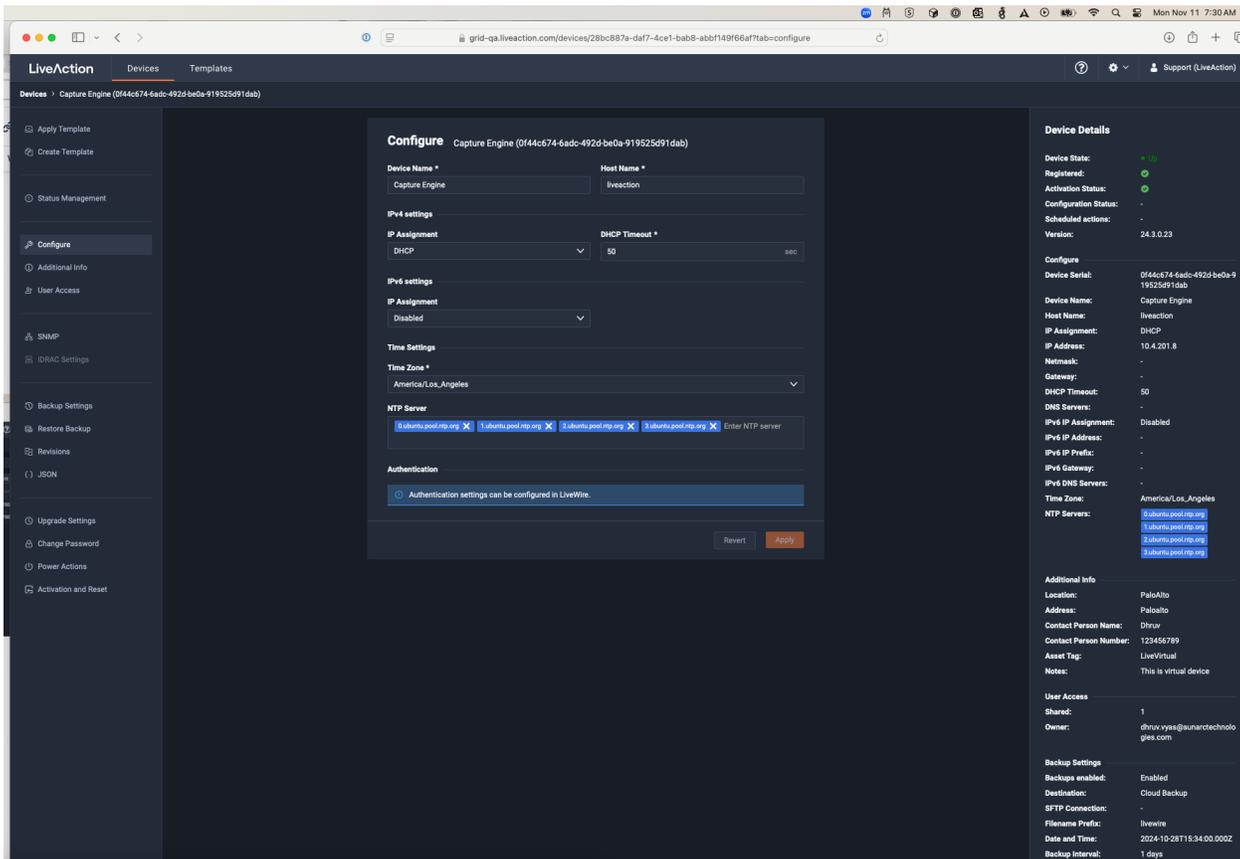


- ◦ *Device Name*: Displays the unique name given to the device. Type a new name to change the name.
- ◦ *Host Name*: Displays the host name of the device used by DNS.

- *Location*: Displays the general location of the device. Type a new location to change the location. We suggest entering the physical location of the device for the organization. For example, 'Office.'
- *Address*: Displays the mailing address of the device. For example, 123 Main St., New York, NY.
- *End of Life Date*: Displays the date when the device should be replaced.
- *Asset Tag*: Displays the asset tag of the device. Type the asset tag to change it.
- *Notes*: Type any notes to add to the device you are configuring.
- *IP Assignment*: Displays the current IP assignment for the device. You can select either DHCP or Static. If the IP Assignment is DHCP, then the IP assignment is configured automatically via the DHCP server. If the IP Assignment is Static, then the options below are available:

**Important!** LiveWire is pre-configured to obtain an IP address automatically from a DHCP server; however, we strongly recommend the use of a static IP address for LiveWire. If DHCP is selected as the *IP Assignment*, and if the address should change on a new DHCP lease, then you must look up the new IP address assigned to LiveWire.

**Note** If *DHCP* is selected, you have approximately two minutes to connect LiveWire to your network in order for the DHCP server to assign an IP address. If an IP address is not assigned to LiveWire by the DHCP server within two minutes of being connected to the network, LiveWire defaults to a static address of 192.168.1.21. Please make sure LiveWire is connected to your network within the two minute time period from the time you click *Apply*. If you reboot LiveWire, the two minute clock is also reset.

- *Address*: Displays the IP address assigned to the device. Type a new address to change the IP address.
- *Netmask*: Displays the netmask address assigned to the device. A netmask address, combined with the IP address, defines the network associated with device. Type a new address to change the netmask address.
- *Gateway*: Displays the gateway address, also known as 'default gateway,' assigned to the device. When the device does not have an IP route for the destination, the IP packet is sent to this address as it does not know how to direct it locally. Only a single default gateway can be defined. Type a new address to change the gateway address.
- *DNS*: Enter the address of any DNS (Domain Name Server) servers to add to the configuration. A Domain Name Server translates domain names (e.g., http://www.liveaction.com ) into an IP address. To add a DNS server, enter the address of the server, and click *Add Server*. Multiple DNS name servers can be defined. You can also edit or delete any defined DNS servers.
- *Add Server*: Click to add the DNS server to the configuration.
- *DNS Servers*: Displays the DNS servers added to the configuration.
- *Edit DNS*: Click to edit or update the DNS server in the configuration.
- *Delete DNS*: Click to delete the DNS server from the configuration.
- *DHCP Timeout*: Displays the amount of time (in seconds) the device will wait for a DHCP address.

## Time Settings
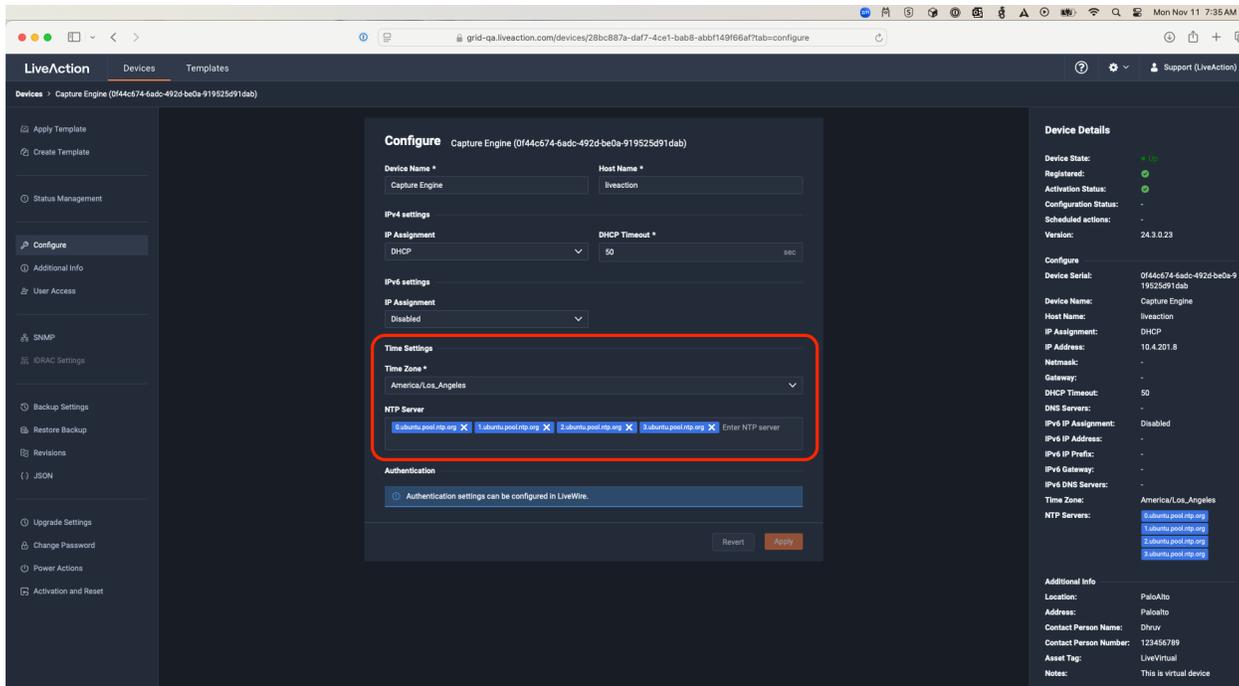


- ○ *Time Zone*: Displays the time zone of the device. Select a different time zone to change the time zone.
- ○ *NTP Server*. Enter the address of any NTP servers to add to the configuration, and then click *Add Server*.
- ○ *NTP Servers*: Displays the list of NTP servers added to *Time Settings*. You can click the *Edit* icon to edit an NTP server in the list, or click the *Trash* icon to remove an NTP server from the list.
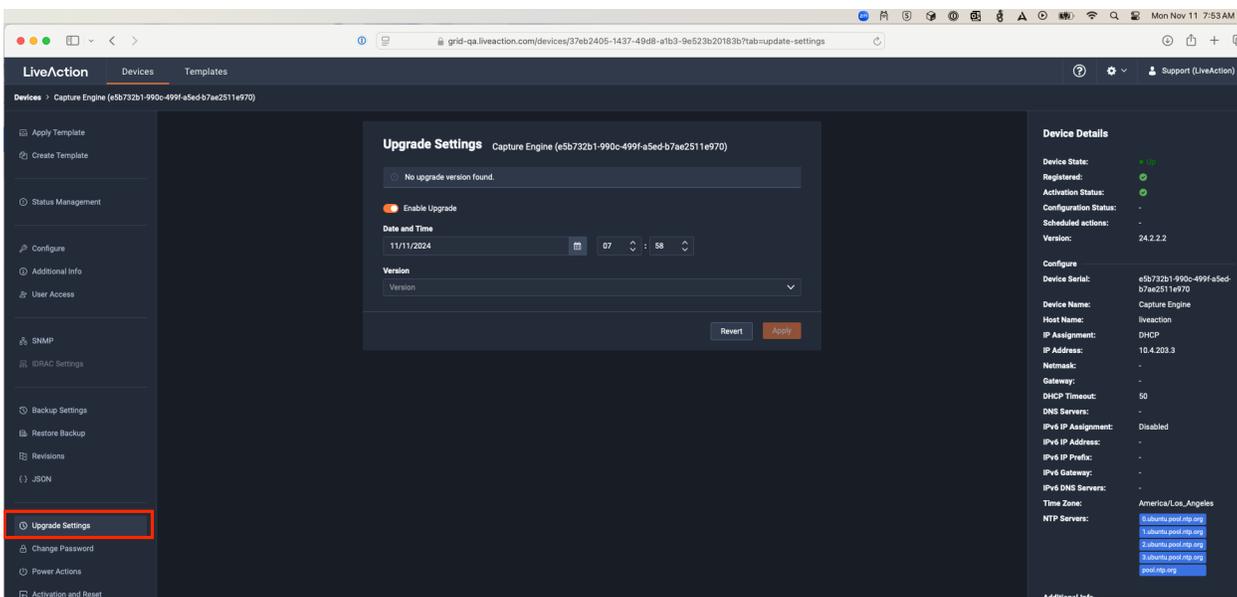
## Authentication
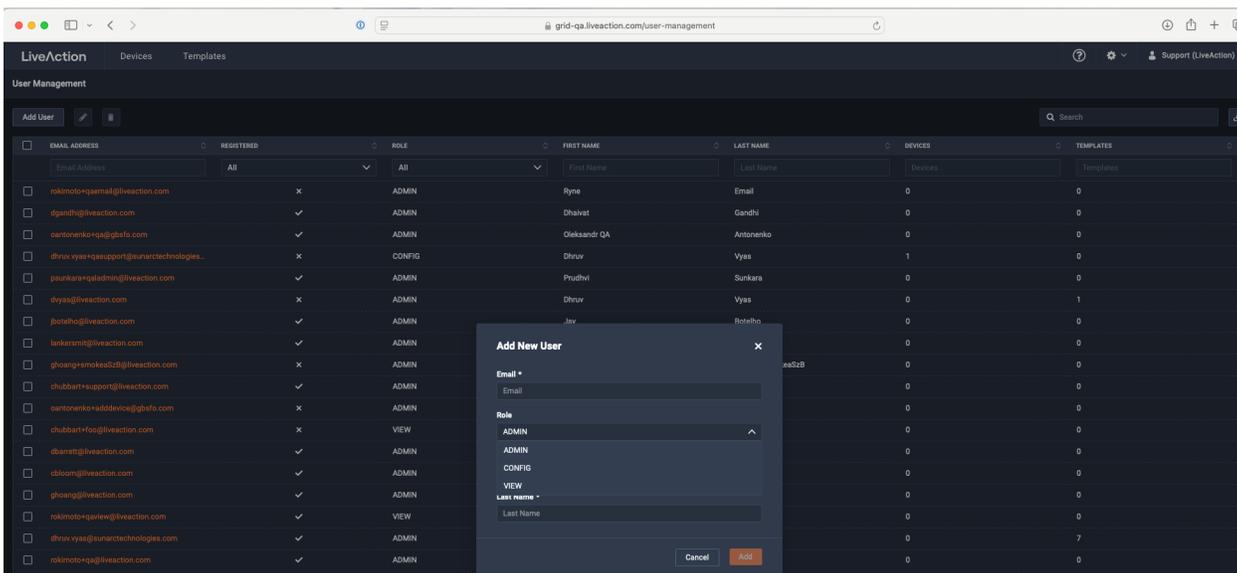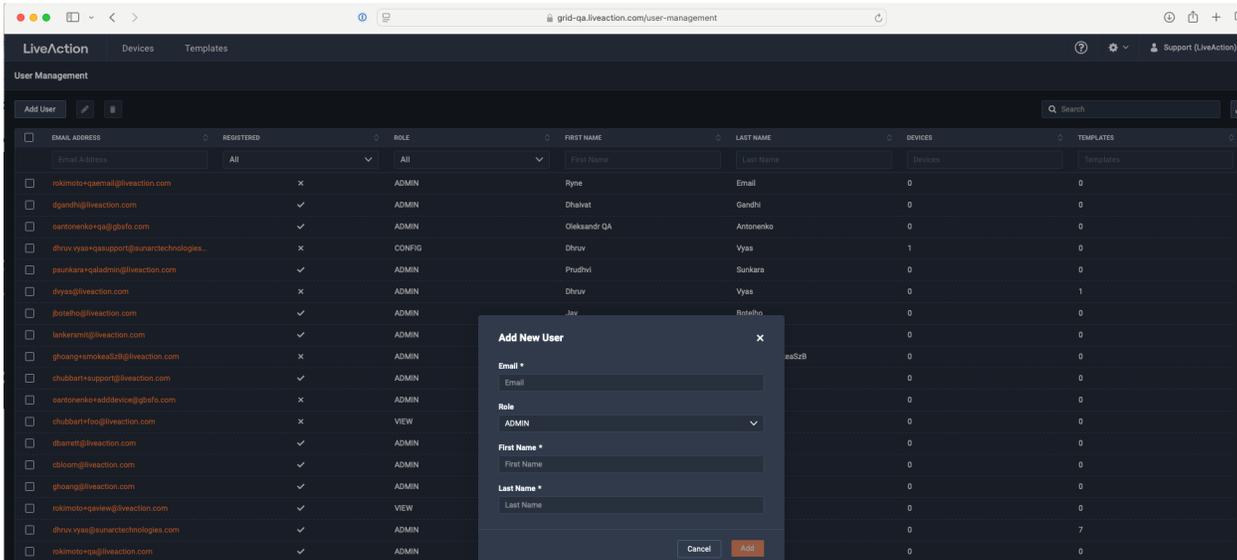




Grid supports adding users via the portal and these users will receive a welcome email from Okta with a link to login.

Additionally, an admin user can configure SAML based SSO access by navigating to Settings (gear icon) and selecting Settings. Users can follow the instructions on screen and configure their IDP.
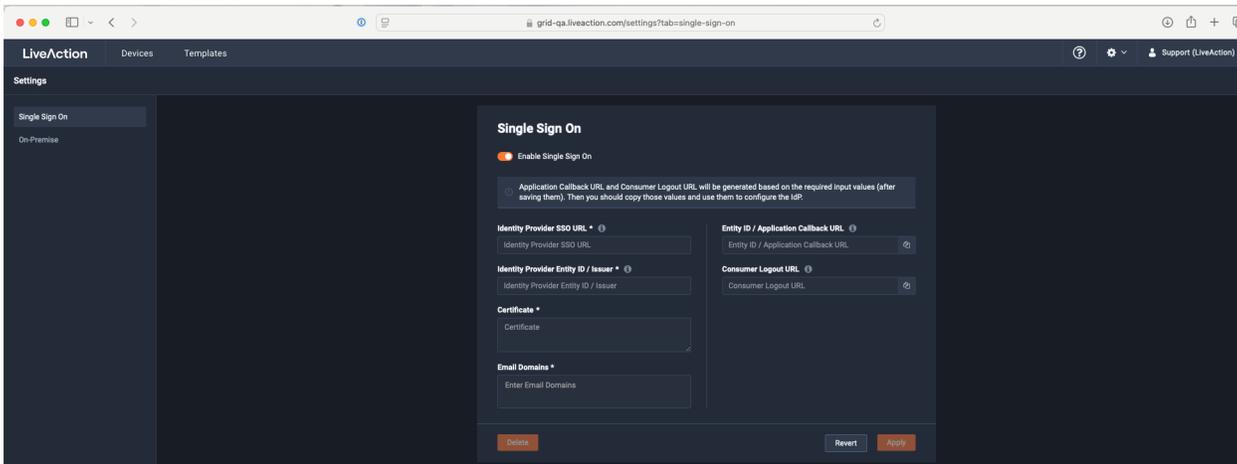


## Upgrade

Click the *Upgrade* button to upgrade the selected appliance remotely through Grid. User can choose to upgrade to any newer version than what is running on the device. There is no capability to upgrade to a previously released version.



- *Disable*: Select to disable the upgrade on the selected devices.
- *Enable*: Select to enable the upgrade on the selected devices. If you enable the upgrade, you are presented with settings to specify the date and time the upgrade should take place. Because all communications are initiated from the device once every ten minutes, the upgrade will happen as the result of the device communicating with the network, sometime on or after the selected time.
- *Apply*: Click to save the changes to the selected devices.

## Refresh
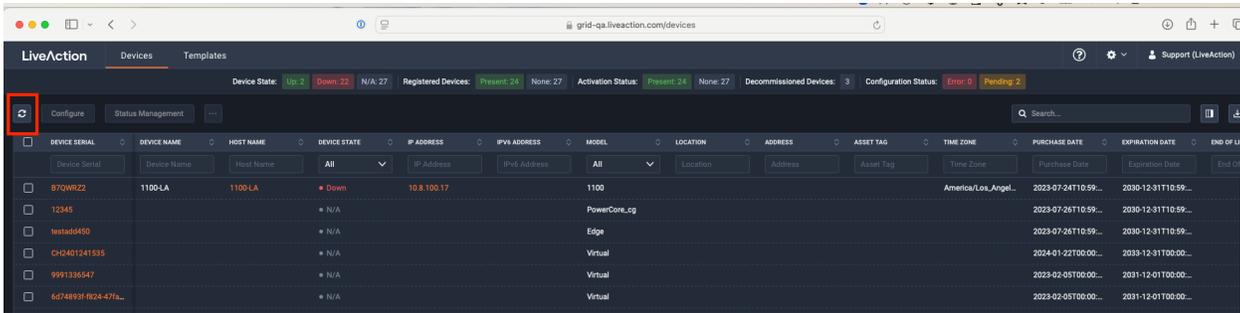


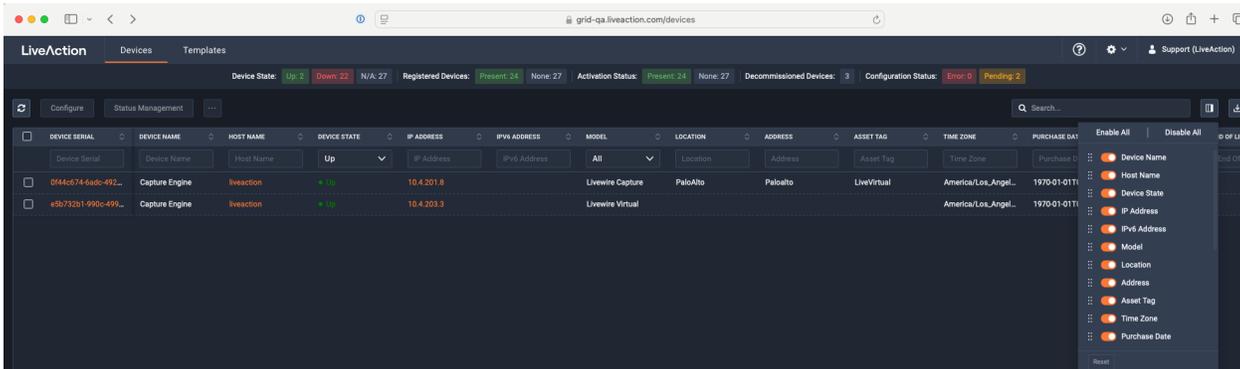Click the *Refresh* button to refresh the list of devices.

## Search

Use the *Search* field to locate a specific device in the list of devices. Simply enter a text string to display all appliances that match the text string.
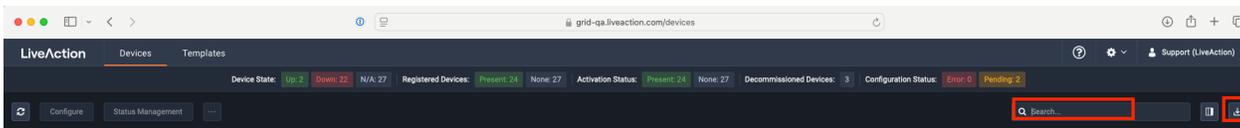


## Display Columns

Click the *Display Columns* icon and then select the columns you want to display in the list of devices.



## Export to CSV

Click the *Download* icon to export list of devices as a .csv file.



## Device Column Headings

Descriptions of the columns displayed in the list of devices are provided below.

Below each of the column headings is either a text box or list box that you can use to filter the devices displayed in the list of Devices. To filter using the text box, simply enter a text string to display the devices that match the text string. To filter using a list box, click the box and select an option to display the devices that match that option.
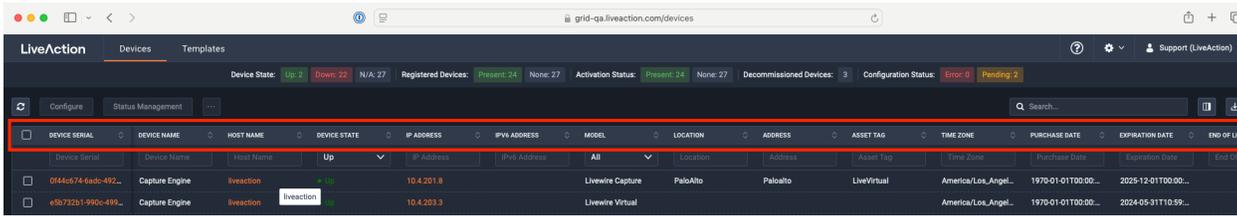


- ○ *Device Serial*: Displays the serial number of the device.
- ○ *Device Name*: Displays the name of the device.
- ○ *Host Name*: Displays the host name of the device used by DNS.
- ○ *Device State*: Displays whether the device is *Up* or *Down*. A device is up if it has contacted Grid in the last 25 minutes.
- ○ *IP Address*: Displays the IP address of the device. The *IP Address* value is a link which can be used to connect directly to Omnipeek running on the device. This makes it easy to use Grid as a launch pad to access all of the devices being managed. It can also be used to discover the *IP Address* in the case where the device is set to DHCP, or for some other reason the *IP Address* is not known. The *IP Address* is provided by the device every time the device connects back to the portal, which by default is every 10 minutes. This way, if the *IP Address* of the device changes, the *IP Address* value displayed in the DMS portal will reflect that.
- ○ *Model*: Displays the model of the device (*Edge, 1100, 3100,* or *Virtual*).
- ○ *Location*: Displays the location of the device.
- ○ *Address*: Displays the address of the device. Typically, this is the mailing address where the device is located.
- ○ *Asset Tag*: Displays the asset tag of the device.
- ○ *Time Zone*: Displays the time zone of the device.
- ○ *Expiration Date*: Displays the date that the maintenance on the device will expire. Once the expiration date has passed, you can still access Grid and use it to manage most of the device configuration; however, until the maintenance is renewed, the device cannot be upgraded to a newer version. As LiveAction releases new versions a few times a year with significant improvements, we recommend keeping the devices up to date with the latest releases of the software.
- ○ *End Of Life Date*: Displays the date for when the device should be replaced.
- ○ *Notes*: Displays any notes entered for the device.
- ○ *Version*: Displays the version number of the software installed on the device.
- ○ *Engine Type*: Displays the type of device, which can be *LiveWire, LiveCapture,* or *LiveWire Virtual.*
- ○ *Shared Users Count*: Displays the number of secondary users that have access to the device.
- ○ *Scheduled Action(s)*: Displays any 'Actions' scheduled for the device.
- ○ *Configuration Status*: Displays any status associated with configuration of the device.
- ○ *Registered*: Displays a check mark if the device has been registered with LiveAction.
- ○ *Activation Status*: Displays a check mark if the license on the device is valid and not expired.

## Change Password

Select the *Change Password* option to change the password of the selected devices.
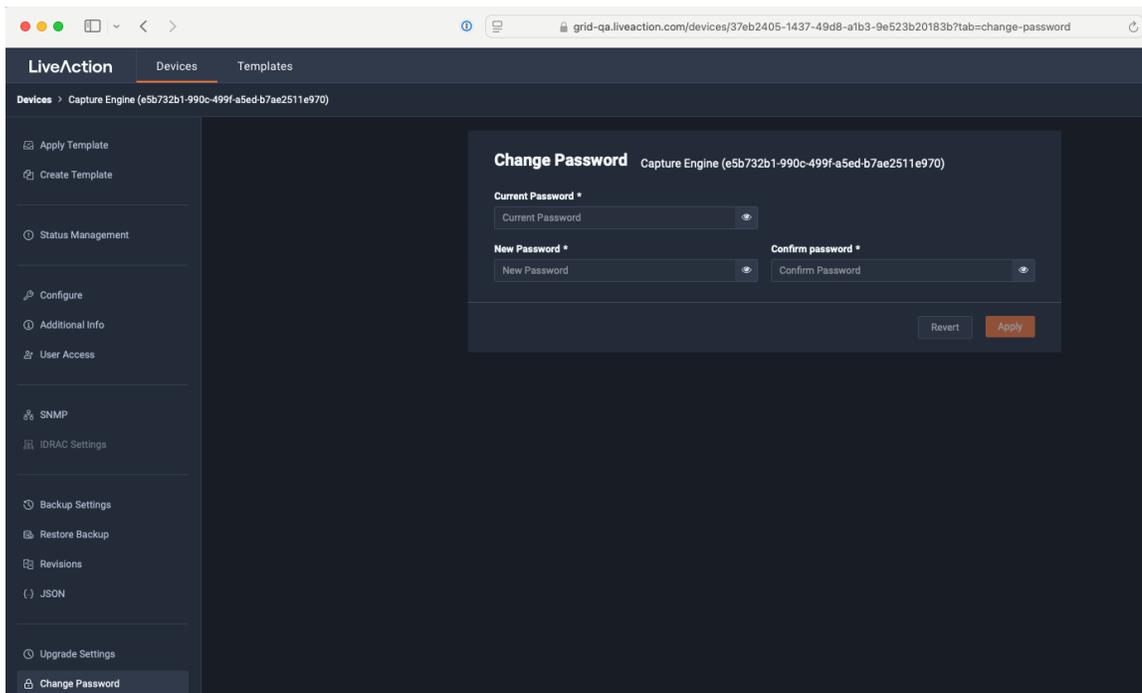


- ◦ *Current Password*: Enter the current password.
- ◦ *New Password*: Enter the new password. The new password must meet the following requirements:

  Must have 5 different characters than the last password.
  Must be at least 6 characters.
  Must contain at least 1 number
  Must contain at least 1 uppercase character.
  Must contain at least 1 lowercase character.
  Must contain at least 1 special character.

- ◦ *Confirm Password*: Enter the new password again.

## Power Actions

Select the *Power Actions* option to perform the actions below on the device.
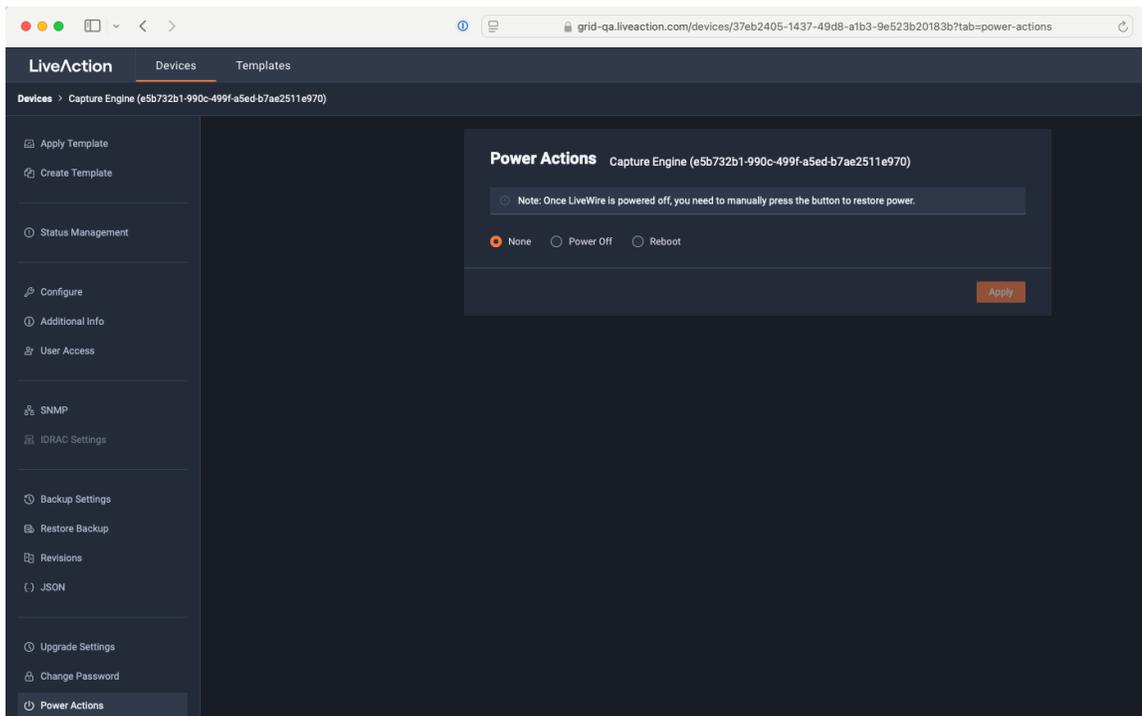


- ○ *None*: Select to not perform an action on the selected appliances.
- ○ *Power Off*: Select to power off the selected device. Once the device is powered off, you must manually press the power-on button on each of the devices to power them back on.
- ○ *Reboot*: Select to reboot the selected appliances.

## Activation and Reset

Select the *Activations and Reset Actions* option to perform the actions below on the device.
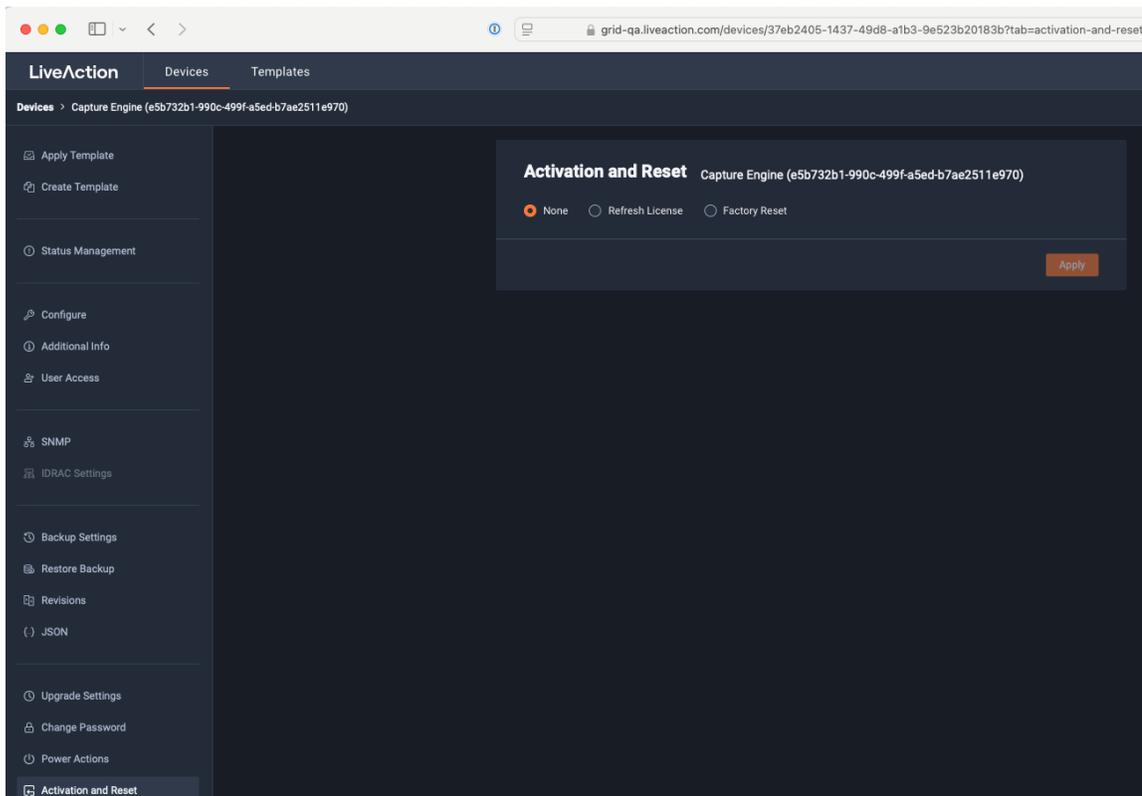


- ◦ *None*: Select to not perform an action on the selected appliances.
- ◦ *Factory Reset*: Select to reset the selected appliances to their factory default settings.
- ◦ *Clear Activation ID*: Select the check box to clear the activation ID.

**Important!** If you select *Factory Reset* on a LiveWire Edge (or by either pressing the reset button or from the command line), then you will also need to also select *Clear Activation ID* for that appliance in Grid.

## SNMP
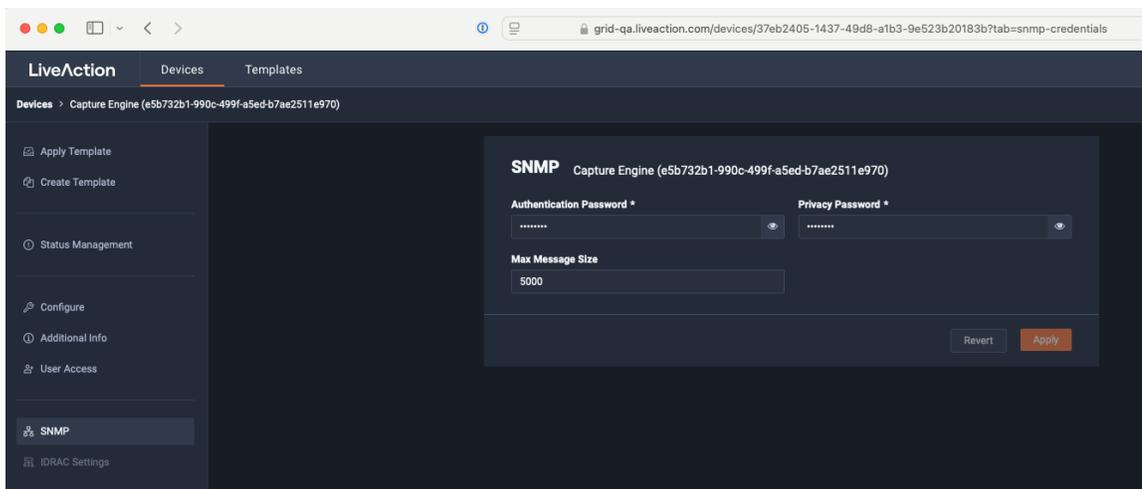
## Backup Settings

Select the *Backup Settings* option to configure backup options for a specific device.
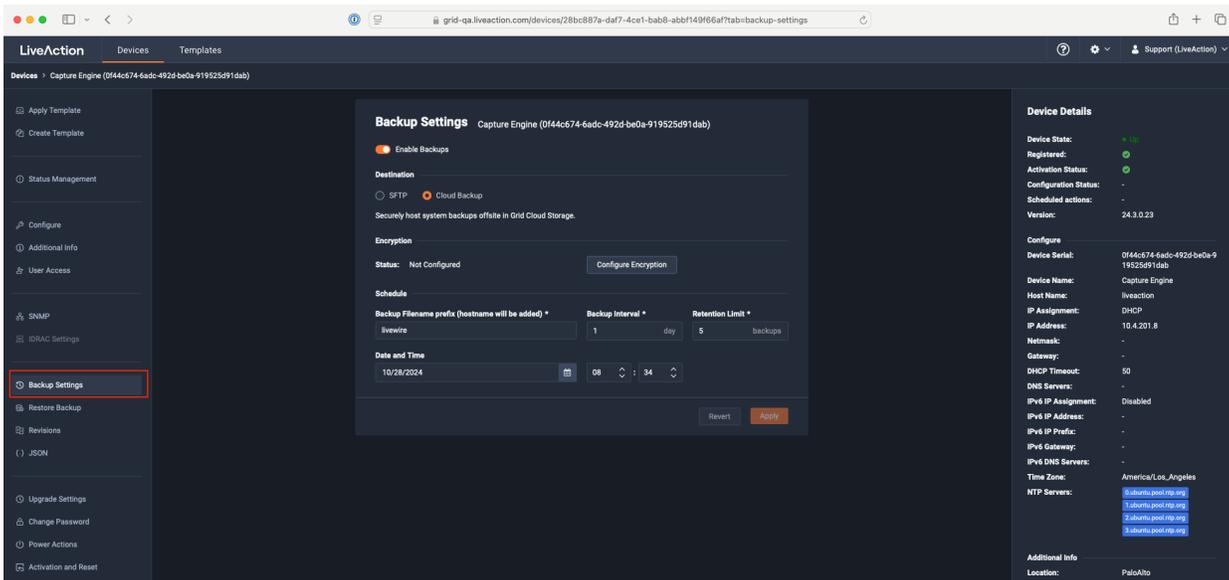


- ◦ *Enable backups* - A toggle to enable or disable configuration backup
- ◦ Destination
    - ◦ *SFTP*
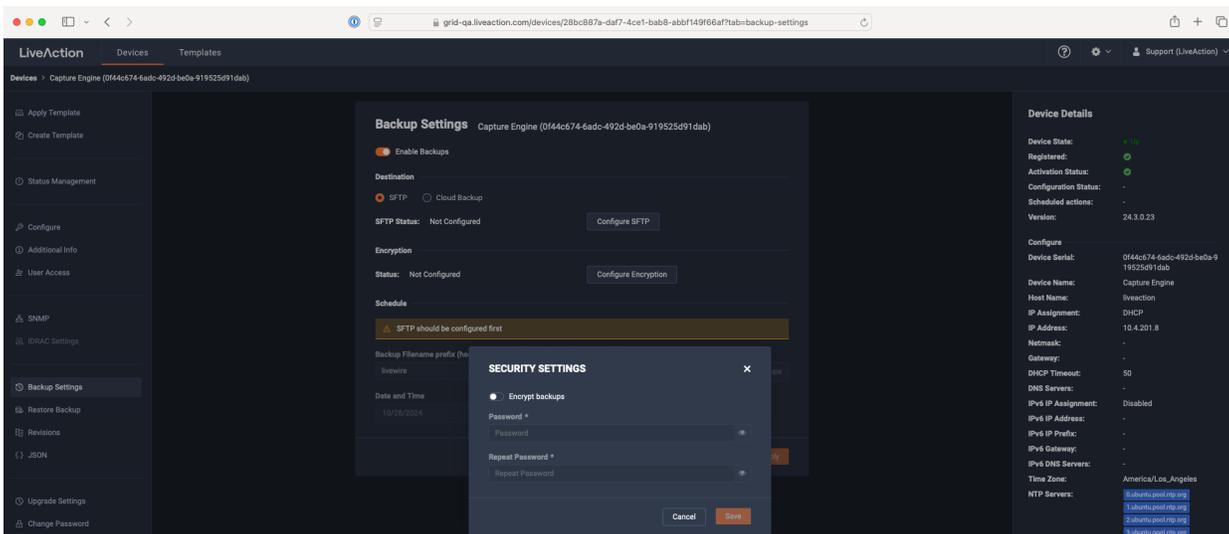


Customers can configure backups to be sent to an SFTP server of their choice inside their environment.

◦ *SFTP Status* - Indicates if SFTP server is configured.
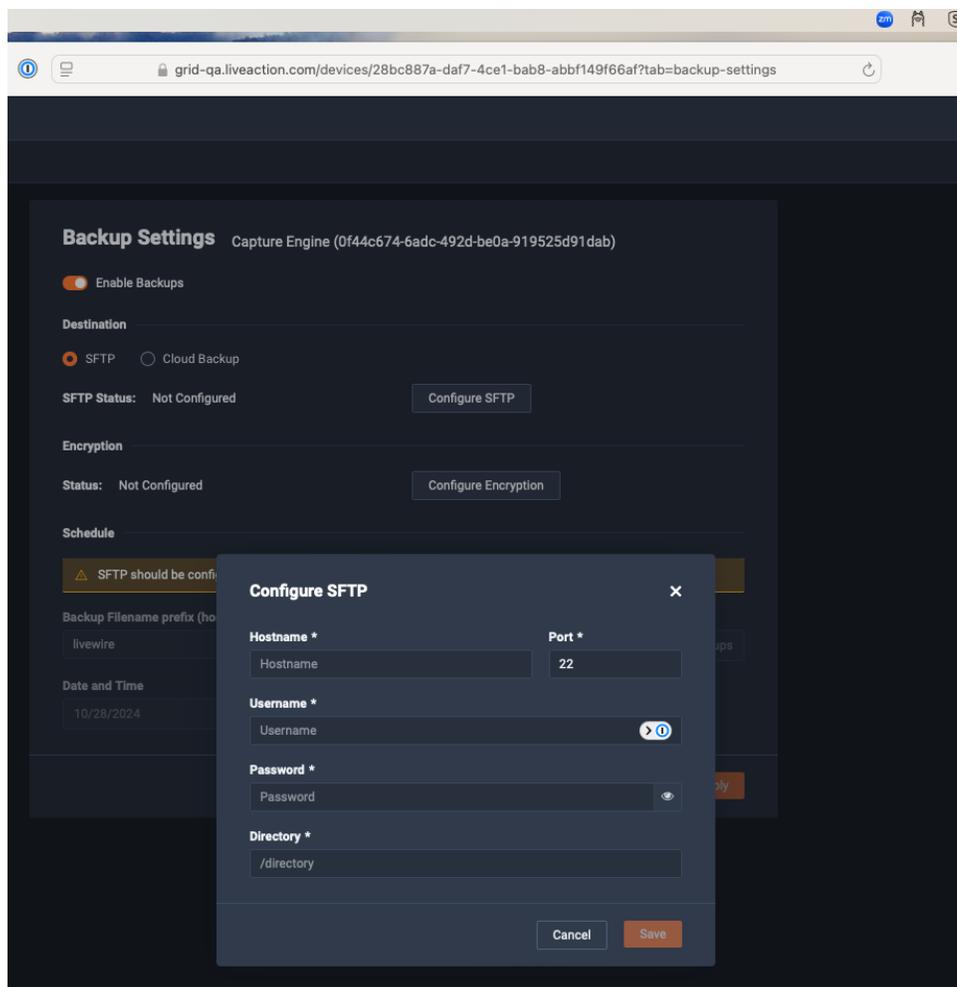


  ◦ SFTP Status - Indicates if SFTP server is configured or not

  ◦ Configure SFTP field:
    *Hostname* - the hostname of the SFTP server
    *Port* - the port number of the server FTP application
    *Username* - the username for SFTP user
    *Password* - the password for the SFTP user
    *Directory* - Where the backups are to be stored on the SFTP server

  ◦ *Cloud Backup* - When selected, the configuration backup is stored in Grid SaaS as an encrypted backup.

◦ *Schedule* - The frequency of backup and how many backups to be stored and a time selector for the backup needs to be taken.

## Restore Backup

Users may introduce changes to the configuration that is not desired and want the ability to revert to an older configuration state. Restore backup allows users to be able to choose a backup version of the configuration. When backups are configured, the list of backups for each device is visible in this section. The list includes

1. *Status* - indicates whether the backup is successful or not

2. *Filename* - the filename of the backup file

3. *Backup Time* - When the backup took place

4. *Location* - The location of the backup file (indicating the full path for the file)

5. *Action* - A user can select a backup and apply that configuration to the device.

## Revisions

Admin users can click *Revisions* to view the configuration changes made against a LiveWire device.

Admin users can create and edit configuration of LiveWire devices from the Grid UI. When a LiveWire device is connected to Grid, it receives any configuration updates made on the LiveWire device and is stored as a revision. Any configuration made on the device and pushed to Grid is shown as Created by the device.

If an admin user creates or updates the device configuration from Grid, a copy of the device configuration made by that user is also stored under *Revisions*.

## Application Config

The current running configuration of a LiveWire device is shown here. If the device is running 24.3 or newer version, then all the configuration (including, Alerts, alarms, Filters, Captures etc) are shown in the section as a JSON document. If the device is running an older version, then only the ACL and user permission configuration is shown in this section.

# Grid Templates Tab

The Grid *Templates* tab displays the templates associated with your account. Ten plates allow you to configure settings independent of a particular device, and then apply the template, and thus the settings, to a device, or multiple devices in bulk at the same time. A description of each of the available options and settings in the *Templates* tab is provided below:



## Add Template

Click the *Add Template* button to display the *Add Template* dialog to add a new template to the configuration.
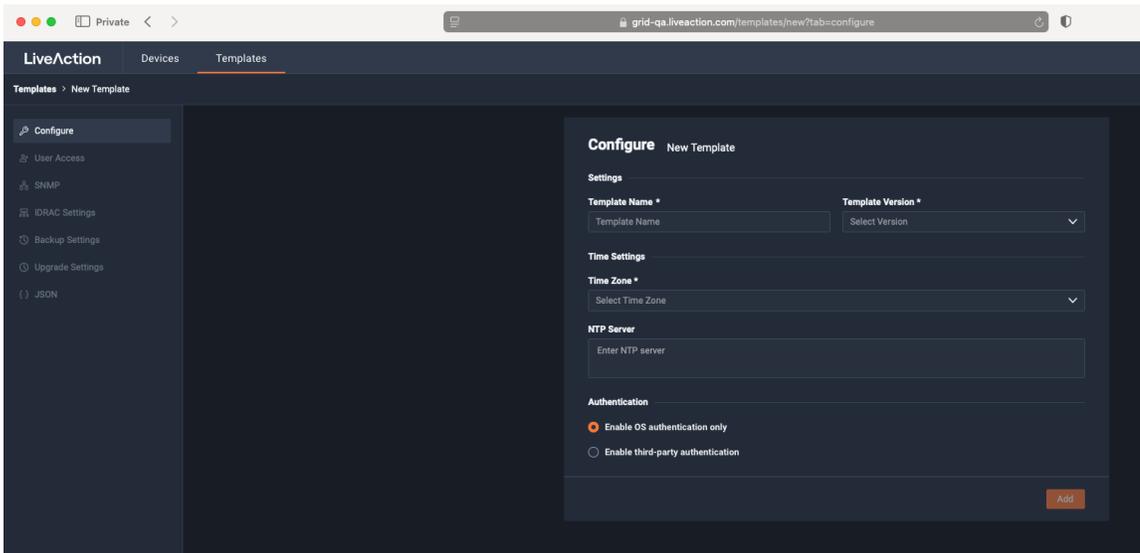


- *Template Name*: Type a name for the template.
- *Template Version*: Click to select the version of the template you are configuring.
- *Timezone*: Click to select the timezone for the template.
- *NTP Server*: Enter the address of any NTP servers to add to the configuration, and then click *Add Server*.
- *NTP Servers*: Displays the list of NTP servers added to *Settings*. You can click the *Edit* icon to edit an NTP server in the list, or click the *Trash* icon to remove an NTP server from the list.
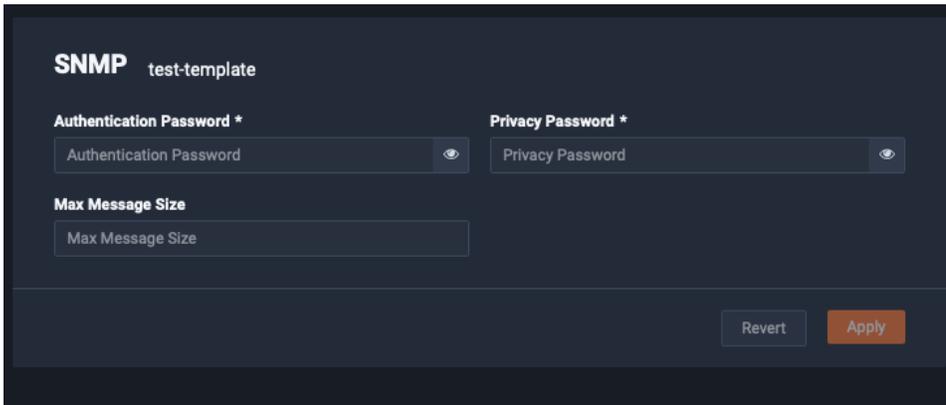
## Authentication



- ◦ *Enable OS authentication only*: Select this option to use the local OS authentication.
- ◦ *Enable third-party authentication*: Select this option to use TACACS+ or RADIUS authentication. If this option is selected, click *Add* to configure the new authentication setting.
- ◦ *Add*: Click to add a new authentication setting. You will need to configure the new authentication setting.
- ◦ *Search*: Enter the text string to search the list of authentication settings.
- ◦ *Name*: Displays the name of the authentication setting.
- ◦ *Type*: Displays the type of authentication, which can be either 'RADIUS' or 'TACACS+.'
- ◦ *Host*: Displays the host of the authentication setting.
- ◦ *Port*: Displays the port of the authentication setting.
- ◦ *Secret*: Displays the secret key of the authentication setting.
- ◦ *In Use*: Displays whether or not the authentication setting is in use.

- *Action*: Click the *Edit* icon to edit the authentication setting, or click the *Trash* icon to delete the authentication setting.
- *Save*: Click to save the authentication setting.

## User Access

The *User Access* setting is similar to the *Authentication* section above where the admin user can configure additional users and set their roles.

## SNMP



Admin can configure SNMP settings such as:

- Authentication password
- Privacy password
- Max Message size

## IDRAC Settings

The Integrated Remote Access Controller (iDRAC) firmware and hardware built into LiveWire (LiveWire Core/PowerCore only) lets you remotely access LiveWire as if you were in the same room as the LiveWire. Using an Internet browser, you can easily perform tasks such as accessing a remote console, reimaging LiveWire, rebooting, shutting down, and starting LiveWire (even if LiveWire is off).

These settings are only applicable to physical appliances and not for Virtual ones. These are Dell hardware settings.

**IDRAC Settings** test-template

**Time Zone ***

Select Time Zone ⌄

**DNS Server 1**

DNS Server 1

**DNS Server 2**

DNS Server 2

**Web Server TLS Version ***

Select Version ⌄          ☐ Host Header Check

**Update Settings**

⬤ Enable Updates

**Update Proxy Server ***

Proxy Server

**Update Proxy User ***

Username

**Update Proxy Password ***

Password          👁

**SNMP**

⬤ Enable SNMP          ⬤ Enable SNMP Alert 1          ⬤ Enable SNMP Alert 2

**SNMP Community ***

SNMP Community          👁

**Alert 1 Target Address ***

Alert 1 Target Address

**Alert 2 Target Address ***

Alert 2 Target Address

**NTP**

⬤ Enable NTP

**NTP Server ***

NTP Server

**Event Filters**

**Alert**

Example: -c idrac.alert.storage.stor.critical -n snmp -a none          +
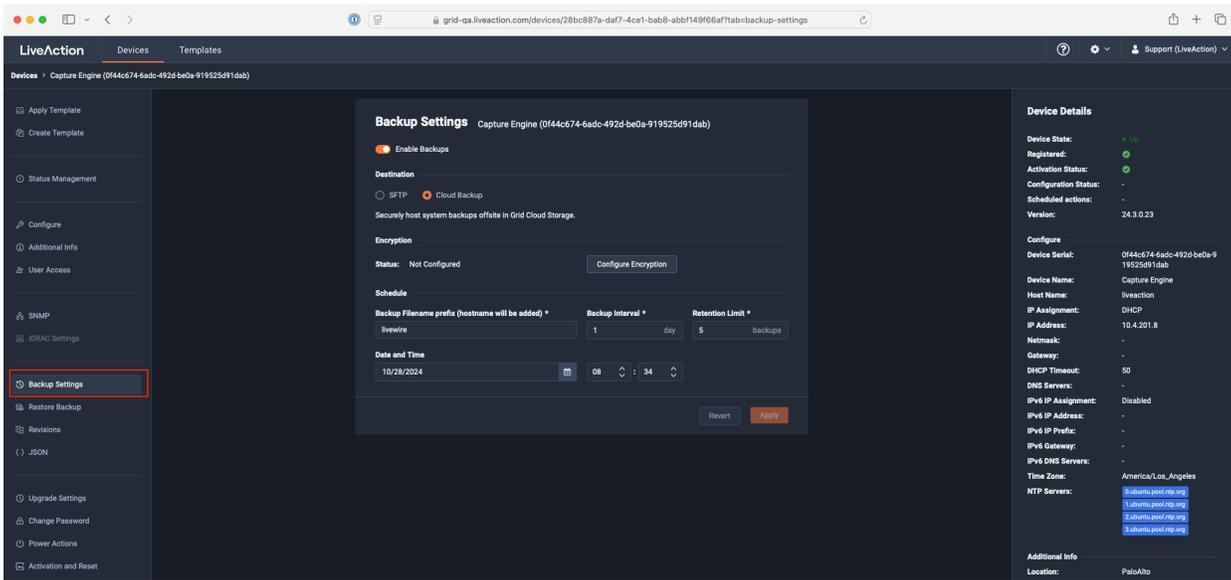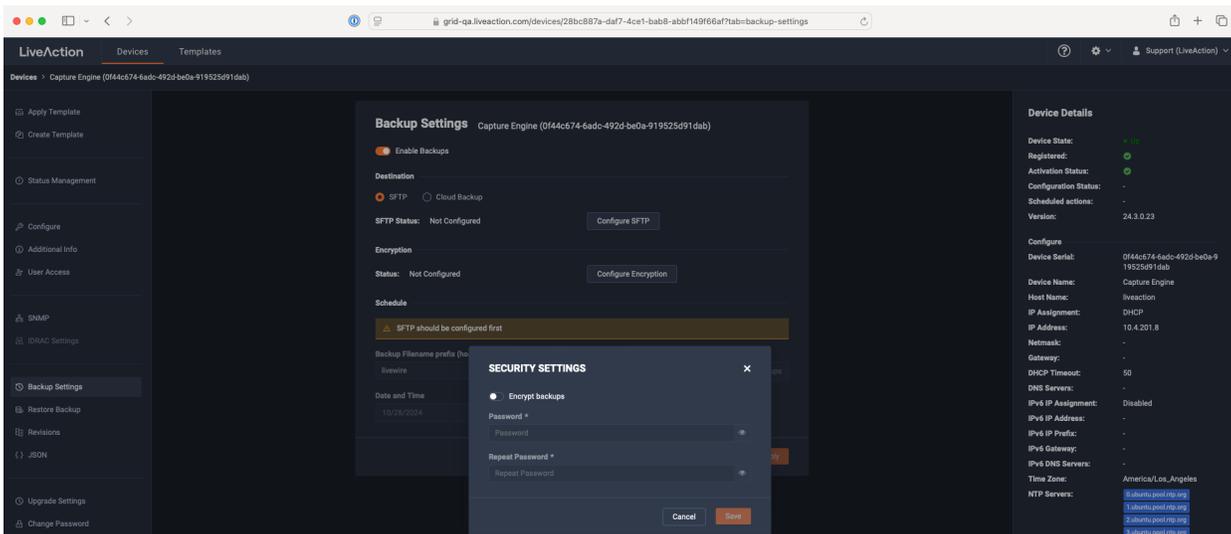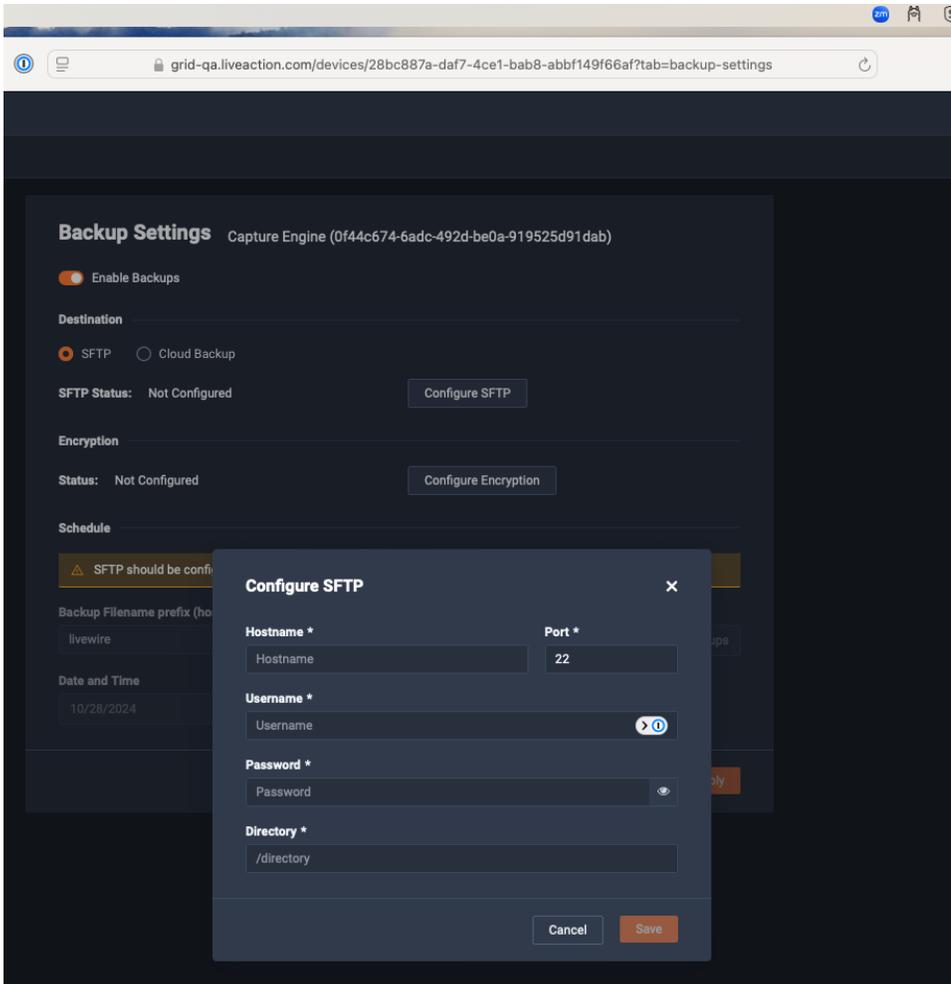
Revert          Apply

## Backup Settings

Select the *Backup Settings* option to configure backup options for a specific device.



- ◦ *Enable backups - A toggle to enable or disable configuration backup*
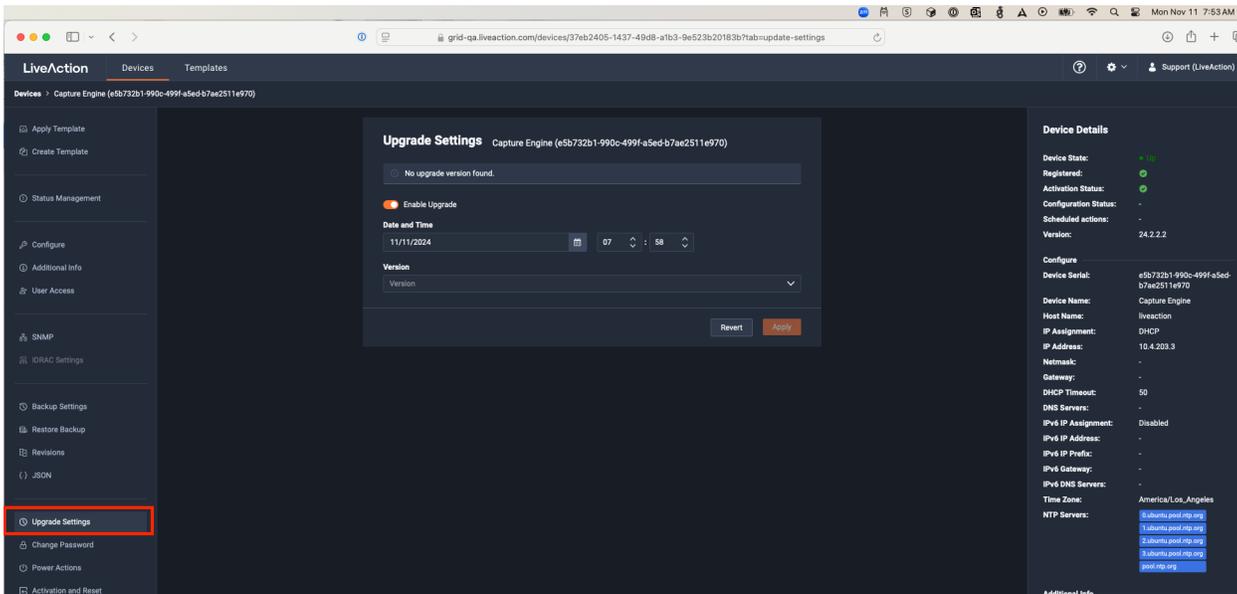- ◦ Destination
  - ◦ *SFTP*

Customers can configure backups to be sent to an SFTP server of their choice inside their environment.



- ○ *SFTP Status* – Indicates if SFTP server is configured or not
- ○ Configure SFTP fields:
  *Hostname* – the hostname of the SFTP server
  *Port* – the port number of the server FTP application
  *Username* – the username for SFTP user
  *Password* – the password for the SFTP user
  *Directory* – Where the backups are to be stored on the SFTP server
- ○ *Cloud Backup* – When selected, the configuration backup is stored in Grid SaaS as an encrypted backup.
- ○ *Schedule* – The frequency of backup and how many backups to be stored and a time selector for the backup needs to be taken.

## Upgrade Settings

Click the *Upgrade* button to upgrade the selected appliance remotely through Grid. User can choose to upgrade to any newer version than what is running on the device. There is no capability to upgrade to a previously released version.



- ◦ *Disable*: Select to disable the upgrade on the selected devices.
- ◦ *Enable*: Select to enable the upgrade on the selected devices. If you enable the upgrade, you are presented with settings to specify the date and time the upgrade should take place. Because all communications are initiated from the device once every ten minutes, the upgrade will happen as the result of the device communicating with the network, sometime on or after the selected time.
- ◦ *Apply*: Click to save the changes to the selected devices.

# Enabling Grid Support

## Grid Support from LiveAdmin Utility

The LiveAdmin utility on LiveWire lets you view and configure a variety of settings from the LiveAdmin views in the left-hand navigation pane of the utility. Before you can use Grid for LiveWire, you must enable *Centralized Management* support (enabled by default) in the *Omni* view of the LiveAdmin utility, as described below.

To enable *Centralized Management* support in the LiveAdmin utility:

**1.** From a browser window on a computer connected to the same network as LiveWire, enter the IP address for LiveWire in the URL box as *IP ADDRESS:8443* (e.g., 192.168.1.21:8443). The LiveAdmin Login screen appears.
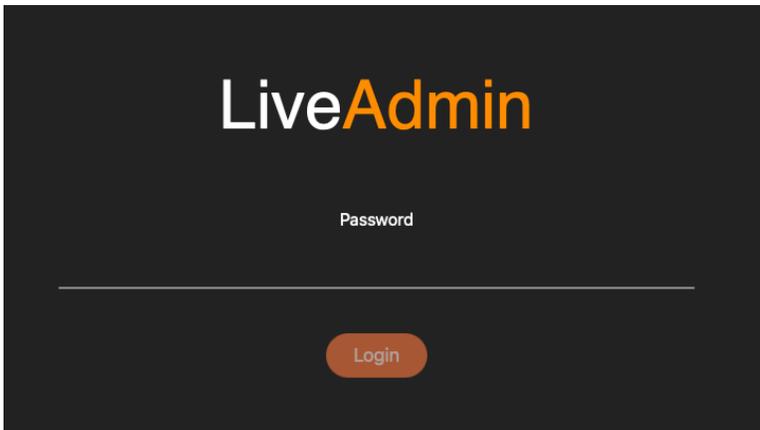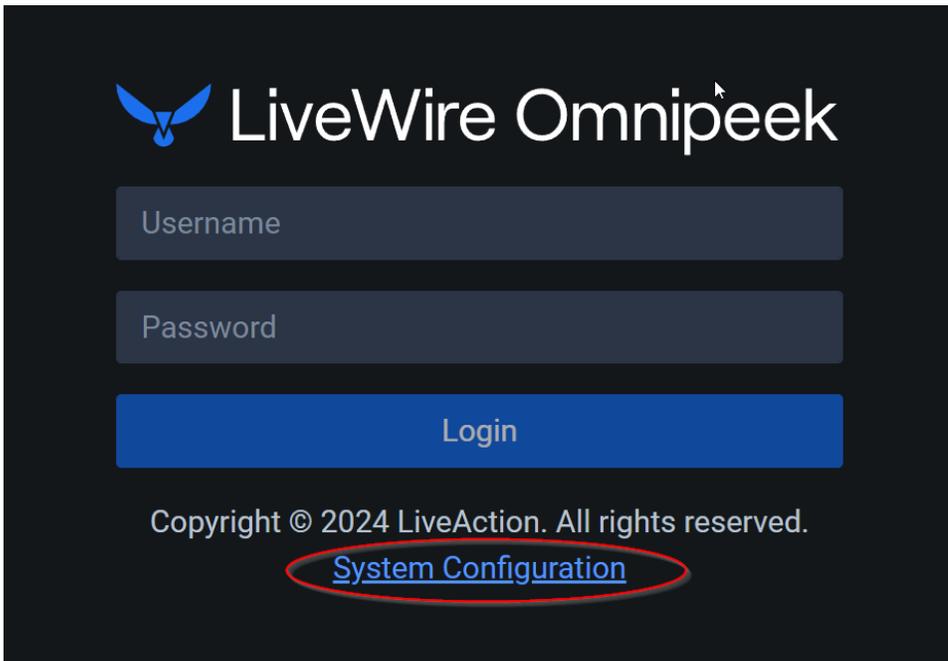


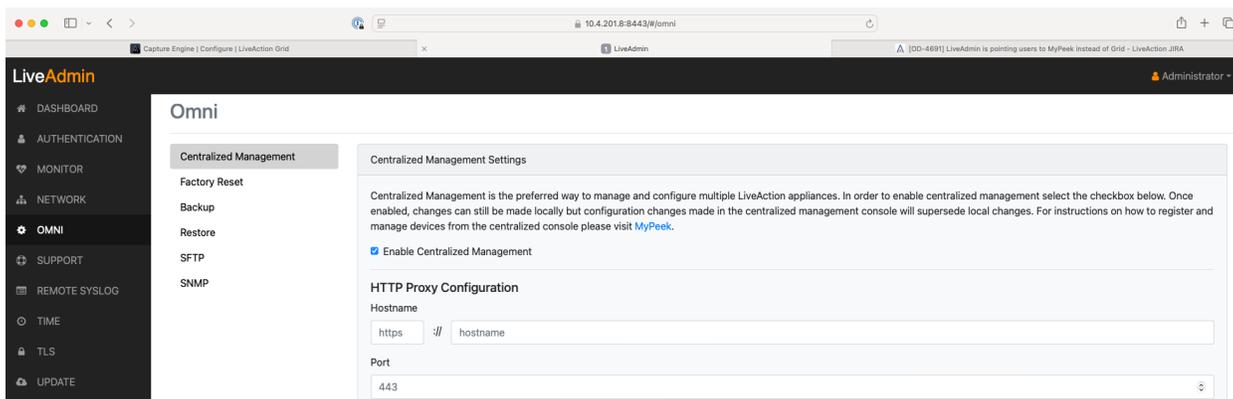**2.** Enter the default password 'admin' and click *Login.*

> **Note** If you are using LiveWire Omnipeek, you can also access the LiveAdmin Login screen by clicking *System Configuration* from either the Omnipeek Login screen, or by clicking *Configure System* from within Omnipeek itself.

3.  Go to the *Omni* view, select the *Centralized Management* option, and then click the *Enable Centralized Management* check box to enable Grid support. To learn more about each of the LiveAdmin views, see the *LiveWire User Guide.*



4.  Click *Apply.*