Import

Unimus supports 2 main ways to bulk-add/import devices.

1) One-time import
2) NMS sync

As the name implies, "one-time import" is one-time, based on user interaction.

NMS sync can be scheduled, and Unimus will automatically import devices from NMS following Sync Preset configuration.
(you can also do NMS sync only once, without configuring it to be scheduled)

One-time import

You have 3 options for one-time import:

1) Import a list of addresses

This is the fastest way to add devices to Unimus in bulk.
You can simply paste a comma or semicolon separated list od devices, and Unimus will add each of them as a new device.

For example:

```
10.0.0.1, 10.0.0.2; 10.2.0.1; host.domain.tld, 7001:11::44:1
```

All valid address formats are supported - IPv4, IPv6 and FQDNs

2) Import devices from a .csv file

If you want to import devices together with descriptions, you can use a .csv file import.

Here, you provide a .csv file to Unimus, that should contain one device per line.
Both "\r" and "\r\n" (LF and CRLF) line terminations are supported.

You can optionally choose to ignore the 1st line of the .csv file - which is usually a header.

Example of the .csv file:

```
# Device, description
10.0.0.1, Edge router
10.0.0.2, VPN router
7001:11::44:1, Switch
```

In the above example, we would check the "Ignore .csv file header (1st line of file)" checkbox.

All valid address formats are supported - IPv4, IPv6 and FQDNs

3) Add devices discovered by a Network scan

Network scan is a tool for discovering devices on supplied subnets. It checks whether service(s) defined in Default Connectors are available on reachable devices.

Devices discovered by Network scan can be imported to Unimus.

To set up a Network scan, you need to create a Preset, specify subnets and (optionally) set up a scheduled execution.

```
# Supported input formats:
subnet: 172.16.0.0/16
range: 172.16.0.0-172.31.255.255
address: 172.24.5.11
```

NMS sync

Unimus supports syncing devices with NMS instances of various vendors.

This approach allows you to automate adoption of new networks into Unimus as well as simplify device management.
After configuring NMS sync, you only need to add devices into your NMS, and Unimus will pick them up automatically.
(You only need to manage devices on the NMS)

Unimus identifies and keeps track of existing local devices, which allows device adoption under a given Sync Preset.
Devices no longer provided by import source from an NMS become orphaned.

Configuration

NMS Sync is configured via **Sync Presets**, which specify an NMS instance to import devices from, along with few other settings.
Steps to create NMS Sync Preset:

1. Select NMS type
2. Configure NMS connection details
3. *Set a **target Zone(s)** to import devices into (and identifiers specifying the device containers on the NMS)
4. (Optional) Schedule the NMS Sync
   - NMS sync can be scheduled - you simply need to select an existing (or use the default) schedule.
   With this configuration, Unimus will sync against the NMS periodically.
5. Advanced setting (Optional) - Choose preferred **Device Action policy**
   - Controls whether moving of local devices to target Zone is enabled during Sync, if a matching device is also provided by the NMS during a Sync.
6. Advanced setting (Optional) - Choose preferred **Orphaning policy**
   - Defines action taken on all orphaned devices under this Sync Preset upon completion of a Sync. Manually moved devices are exempt from the effects of this policy.

*Some NMS types require configuring Sync Rules. These specify which devices to import from an NMS.
Each Sync Rule requires a "container" identifier, specifying the group of devices on the NMS, and a target Zone where to import devices into.
Container identifiers vary according to each NMS type.
With NMS types without Sync Rules all configuration of which devices to import is done on the NMS.
The NMS'es that don't have Sync Rules are tagged in the table of supported NMS types below.

UUIDs

Some NMS types provide UUIDs of devices, along with their addresses. (UUIDs are not visible to the users via GUI)
These enable more consistent device tracking between Unimus and NMS.
When a device is defined by UUID, on top of its address, its actual address change on the NMS will be reflected on Unimus upon Sync completion.
In the same scenario, when NMS doesn't support UUIDs, new devices would be imported.
The NMS'es that support UUIDs are tagged in the table of supported NMS types below.

Adoption

Devices imported by a Sync Preset become adopted by this Sync Preset.
Existing local devices without adoption and orphaned devices can become adopted by a Sync Preset.
The scope of devices considered for adoption is influenced by **Device Action policy** setting.

Orphaning

In addition to no longer being present on NMS within a given identifier, devices can become orphaned by:

- Changing target Zone of a Sync Rule within a Sync Preset
- Deleting a Sync Rule of a Sync Preset
- Manually moving a device adopted by a Sync Preset to a different Zone

Device Action policy

This policy control the syncing behavior in regards to existing local devices (on Unimus) that match devices provided by the NMS during a Sync. Three options exist:

No Move/Always Create

During NMS Sync no devices will be moved between Zones.
A device provided by NMS will be imported into the target Zone, unless it already exists.

Move within Preset Zones

During NMS Sync, before a device is imported to the target Zone, the algorithm will check for a matching device in Preset Zones and if a match is found will attempt to move it to the target Zone.
Preset Zones are all target Zones specified by all Sync Rules under a given Sync Preset.
If no match is found the device provided by NMS will be imported into the target Zone.
Note: Multiple matching candidates found counts as a failed operation (multiple candidates for update found).

Move from All Zones

Same as "Move within Preset Zones" option, but all Unimus Zones are checked for a matching device.

Orphaning policy

Action taken on orphaned device under a given Sync Preset upon completion of a Sync is configured via Orphaning policy. Three options exist:

No Action

Device is retained in Unimus, though it is now eligible for adoption by any Sync Preset

Unmanage

Device becomes unmanaged in Unimus. No further jobs will run on it. Backups are kept. Device is eligible for adoption by any Sync Preset.

Delete

Device is deleted from Unimus, along with all its backups.

Supported NMS types

For more details on each NMS sync connector, please see the appropriate articles:

NMS type	Supports UUIDs	Has Sync Rules
LibreNMS	yes	yes
NetBox	yes	yes

NetXMS	**yes**	**yes**
Observium	**yes**	**yes**
Panopta	**yes**	no
Powercode	no	no
PRTG	no	**yes**
Zabbix	no	**yes**