DDN GridScaler ZenPack

Support

This ZenPack is developed by DDN for modelling and monitoring of DDN's GridScaler storage solution. It will also support modelling for GridNAS storage solution.

Releases

Version: 0.0.7
Summary of changes: First release
Released on: 27/02/2015
Compatible with: Zenoss 4 & Zenoss 5

Background

DDN GridScaler ZenPack will provide modelling and monitoring functionality for DDN's GridScaler storage solutions. Additionally it models GridNAS as well.

Prerequisites

This zenpack is dependent on DDN Gridscaler API to be available on all NSD nodes. Additionally, this zenpack only works with latest GS API (10.1.18450+)

One can check the GS API installed as below.

[root@vmGSNSD01 ~]# /opt/ddn/directmon/gridscaler/scripts/get_gsapi_version.py
10.1.18450

Installed Items

Installing the ZenPack will add the following items to your Zenoss system.

Device Classes

Following device classes will be created once this zenpack is installed.

- /Storage
- /Storage/DDN
- /Storage/DDN/GridScalerv2

Configuration Properties

Following configuration properties to be added which is required for this zenpack.

- **zCommandUsername**
    - name of the user through which Zenoss system communicates with the device (Ex: **root**).

- **zCommandPassword**
    - password of that particular user through which Zenoss system communicates with the device (Ex: **root**).

- **ZKeyPath**
    - If passwordless SSH is configured provide the path of the private key file path. (Ex: **~/.ssh/id_rsa**).

- **zGSNSDList**
    - Management network address of NSD servers to be monitored (Ex: **192.168.111.8,192.168.111.9**).Provide atleast 2 servers address to ensure continued monitoring on failed nodes.

Modeler Plugins

List of modeler plugins for Gridscaler and GridNAS.

GridScaler

- ddn.GridScaler_ModelClientNode
- ddn.GridScaler_ModelFS
- ddn.GridScaler_ModelNSD
- ddn.GridScaler_ModelSFA

GridNAS

- ddn.GridNAS_Model_CIFS
- ddn.GridNAS_Model_Group
- ddn.GridNAS_Model_NFS
- ddn.GridNAS_Model_Shares
- ddn.GridNAS_Model_User
- ddn.GridNAS_Model_VIP

Monitoring Templates

Defines the metrics, events and thresholds for modeled components.

Component Level

1. **GS_FsList**

a. TotalAvailableLnodes
b. TotalFreeSpace
c. TotalInodes
d. TotalSpace
e. TotalUsedInodes
f. TotalUsedSpace

2. **GS_NsdServer**

3. **GS_NsdDisk**

Graphs

1. **GS_FsLists**
    a. FileSystemUseage
    b. InodeUseage

Event Classes

- Perf/GridScalerv2/CN - Client Node
- Perf/GridScalerv2/FSLIST - Fs List
- Perf/GridScalerv2/NSD - Network Storage Device
- Perf/GridScalerv2/SFA - SFA

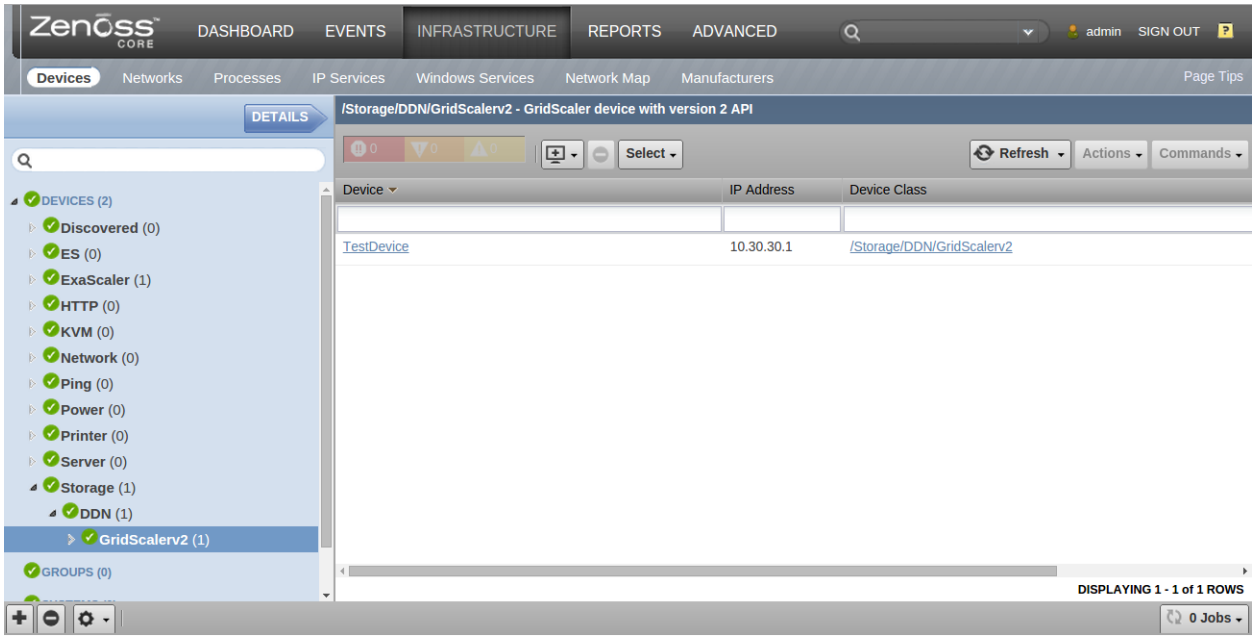
Thresholds

No Thresholds defined.

Detailed Overview

Device classes

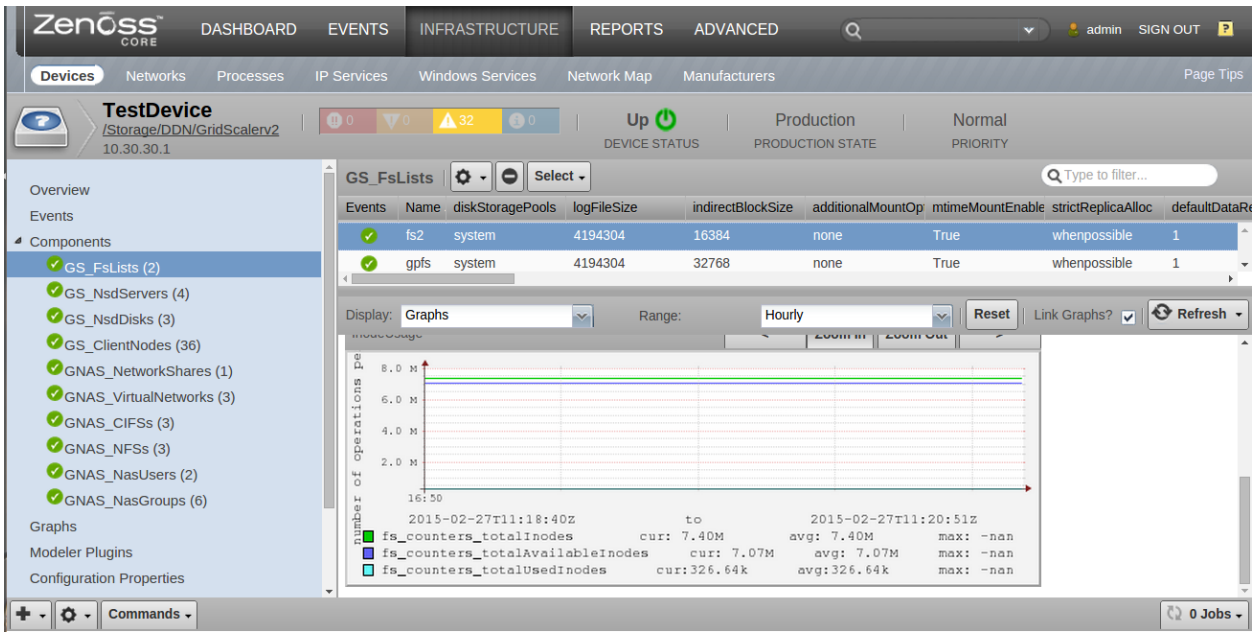
Below screenshot give the list of device class available in this ZenPack.



Device Components

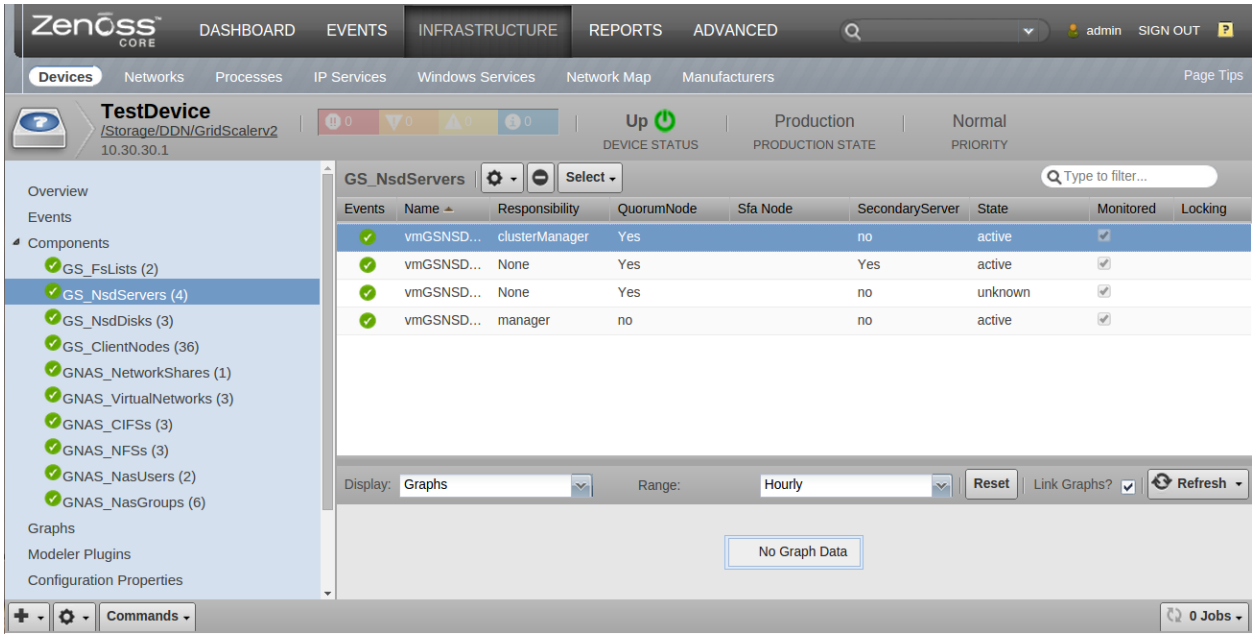
1. List of GS_FsList

Below screenshot give the list of GridScaler GS_FsList in this ZenPack.



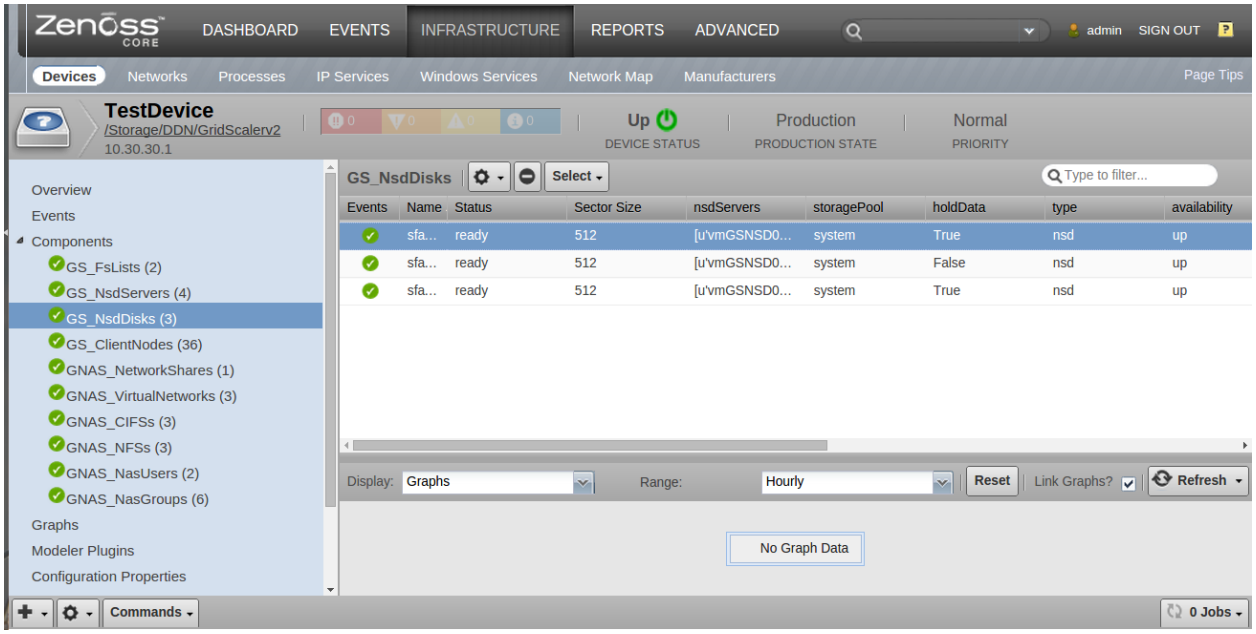
2. List of GS_NsdServers

Below screenshot give the list of GridScaler GS_NsdServers in this ZenPack.



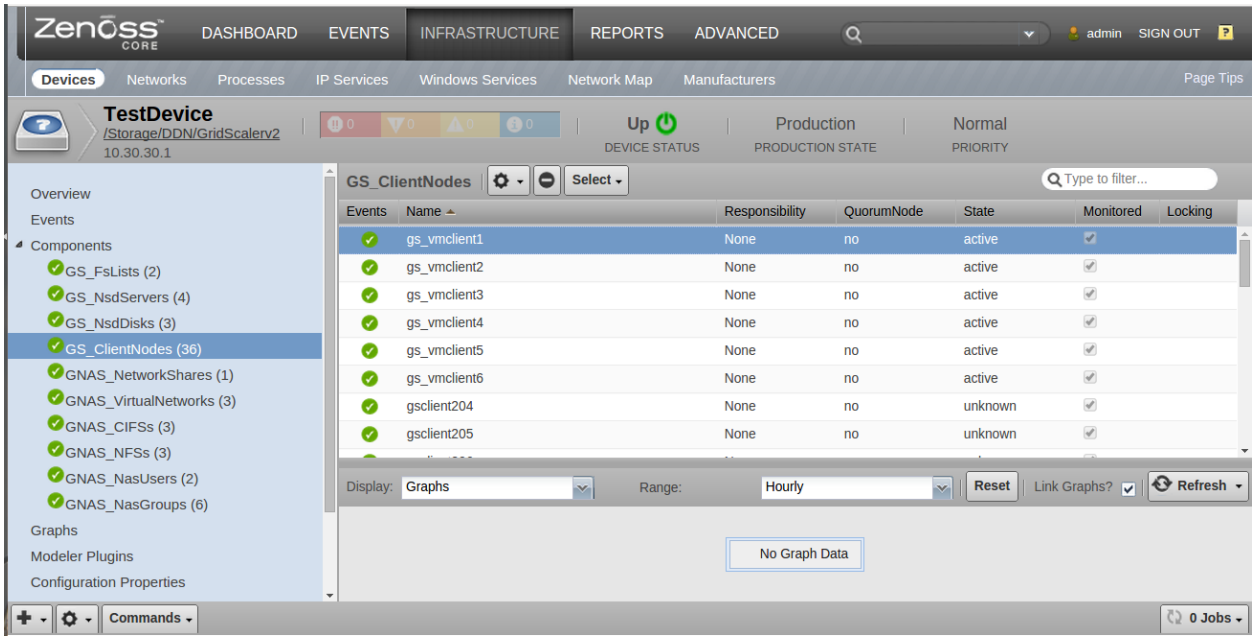
3. List of GS_NsdDisks

Below screenshot give the list of GridScaler GS_NsdDisks in this ZenPack.



4. List of GS_ClientNodes

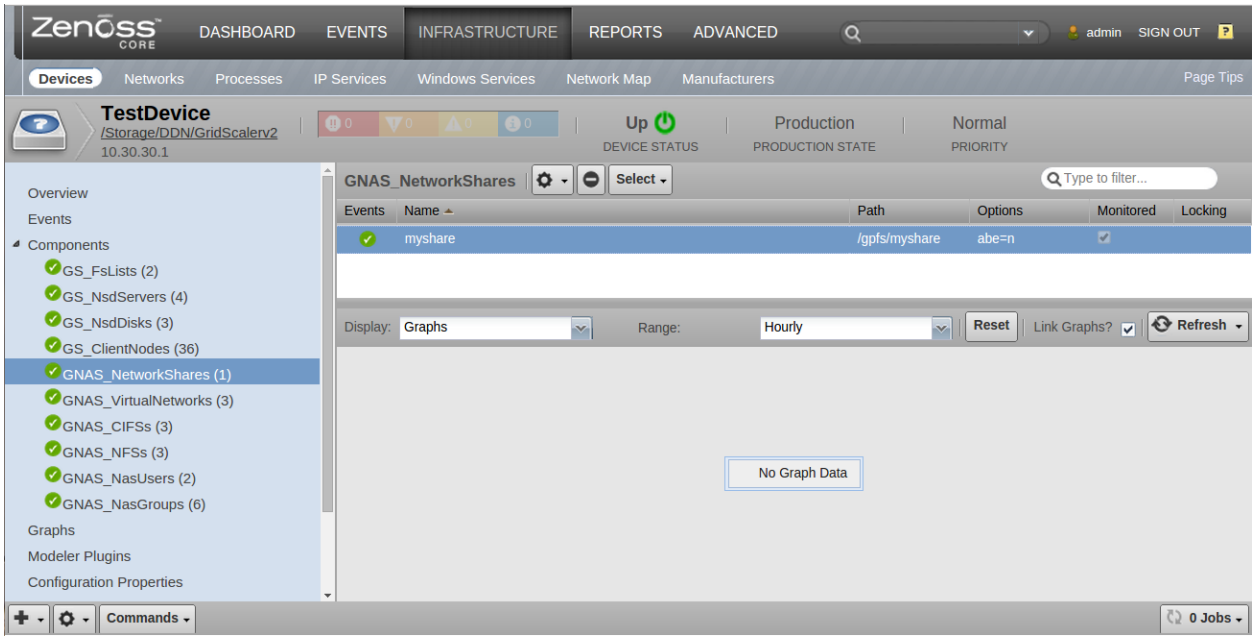
Below screenshot give the list of GridScaler GS_ClientNodes in this ZenPack.



Below components and screenshots are visible, only if the solution is configured as GridNAS as well.

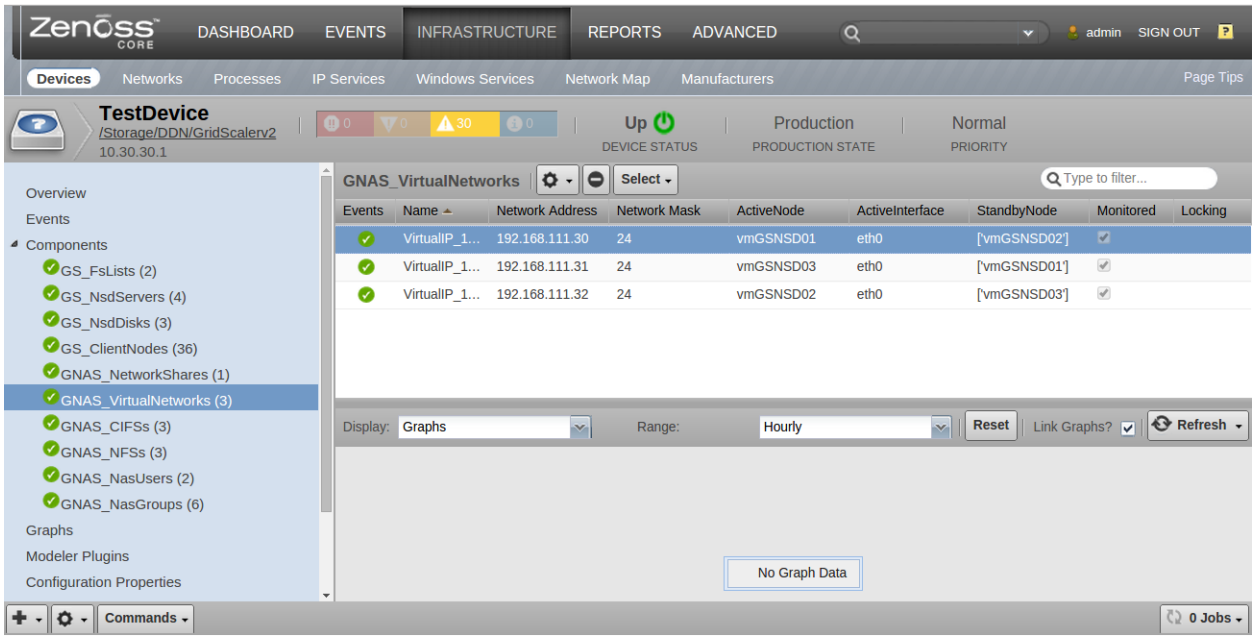
5. List of GNAS_NetworkShares

Below screenshot give the list of GridNAS GNAS_NetworkShares in this ZenPack.



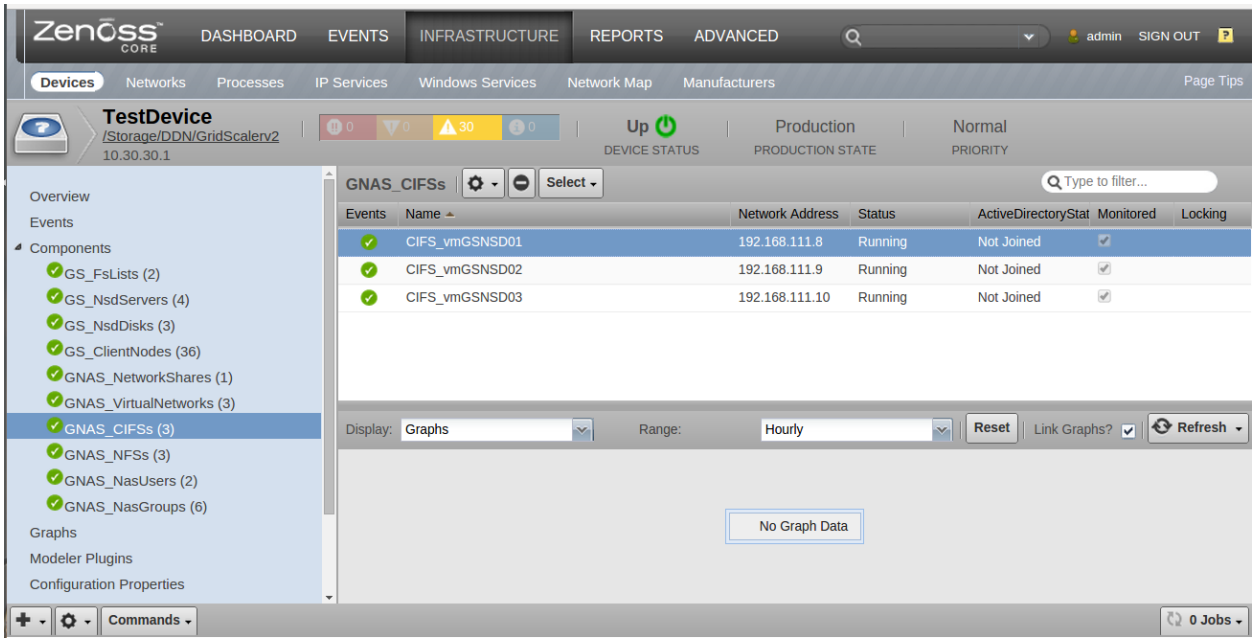
6. List of GNAS_VirtualNetworks

Below screenshot give the list of GridNAS GNAS_VirtualNetworks in this ZenPack.



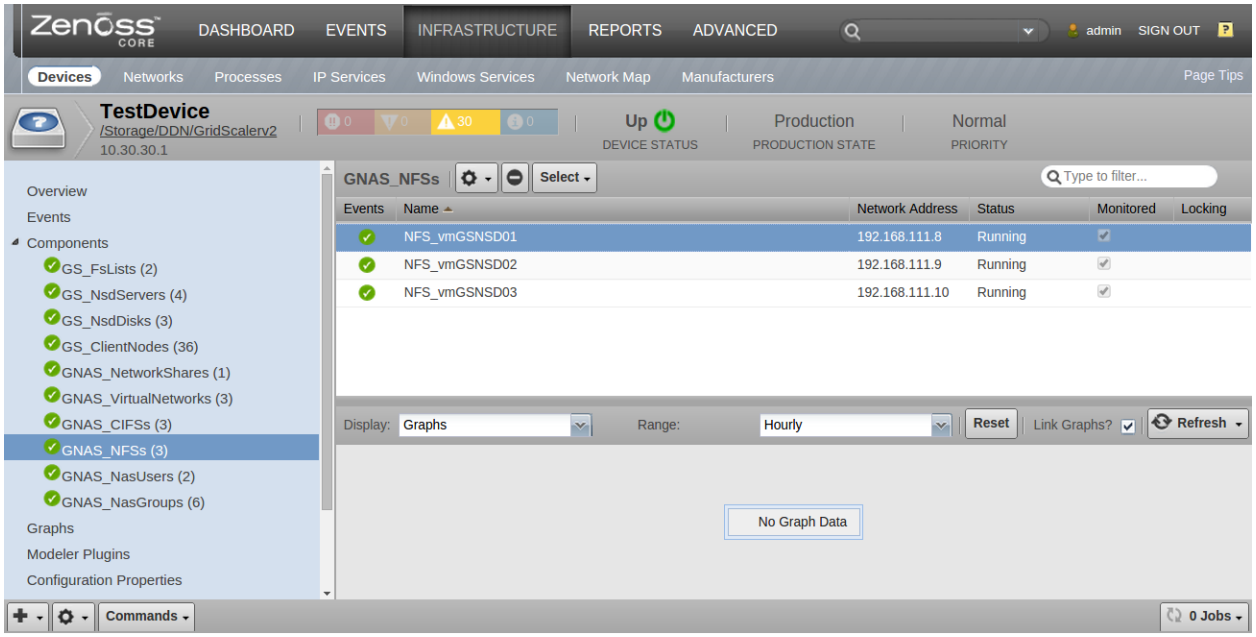
7. List of GNAS_CIFSs

Below screenshot give the list of GridNAS GNAS_CIFSs in this ZenPack.



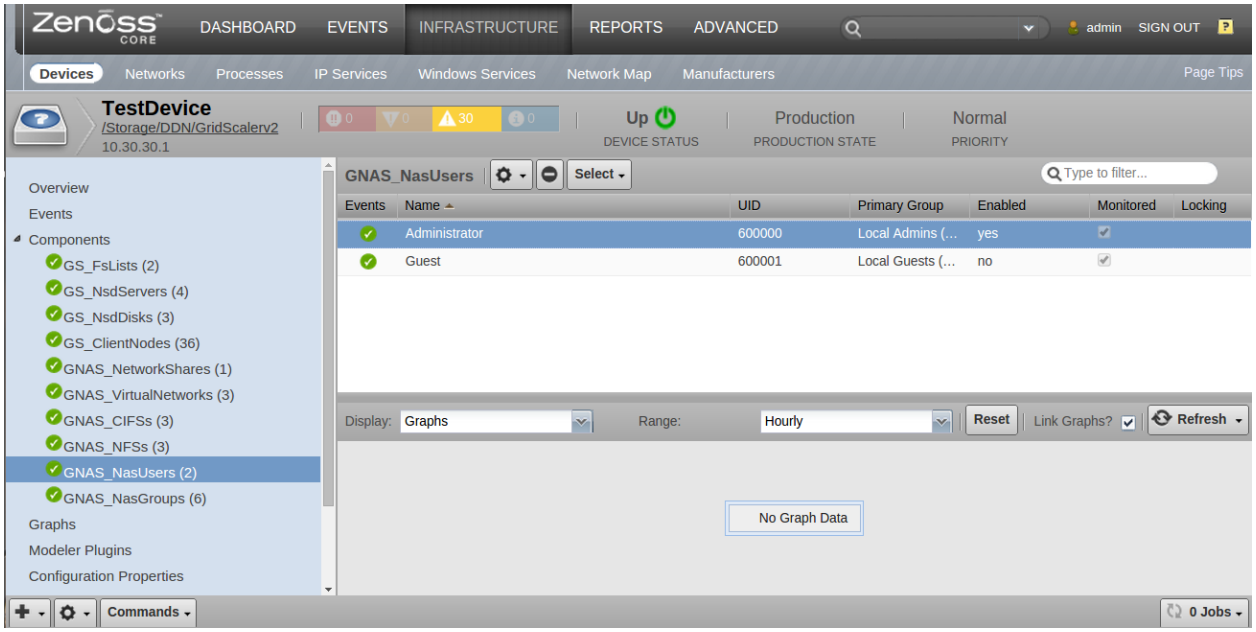
8. List of GNAS_NFSs

Below screenshot give the list of GridNAS GNAS_NFSs in this ZenPack.



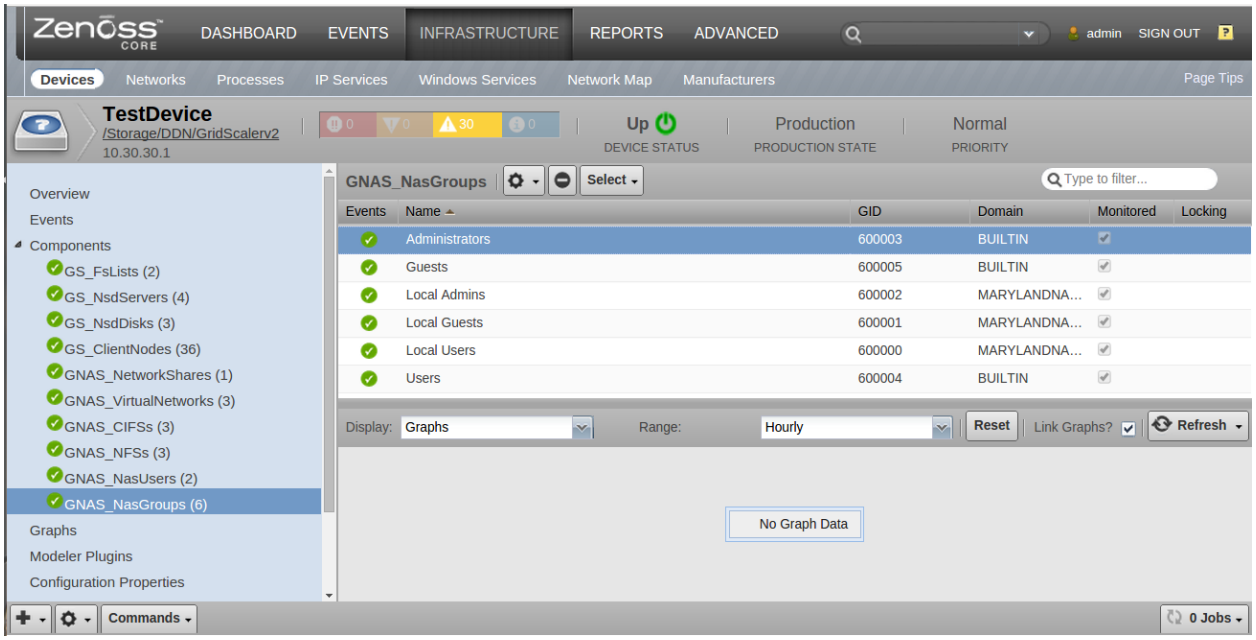
9.List of GNAS_NasUsers

Below screenshot give the list of GridNAS GNAS_NasUsers in this ZenPack.



10.List of GNAS_Groups

Below screenshot give the list of GridNAS GNAS_Groups in this ZenPack.



ZenPack Installation

1. Download the appropriate egg file for the version of the Zenoss you are running.
2. Ensure you are logged in as Zenoss user.

   >>> su - zenoss

3. Install ZenPack

   a. Zenoss 4

      >>> zenpack -- install ZenPacks.DDN.GridScalerv2 -*.egg

   b. Zenoss 5

      >>> sudo serviced service run zenpack install ZenPacks.DDN.GridScalerv2 -*.egg

4. Restart Zenoss

   a. Zenoss 4

      >>> zenoss restart

   b.Zenoss 5

>>> sudo serviced service stop <service name>

[Get the service name by running command "sudo serviced service status"]

>>> sudo serviced service start <service name>

To list all installed ZenPacks

a. Zenoss 4

>>> zenpack -- list

b.Zenoss 5

>>> sudo serviced service run zope zenpack list

Steps to uninstall ZenPacks

a. Zenoss4

>>> zenpack -- remove <zen pack>

b.Zenoss 5

>>> sudo serviced service run zope zenpack uninstall <zen pack>

Instructions to model Gridscaler through Zenoss

A Gridscaler solution is a cluster of devices. So it cannot be modeled and monitored like other devices. This zenpack expects a pseudo network device to be created locally. This psuedo network device shall be used to register the cluster. A zProperty ('zGSNSDList') is defined to map the network address of NSD Servers in the cluster.

Follow the below instructions to model a gridscaler solution through zenoss:

1. Create a pseudo network device:
   a. sudo ip link add link em1 address 44:44:44:44:44:44 em1:10 type macvlan
   b. sudo ifconfig em1:10 10.1.1.4 netmask 255.255.224.0

   Note : Change the ip and MAC address accordingly

2. Add this IP (10.1.1.4) into newly created device

   You can choose to use any local private IP instead of 10.1.1.4

3. Update the zProperty accordingly before modeling. For ex. if you have 4 NSD Nodes reachable at address (IP1, IP2, IP3, IP4) [management interfaces], you can either add them all or atleast 2 to ensure connectivity even on node failure. Using one valid IP will also complete the modeling successfully.