ZenPack

User Guide

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About This Document

Purpose

This document describes how to install, configure, and use the Zenoss ZenPack (ZenPack for short) plug-in provided by Huawei storage and helps customers quickly install and deploy ZenPack.

Intended Audience

This document is intended for:

Huawei ZenPack plug-in personnel and other related personnel

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.
NOTE	Calls attention to important information, best practices and tips. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

Contents

1 Overview

ZenPack is installed on Zenoss and used to monitor Huawei storage. It provides the following functions:

- Viewing the basic information about Huawei storage
- Viewing the alarm information about Huawei storage
- Viewing the performance charts of important components

2 Installation Preparations

2.1 Supported Device Models

You can query the version mapping table of eSDK plug-ins to obtain the storage system versions. To obtain the version mapping table, log in to **http://support.huawei.com/enterprise/en/index.html**. In the search box, enter **eSDK Enterprise Storage Plugins** to search for and download the *eSDK Enterprise Storage Plugins x.x.xxx Version Mapping*. *x.x.xxx* indicates the version number.

2.2 Software and Hardware Requirements

Software Requirements

Table 2-1 Software requirements

Software	Description	Version
Zenoss Core	Zenoss monitoring software	6.2.0

2.3 Obtaining the Software Package

Before installing the ZenPack plug-in, obtain the software package that is listed in **Table 2-2**. Decompress the software package and then obtain installation file **ZenPacks.community.OceanStor-*X.X.X*-py2.7.egg**.

NOTE

X.X.X indicates the version number. Obtain the installation package with this manual before installation.

Table 2-2 Required software package

Software Package	Description	How to Obtain
eSDK_Storage_ZenPack_*X.X.X***.zip**	ZenPack plug-in package	You can download the software by visiting **https://support.huawei.com/enterprise/en/software/index.html** and choosing **Cloud Storage > Tools and Platform > eSDK Enterprise Storage Plugins.**

3 Installing and Uninstalling ZenPack

3.1 Installing ZenPack

Prerequisites

Zenoss Core has been deployed and is running properly.

Procedure

Step 1 Use an SFTP tool such as Xftp to upload the ZenPack plug-in package to a directory in the Zenoss system, for example, **/home**.

Step 2 Run the following command to log in to Zenoss using Xshell:

ssh *Zenoss_IP_Address*

Step 3 Switch to the directory where the ZenPack plug-in package is stored, for example, **/home**.

cd */home*

Step 4 Run the following command to install the ZenPack plug-in:

serviced service run zope zenpack-manager install *ZenPacks.community.OceanStor-X.X.X-py2.7.egg*

Step 5 Run the following command to restart the Zenoss service:

serviced service restart Zenoss.core

----End

3.2 Uninstalling ZenPack

Step 1 Run the following command to log in to Zenoss using Xshell:

ssh *Zenoss_IP_Address*

Step 2 Run the following command to uninstall the ZenPack plug-in:

serviced service run zope zenpack-manager uninstall *ZenPacks.community.OceanStor*

Step 3 Run the following command to restart the Zenoss service:

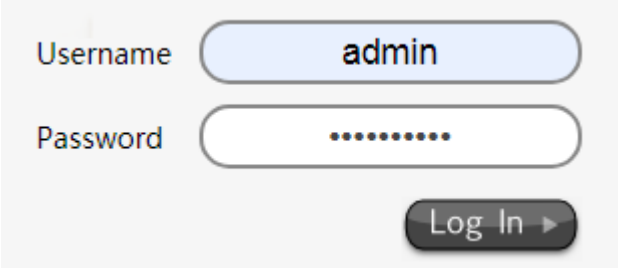
serviced service restart Zenoss.core

----End

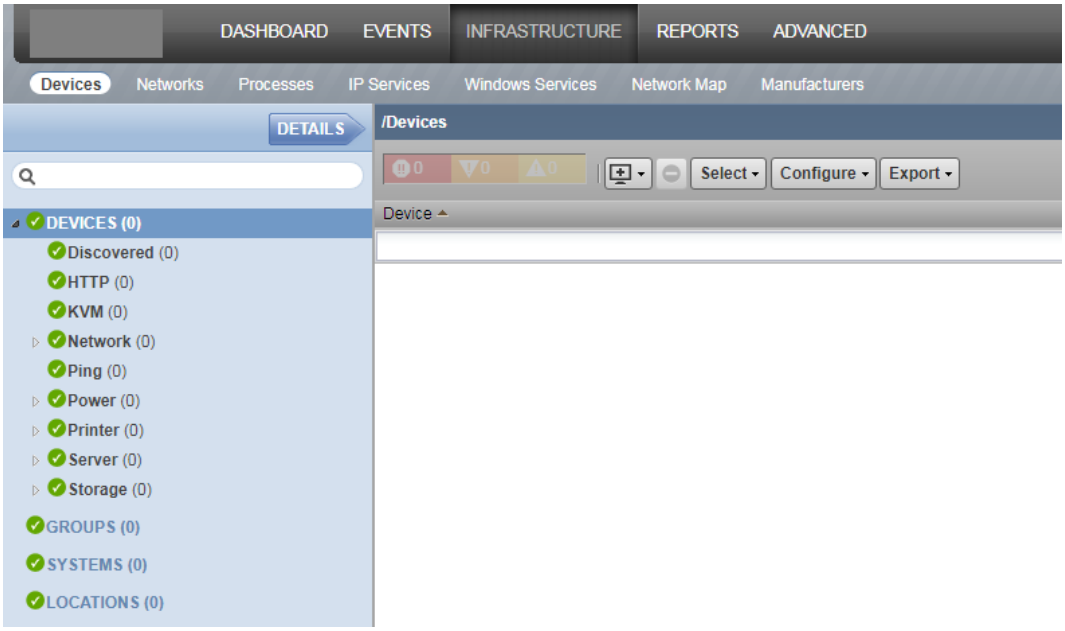
4 Adding and Deleting Devices

4.1 Adding Storage Devices

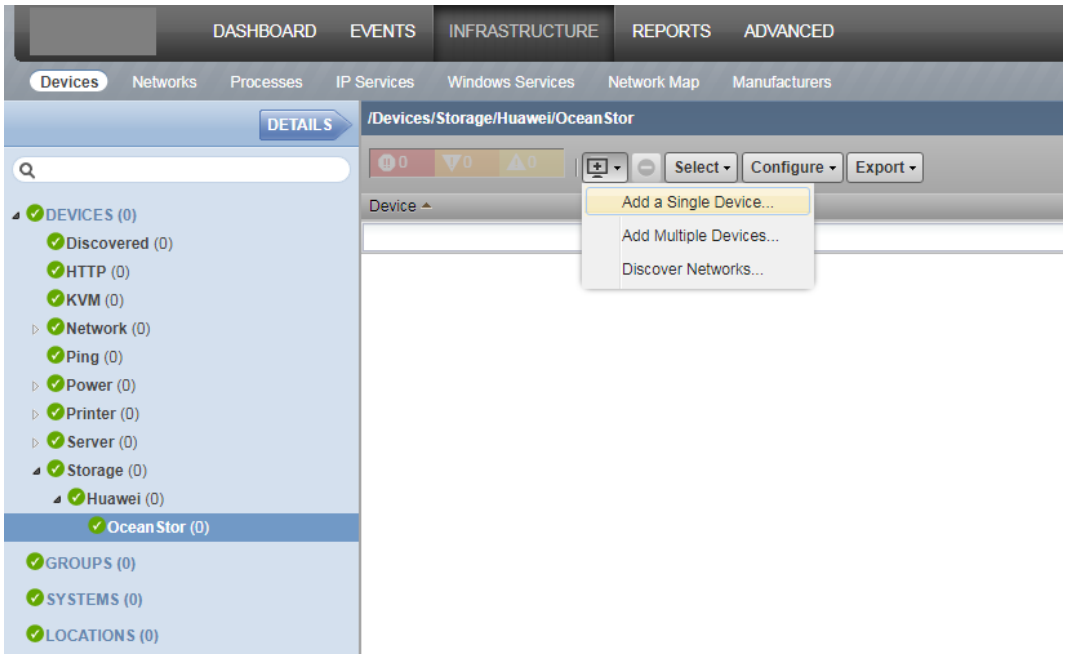
Step 1 Log in to the Zenoss Core GUI through **https://***x.x.x.x***:54321**.



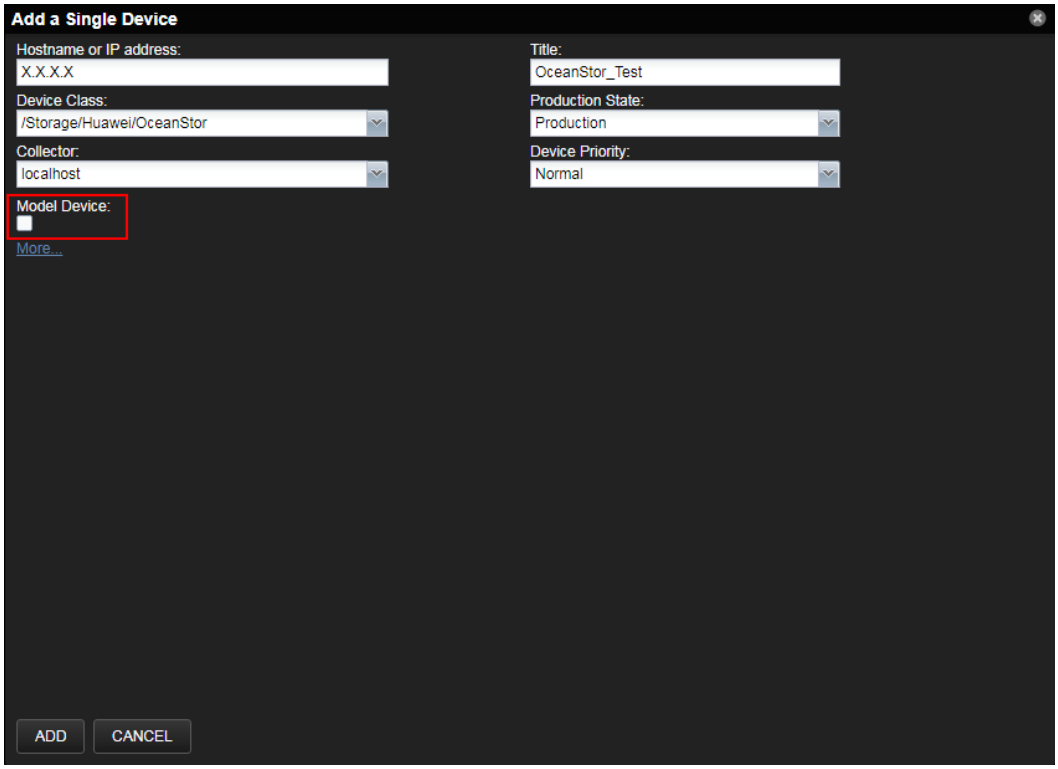
Step 2 Choose **INFRASTRUCTURE** > **Devices**.



Step 3 Choose **Storage** > **Huawei** > **OceanStor** and click **Add a Single Device**.



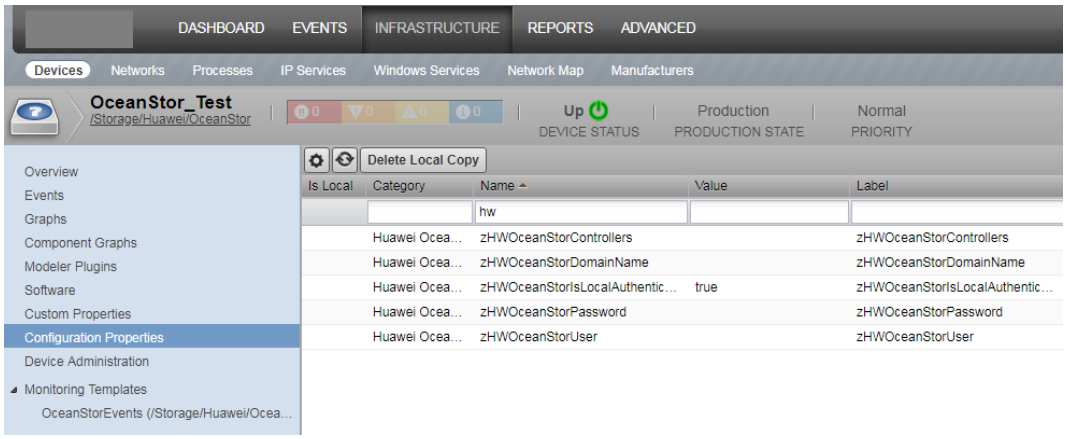
Step 4 Enter the storage management IP address in the **Hostname or IP address** text box, enter the storage name in the **Title** text box, and click **ADD**.



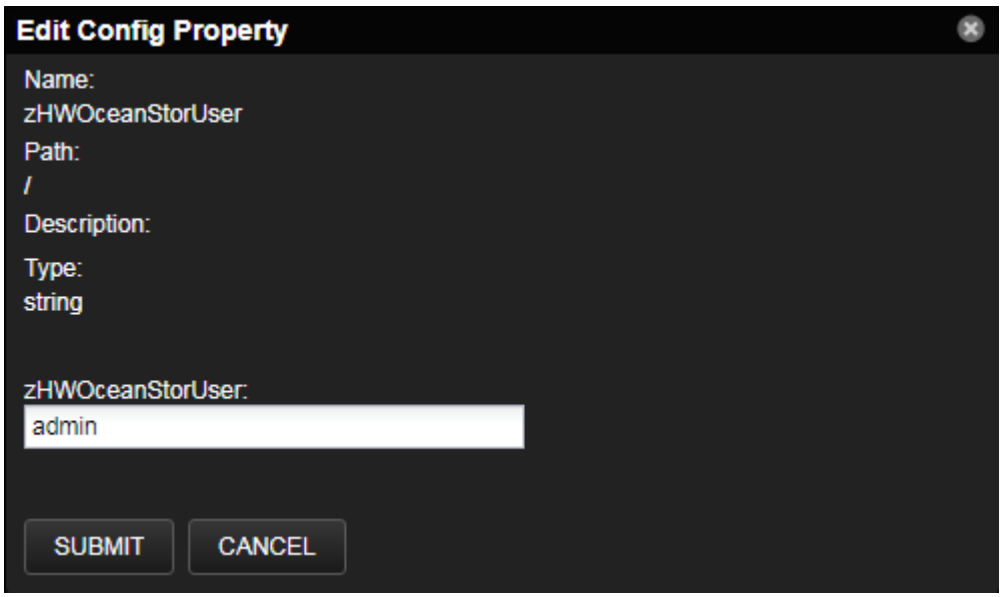
NOTE

When adding a device, deselect **Model Device**, as shown in the preceding figure.

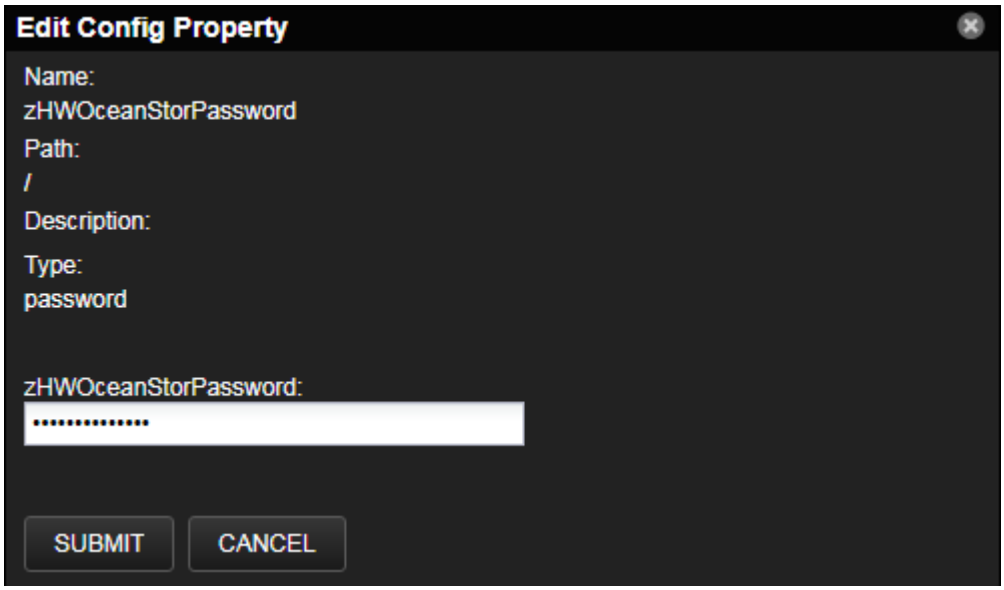
Step 5 Click the added device, select **Configuration Properties** in the left, and search for **hw** in the **Name** column.



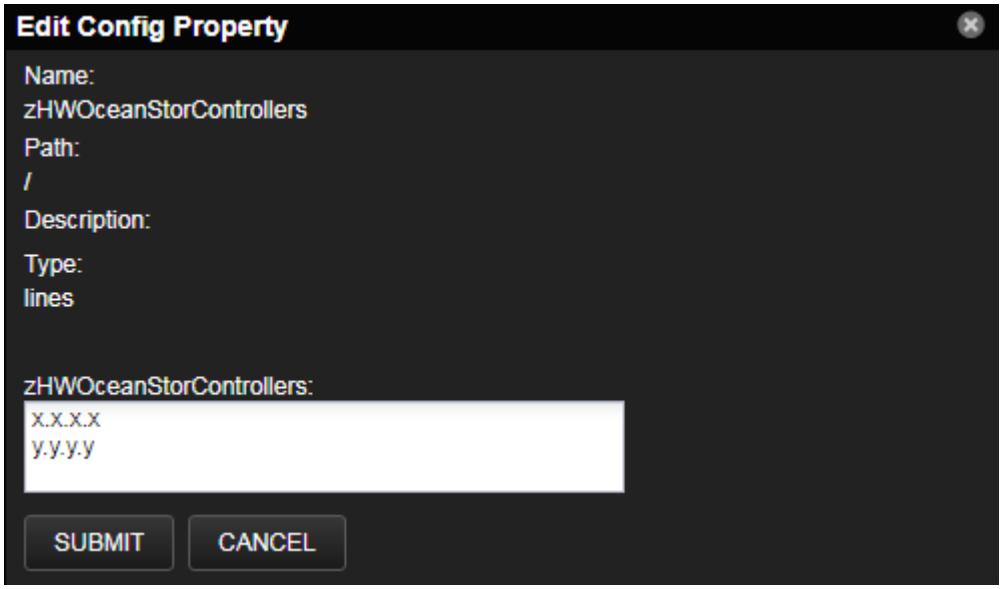
Step 6 Double-click **zHWOceanStorUser**, enter the user name of the storage device, and click **SUBMIT**.



Step 7 Double-click **zHWOceanStorPassword**, enter the password of the storage device, and click **SUBMIT**.



Step 8 Double-click **zHWOceanStorControllers**, enter the management IP address of the storage device, and click **SUBMIT**.



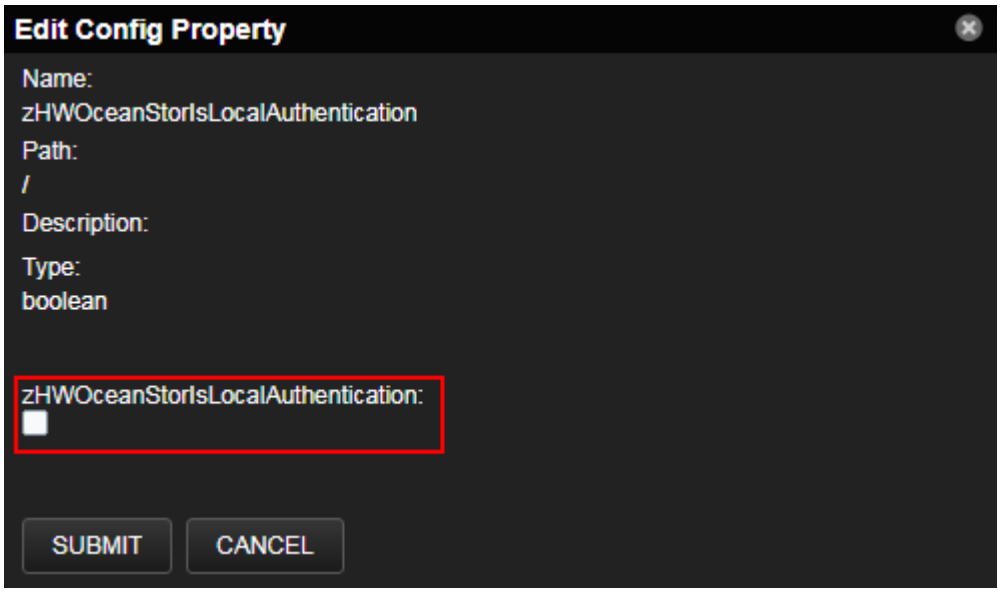
NOTE

To enter the IP addresses of multiple controllers in the same storage array, enter them as follows:

x.x.x.x

y.y.y.y

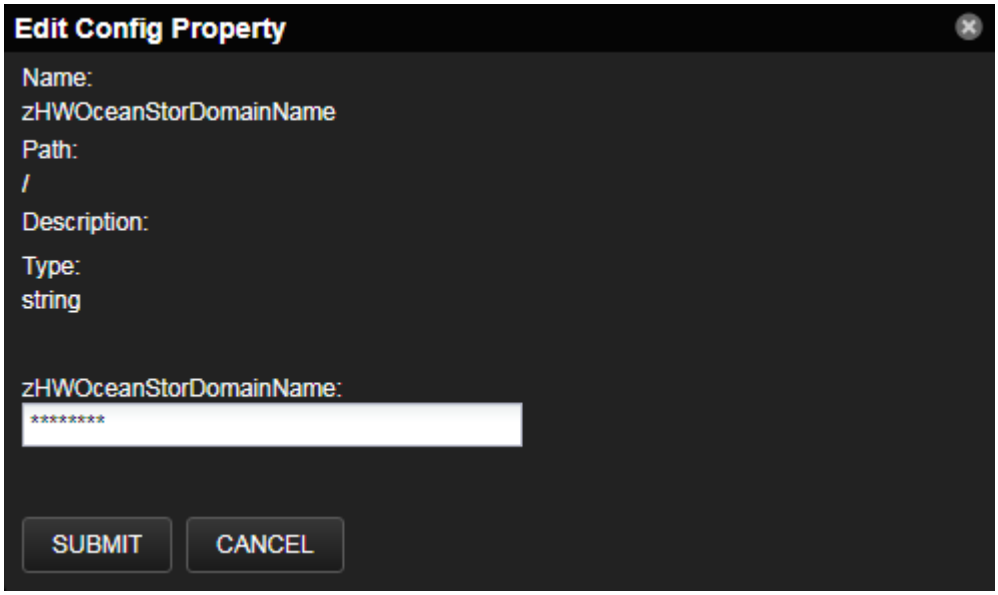
Step 9 (Optional)If want to login the storage device using domain authentication, double-click **zHWOceanStorIsLocalAuthentication**, uncheck the Check-box as below, and click **SUBMIT**.



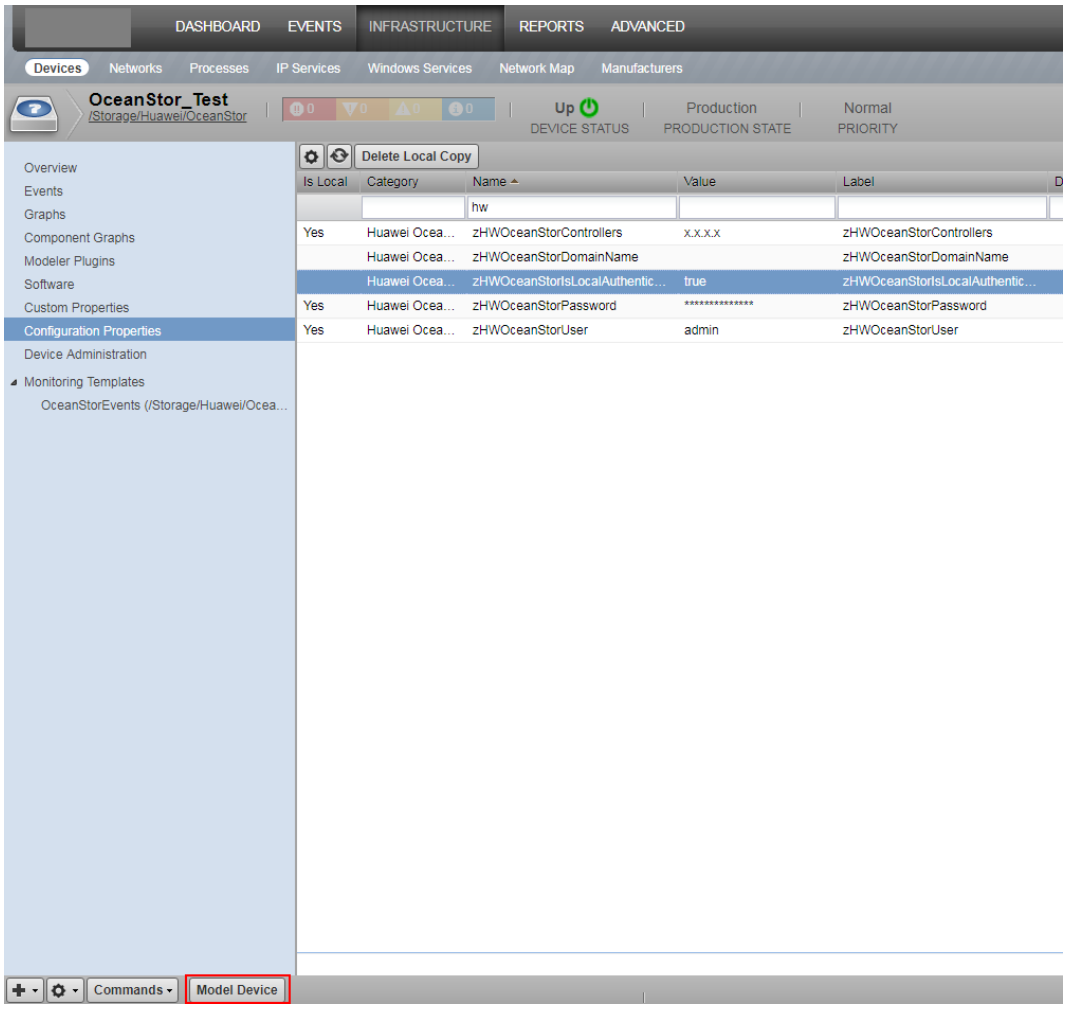
NOTE

zHWOceanStorIsLocalAuthentication defaults true.

Then double-click **zHWOceanStorDomainName**, enter the domain name, and click **SUBMIT**.



Step 10 Click **Model Device** in the lower part.

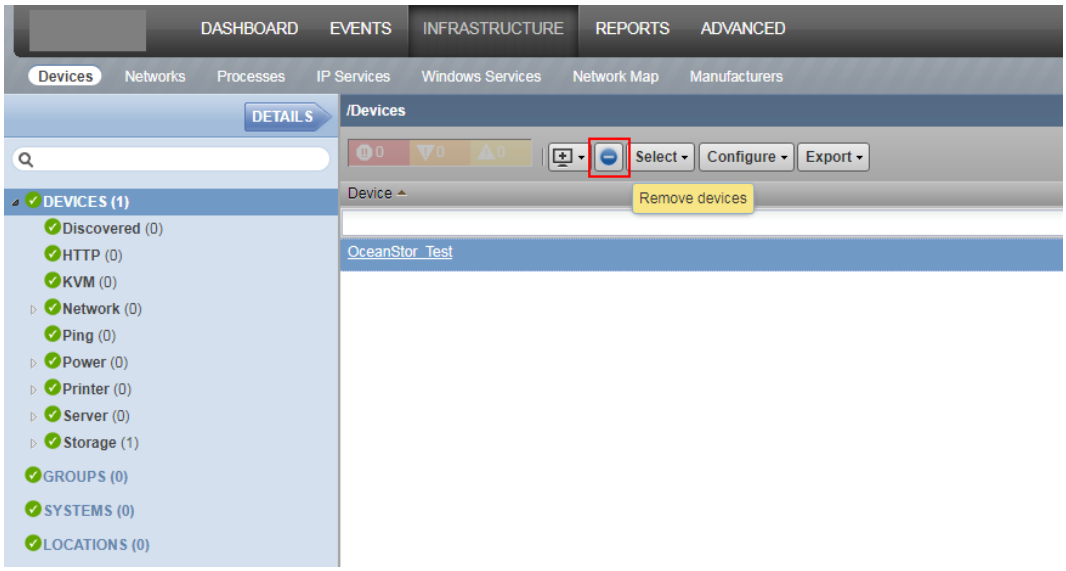


----End

4.2 Deleting Storage Devices

Step 1 Log in to the Zenoss Core GUI through **https://***x.x.x.x***:54321**.

Step 2 Choose **INFRASTRUCTURE** > **Devices > Storage > Huawei > OceanStor**, select the device you want to delete, and click **Remove devices**.



----End

5 Viewing Storage Information

5.1 Storage Component Information

You can use ZenPack to view the following component information of Huawei storage.

Table 5-1 Components Details

Components	Properties	Data Points	Thresholds	Graphs
Arrays	Name Health Status Running Status Product Model Product Version System Capacity Used Capacity Storage Pools Capacity Storage Pools Free Capacity	SYSTEM_CAPACITY_USAGE STORAGE_POOLS_CAPACITY_USAGE	80% System Capacity Usage 80% Storage Pools Capacity Usage	System Capacity Usage Storage Pools Capacity Usage

Components	Properties	Data Points	Thresholds	Graphs
Enclosures	Name Location Health Status Running Status Type Temperature(°C)	TEMPERATURE	Temperature Reaches 48°C	\
Powers	Name Location Health Status Running Status Type Model Manufacturer	\	\	\
Fans	Name Location Health Status Running Status Running Level	\	\	\
BBUs	Name Location Health Status Running Status Remaining Lifetime(days)	\	\	\
Controllers	Name Location Health Status Running Status CPU Cache Capacity	BLOCK_BANDWIDTH TOTAL_IOPS CPUUSAGE MEMORYUSAGE	90% CPU Usage 90% Memory Usage	Block Bandwidth IOPS CPU Usage Memory Usage

Components	Properties	Data Points	Thresholds	Graphs
Disk Domains	Name Health Status Running Status Disk Type Total Capacity Allocated Capacity Free Capacity	\	\	\
Disks	Name Health Status Running Status Disk Type Capacity Disk Domain Model Manufacturer	\	\	\
Storage Pools	Name Health Status Running Status Usage Owning Disk Domain Total Capacity Used Capacity Free Capacity	BLOCK_BANDWIDTH TOTAL_IOPS READ_BANDWIDTH READ_IOPS WRITE_BANDWIDTH WRITE_IOPS AVG_IO_RESPONSE_TIME CAPACITY_USAGE	80% Capacity Usage	Block Bandwidth Read Bandwidth Write Bandwidth Total IOPS Read IOPS Write IOPS Avg. IO Response Time Capacity Usage
LUNs	Name Health Status Running Status Type Capacity Owning Storage Pool Mapping vStore Name	BLOCK_BANDWIDTH TOTAL_IOPS READ_BANDWIDTH READ_IOPS WRITE_BANDWIDTH WRITE_IOPS	\	Block Bandwidth Read Bandwidth Write Bandwidth Total IOPS Read IOPS Write IOPS

Components	Properties	Data Points	Thresholds	Graphs
FileSystems	Name Health Status Running Status Type Total Capacity Available Capacity Owning Storage Pool vStore Name Clone Total inodes	OPS READ_OPS WRITE_OPS AVG_READ_OPS_RESPONSE_TIMEAVG_WRITE_OPS_RESPONSE_TIME INODE_USED_COUNT	\	OPS Read OPS Write OPS Avg. Read OPS Response Time Avg. Write OPS Response Time Used inode Count
LUN Snapshots	Name Health Status Running Status Snapshot Capacity Allocated Capacity Activated At Mapping	\	\	\
FS Snapshots	Name Health Status Snapshot Used Capacity Created At	\	\	\
NFS Share	Share Path Description Character Encoding	\	\	\
CIFS Share	Share Path Description	\	\	\
Quota Trees	Quota Switch	\	\	\

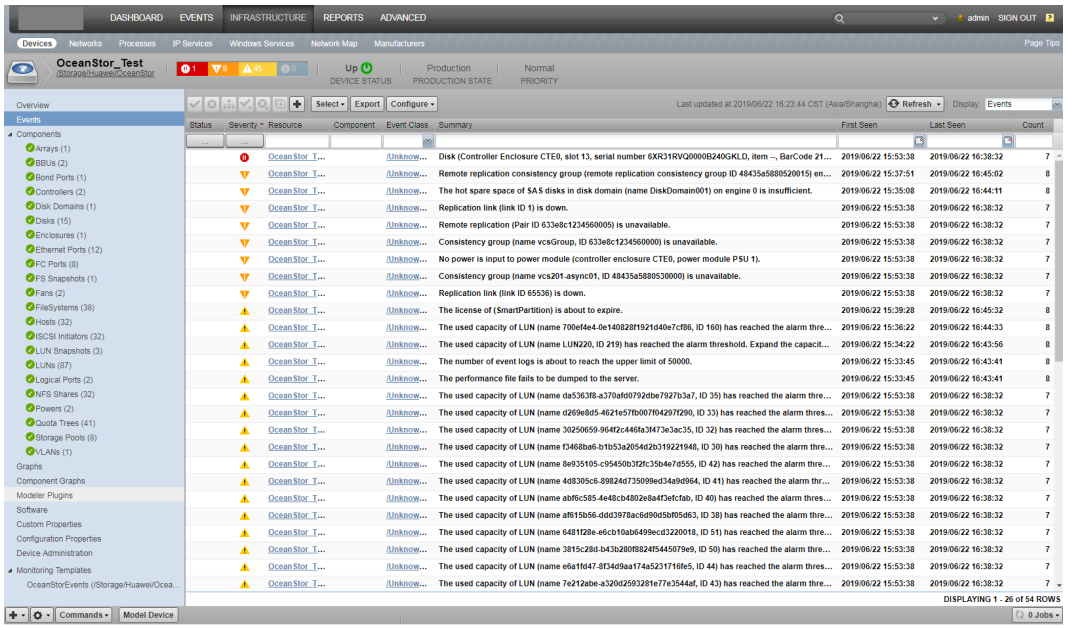
Components	Properties	Data Points	Thresholds	Graphs
Ethernet Ports	Name Location Health Status Running Status IPv4 Address IPv4 Mask IPv6 Address IPv6 Prefix Working Rate(Mbit/s) Max Working Rate(Mbit/s) MTU(Byte) Bond Name Port Switch Initiator	\	\	\
FC Ports	Name Location Health Status Running Status WWPN Working Rate(Mbit/s) Max Working Rate(Mbit/s) Operating Mode Port Switch Initiator	\	\	\

Components	Properties	Data Points	Thresholds	Graphs
FCoE Ports	Name Location Health Status Running Status WWPN Working Rate(Mbit/s) Max Working Rate(Mbit/s) Port Switch Initiator	\	\	\
Bond Port	Name Health Status Running Status MTU(Byte) Number of Ports	\	\	\
VLANs	Name Status Tag MTU(Byte) Port Type Port ID	\	\	\
Logical Ports	Name Running Status Status IPv4 Address IPv6 Address Home Port Current Port Role Dynamic DNS Data Protocol Manage Access Mode vStore Name	\	\	\

Components	Properties	Data Points	Thresholds	Graphs
Hosts	Name Status OS IP Address Number of Initiators vStore Name	\	\	\
ISCSI Initiators	Name Status Associated Host Associated Host Name CHAP Authentication Multipath Type vStore Name	\	\	\
FC Initiators	Name Status Associated Host Associated Host Name Multipath Type vStore Name	\	\	\

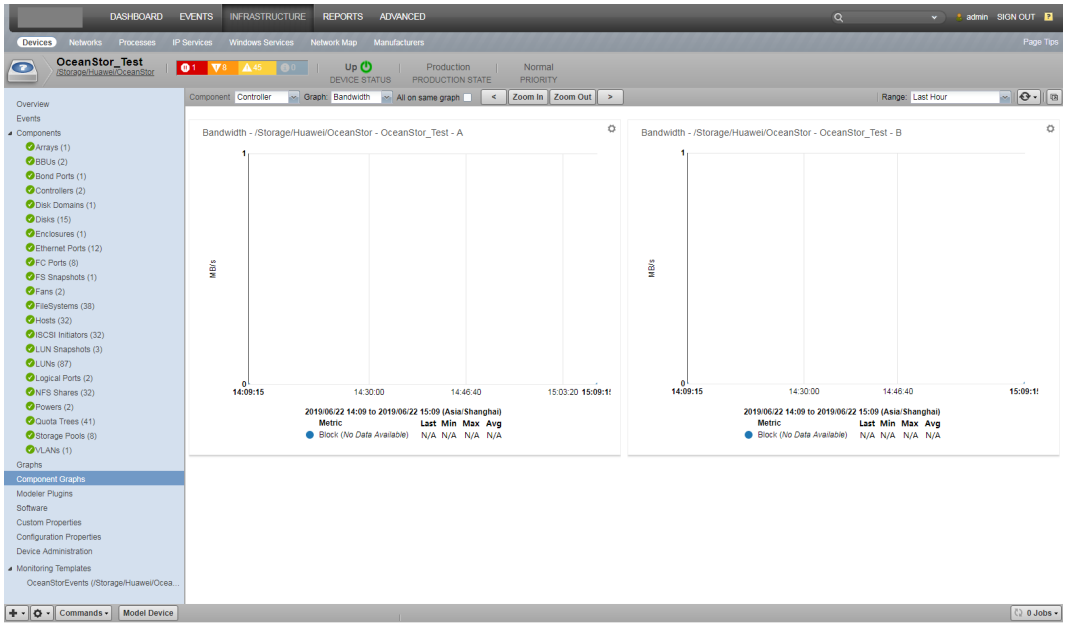
5.2 Alarm Information

You can use ZenPack to obtain the current alarm information of storage devices and display the information on the **Events** page of Zenoss.



5.3 Performance Charts

ZenPack supports performance monitoring on the Controller, StoragePool, LUN and FileSystem components.

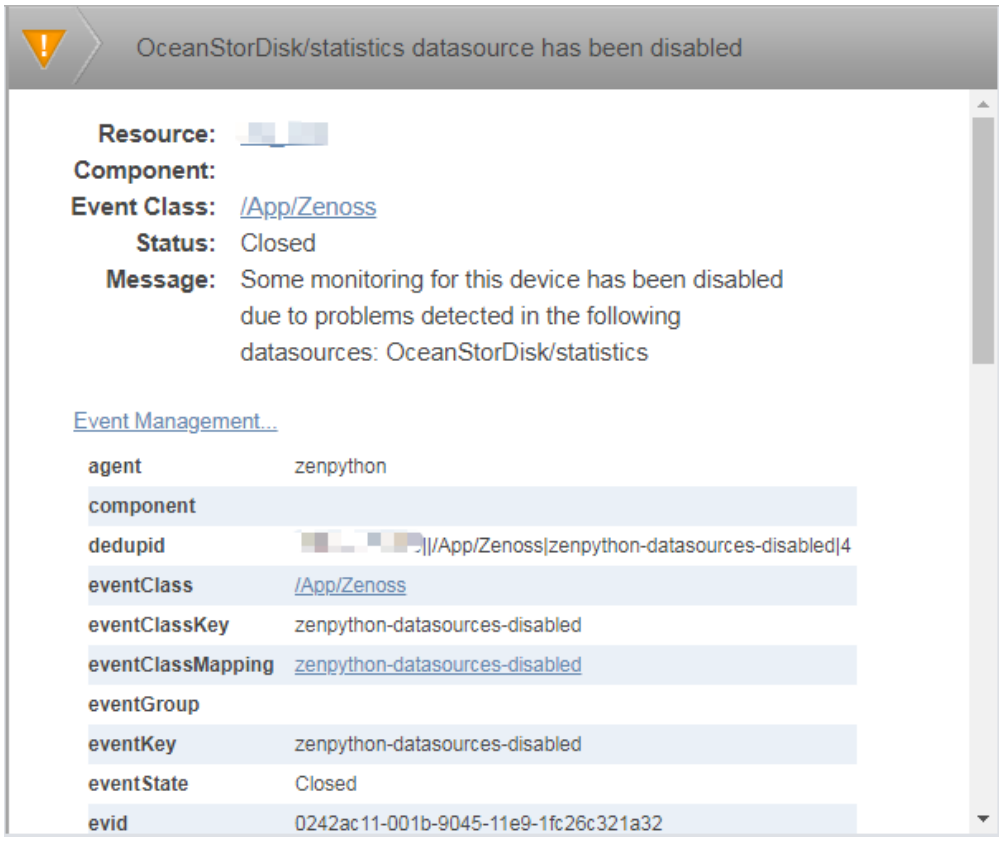


6 FAQ

6.1 Event "Some monitoring for this device has been disabled" Is Reported

Symptom

After you register a storage device with ZenPack, event "Some monitoring for this device has been disabled" is displayed on the **Events** page of Zenoss, as shown in the following figure.

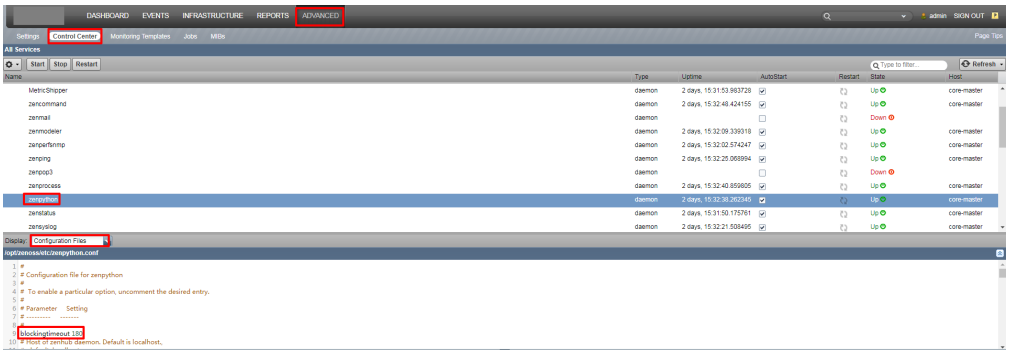


Possible Causes

The datasource plug-in in Zenpack collects a large amount of performance data. As a result, the default timeout interval (30s) of zenpython is exceeded.

Solution

1. Choose **ADVANCED** > **Control Center** > **localhost** > **zenpython** and change the default timeout interval of zenpython. For example, change the value to 180 seconds.



2. Log in to the zenoss server through the CLI and delete the datasource plug-in from **zenpython.blocked**.

```
[root@core-master ~]# serviced service attach zenpython
[root@1f8447228895 /]# su - zenoss
Last login: Tue Mar 12 10:20:02 UTC 2019
(zenoss) [zenoss@1f8447228895 ~]$ vi /var/zenoss/zenpython.blocked
(zenoss) [zenoss@1f8447228895 ~]$
```

3. Restart the zenpython service.