



NetApp®

NetApp SANtricity® Plug-in for Nagios 1.0

Installation and User Guide



NetApp, Inc.
495 East Java Drive
Sunnyvale, CA 94089
U.S.

Telephone: +1 (408) 822-6000
Fax: +1 (408) 822-4501
Support telephone: +1-(888) 463-8277
Web: <http://www.netapp.com>
Feedback: doccomments@netapp.com

Part number: 215-10641_A0
Release date: October 2015

TABLE OF CONTENTS

1	OVERVIEW	1
2	INSTALLATION	1
	NAGIOS QUICK INSTALLATION	1
	NETAPP WEB PROXY INSTALLATION	1
3	PLUG-IN CONFIGURATION	2
	WIZARD DEPLOYMENT	2
4	KNOWN SCENARIOS	6
	HOST CONFIGURATION	6
	SERVICE CONFIGURATION	6

LIST OF FIGURES

Figure 1 - Manage Configuration Wizards.....	2
Figure 2 - Configuration Wizard.....	3
Figure 3 - Configure Monitor Services.....	4
Figure 4 - Configure Monitor Frequencies.....	5
Figure 5 - Configure Notification Settings.....	5
Figure 6 - Configure Group Membership.....	6

1 OVERVIEW

The configuration wizard can be used to configure plug-ins, host, commands and services on Nagios XI. After installation of the configuration wizard, run the configuration wizard to selectively enable or disable specific monitoring services for each storage array within your environment.

2 INSTALLATION

The table below summarizes the prerequisites and requirements.

Component	Location
Nagios XI	Download and Install Nagios XI using the steps in the following link. https://assets.nagios.com/downloads/nagiosxi/docs/XI_Manual_Installation_Instructions.pdf
Install Python Requests Package	Download the latest package from: https://pypi.python.org/pypi/requests and use the following command to install the package after extraction: <code>python setup.py install</code>
Verify the Nagios app is up and running	Check installation by accessing Nagios application through a browser at: <a href="http://<host_address>/nagiosxi">http://<host_address>/nagiosxi
NetApp SANtricity Web Service Proxy	Install the latest build of the NetApp SANtricity Web Service Proxy. http://mysupport.netapp.com/NOW/cgi-bin/software?product=E-Series%2FEF-Series+SANtricity+Management+Plug-ins&platform=WebServices

Nagios Quick Installation

1. Deploy a fresh clean install of CentOS 5/6/7 or RHEL 5/6.
2. Download and install latest stable Nagios XI:

```
wget http://assets.nagios.com/downloads/nagiosxi/xi-latest.tar.gz
tar -xzvf xi-latest.tar.gz
cd nagiosxi
./fullinstall
```

3. Install Python Requests package:

```
wget https://pypi.python.org/packages/source/r/requests/requests-2.7.0.tar.gz
tar -xzvf requests-2.7.0.tar.gz
cd requests-2.7.0
python setup.py install
```

NetApp Web Proxy Installation

1. Download the latest version of NetApp SANtricity Web Services Proxy on the target host.
2. Install the Web Services Proxy:

```
chmod +x webservice-01.20.7000.0005.bin
./webservice-01.20.7000.0005.bin
yum -y install redhat-lsb-core.x86_64 <-- only needed for newer NIX using systemctl
/etc/init.d/web_services_proxy start
firewall-cmd --zone=public --add-port=8443/tcp --permanent <-- default zone and port
firewall-cmd --reload
```

3 PLUG-IN CONFIGURATION

This section describes deployment, Configuration and Monitoring of Nagios - Wizard.

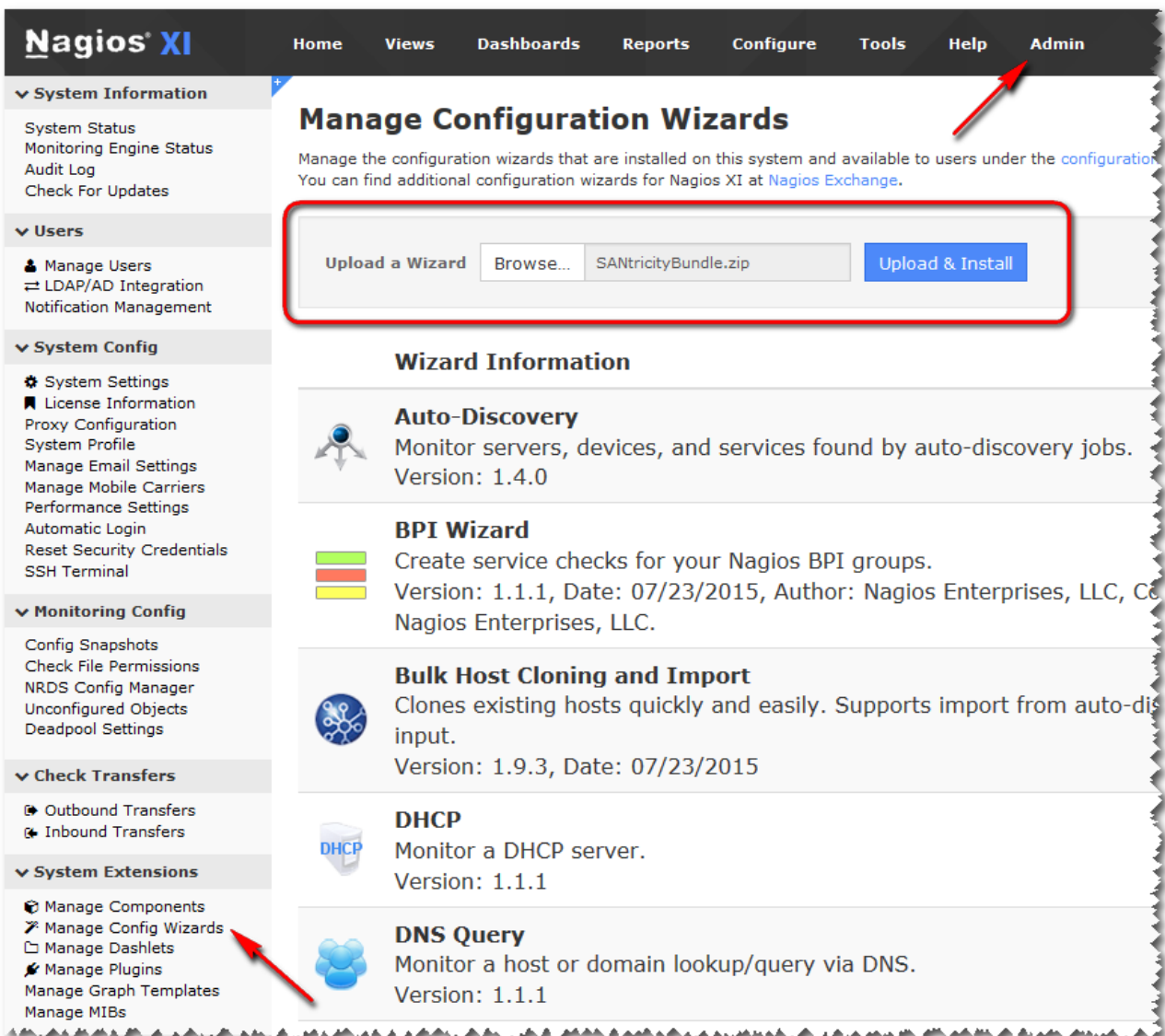
Wizard Deployment

This section describes the setup of how to add the SANtricity Configuration Wizard to Nagios XI.

STEPS TO ADD WIZARD:

1. Login to the Nagios XI with the *nagiosadmin* user ID.
2. Click on the **Admin** view.
3. Under the **System Extensions** side menu, click the **Manage Config Wizards** link.
4. Click on the **Browse** button and select the **SANtricityBundle.zip** file from the local system.
5. Click the **Upload & Install** button to complete the wizard installation.

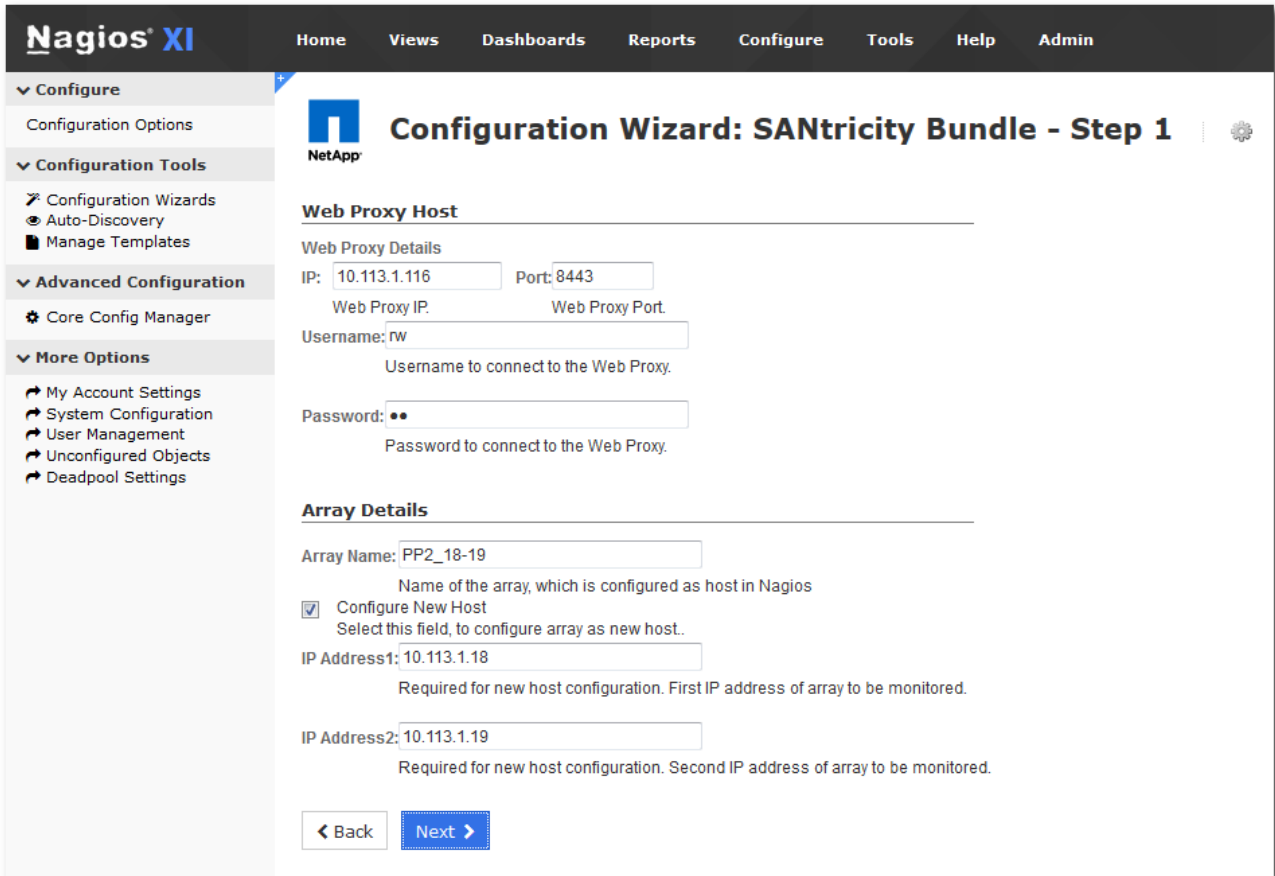
Figure 1 - Manage Configuration Wizards



STEPS TO CONFIGURE WIZARD:

1. Log into Nagios XI with administrator credentials.
2. Click on the **Configure** view from the top menu.
3. Under the **Configuration Tools** side menu, click the **Configuration Wizards** link.
4. Scroll or search through the available wizards to locate and click on the **SANtricity Bundle** wizard.

Figure 2 - Configuration Wizard



5. Enter the details for the web services proxy host and storage array to manage and click **Next**.

Figure 3 - Configure Monitor Services

Configuration Wizard: SANtricity Bundle - Step 2

Net App SANtricity Services

Specify the services you'd like to monitor for the given array.

- Basic Services**
 - Array Availability**
Monitor the availability of the array.
 - Physical Component Status**
Monitor the status of physical components for given array.
 - RBOD Controllers
 - EBOD IOMS
 - Tray
 - Batteries
 - Fans
 - Power Supplies
 - Disk Drives
 - Arrays
 - Logical Component Status**
Monitor the status of logical components for given array.
 - Data Pools
 - Consistency Groups
 - Volumes
 - Snapshots (Legacy and PIT)
 - Mirror Volumes
 - PIT Repositories
 - Major Event Log**
Monitor the event log of the array.
- Advance Services**
 - Monitor Storage Pool**
To track and report Storage Pool capacity information.
Warning: Critical:
 - Monitor Thin Volumes**
To track and report Thin Volumes capacity information.
Warning: Critical:
 - Monitor Physical Component Temperature**
To track and report Physical Component Temperature information.
Warning: Critical:
Warning threshold. Critical threshold.
 - Monitor SSD drives Statistics**
To track and report SSD Drive statistics.
Warning: Critical:
- Performance Services**
 - Volume Statistics**
Track and report performance statistics by Volume for given array.
 - Read IOPs** Range Selector: Low High Warning: Critical:
 - Write IOPs** Range Selector: Low High Warning: Critical:
 - Read Latency** Range Selector: Low High Warning: Critical:

6. Select the monitor services that you want to associate with the selected storage array.
7. Adjust the warning and critical values to suit your environment or except the defaults and adjust the monitors after obtaining baseline information.

Figure 4 - Configure Monitor Frequencies

Configuration Wizard: SANtricity Bundle - Step 3

NetApp

Monitoring Settings

Define basic parameters that determine how the host and service(s) should be monitored.

Under normal circumstances:

Monitor the host and service(s) every minutes.

When a potential problem is first detected:

Re-check the host and service(s) every minutes up to times before generating an alert.

8. Adjust frequency of monitors.

Figure 5 - Configure Notification Settings

Configuration Wizard: SANtricity Bundle - Step 4

NetApp

Notification Settings

Define basic parameters that determine how notifications should be sent for the host and service(s).

When a problem is detected:

Don't send any notifications

Send a notification immediately

Wait minutes before sending a notification

If problems persist:

Send a notification every minutes until the problem is resolved.

Send alert notifications to:

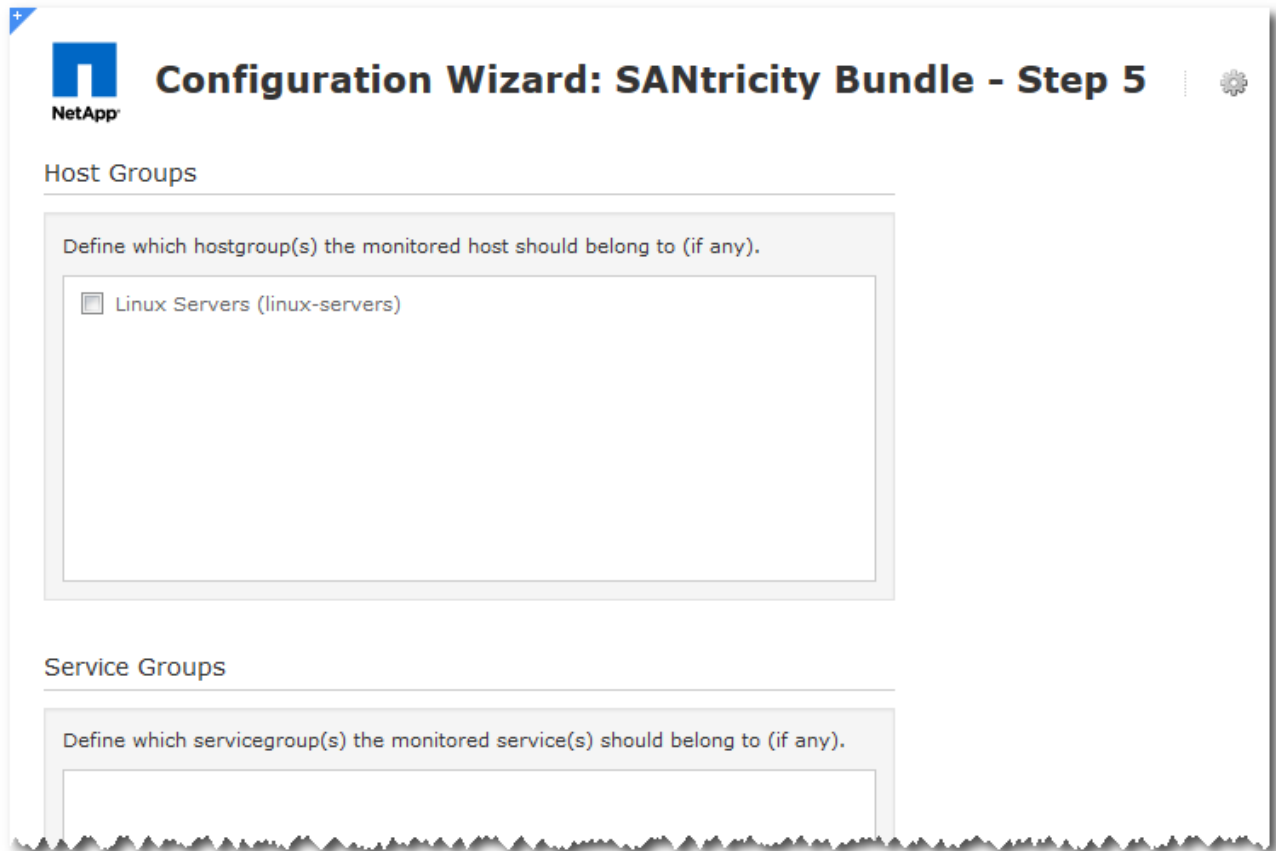
Myself ([Adjust my settings](#))

Other individual contacts

Default Contact (xi_default_contact)

9. Adjust notification settings.

Figure 6 - Configure Group Membership



10. Configure group memberships.
11. Click **Apply** to complete the configuration.

4 KNOWN SCENARIOS

Host Configuration

- There are two possibilities when the user selects the checkbox for "Configure New Host" as follows:-
 - If the entered Array Name does not match with any existing host then a New Host would be configured.
 - If the entered Array Name matches with an existing host then it will overwrite the configuration for the existing Host.
- There are two possibilities when user does not selects the checkbox for "Configure New Host" as follows:-
 - If the user enters an Array Name which does not match to any existing Host in Nagios then the service configuration will fail. User needs to delete incorrect service and host manually.
 - If the user enters an Array Name which matches an existing host it will skip the host configuration and configure the services selected for the Array.
- Initial configuration reports host (storage array) as not configured on proxy server.
 - Resolve by temporarily disabling firewall on proxy host and enabling ports 8080 and 8443 on both proxy host and Nagios host. After initial communication is established between Nagios and proxy host with new array configuration, the firewall can then be re-enabled.

Service Configuration

- Nagios will overwrite existing services and create services which are not present.

Trademark information

NetApp, the NetApp logo, Go Further, Faster, ASUP, AutoSupport, Campaign Express, Cloud ONTAP, clustered Data ONTAP, Customer Fitness, Data ONTAP, DataMotion, Fitness, Flash Accel, Flash Cache, Flash Pool, FlashRay, FlexArray, FlexCache, FlexClone, FlexPod, FlexScale, FlexShare, FlexVol, FPolicy, GetSuccessful, LockVault, Manage ONTAP, Mars, MetroCluster, MultiStore, NetApp Insight, OnCommand, ONTAP, ONTAPI, RAID-DP, SANtricity, SecureShare, Simplicity, Simulate ONTAP, Snap Creator, SnapCopy, SnapDrive, SnapIntegrator, SnapLock, SnapManager, SnapMirror, SnapMover, SnapProtect, SnapRestore, Snapshot, SnapValidator, SnapVault, StorageGRID, Tech OnTap, Unbound Cloud, and WAFL are trademarks or registered trademarks of NetApp, Inc. in the United States, and/or other countries. A current list of NetApp trademarks is available on the web at <http://www.netapp.com/us/legal/netapptmlist.aspx>.

Cisco and the Cisco logo are trademarks of Cisco in the U.S. and other countries. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such.

Copyright information

Copyright © 1994-2015 NetApp, Inc. All rights reserved. Printed in the U.S.

No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

How to send your comments

You can help us to improve the quality of our documentation by sending us your feedback.

Your feedback is important in helping us to provide the most accurate and high-quality information. If you have suggestions for improving this document, send us your comments by email to doccomments@netapp.com. To help us direct your comments to the correct division, include in the subject line the product name, version, and operating system.

You can also contact us in the following ways:

NetApp, Inc., 495 East Java Drive, Sunnyvale, CA 94089 U.S.

Telephone: +1 (408) 822-6000

Fax: +1 (408) 822-4501

Support telephone: +1 (888) 463-8277



NetApp®