Pandora Flexible Monitoring System

Further description of topics covered

Type of Systems: CentOS 7
Necessary Skills: CentOS admin
Complete Goal: Set-up and configure a Pandora FMS server and Pandora FMS agents in order to have in depth information about processes, events and other numerical data on each host on the infrastructure. Pandora FMS also has remote access functionality in order to stop and start services.

Steps:

Pandora FMS Server:

Installing a Mariadb server:

1. Run the following commands to install and start the Mariadb server:
   #yum -y install mariadb-server
   #systemctl start mariadb
   #systemctl enable mariadb

2. Next we need to change the password for the root of Mariadb.
   #mysql -u root
   Now enter the following commands:
   ->use mysql;
   ->update user set password=PASSWORD("password to set") where User='root';
   ->flush privileges;
   ->exit;

Installing the Pandora FMS Console:

1. Run the following command to configure the repository for installing Pandora FMS:
   #vim /etc/yum.repos.d/pandorafms.repo
   Paste the following into the .repo file.
   [artica_pandorafms]
   name=CentOS6 - PandoraFMS official repo
   baseurl=https://firefly.artica.es/centos7
   gpgcheck=0

enabled=1
Save the .repo file and run the following command:
#yum -y install pandorafms_console

2. Start the HTTPD server:
#systemctl start httpd
#systemctl enable httpd
3. Next we need to configure the firewall:
#firewall-cmd --zone=public --add-port=80/tcp --permanent
#firewall-cmd --reload

SeLinux Settings:

Run the following commands:
#yum install -y policycoreutils-python
#semanage fcontext -a -t httpd_sys_rw_content_t '/var/www/html/pandora_console/include'
#semanage fcontext -a -t httpd_sys_rw_content_t 'var/www/html/pandora_console/attachment'
#restorecon '/var/www/html/pandora_console/include'
#restorecon '/var/www/html/pandora_console/attachment'

Web interface settings:

- **Open a browser window and type** http://ipaddress/pandora_console
- This should bring you to an installation wizard. Follow the instructions of the wizard and accept the license agreement. When prompted, enter the DB root password set earlier.

Removing the PHP installer:

- Run the following command to remove install.php:
#rm -rf /var/www/html/pandora_console/install.php

Now refresh the Google window and log in with the default credentials:

Username: admin
Password: pandora

Note: THESE CREDENTIALS SHOULD BE CHANGED IMMEDIATELY

Pandora FMS Agents:

Windows:

1. Go to the following link and click on the 64-bit download link listed under Microsoft Windows:

   https://sourceforge.net/projects/pandora/files/Pandora%20FMS%207.0NG/745/Windows/Pandora%20FMS%20Windows%20Agent%20v7.0NG.745_x86_64.exe/download

   - Open the .exe file and follow the wizard instructions to install the agent.
     - Note: ensure that the correct Pandora FMS server IP address is entered into the installation wizard.
     - Check the Enable Remote Config box

2. Once the agent has been installed, check that it is running as a service.
3. For eHorus configuration, make sure to copy the device ID from the eHorus platform and add it as a custom field in the Pandora FMS console.
   - eHorus integration allows for easier remote access to hosts.

Linux Distros:

1. Run the following commands to download and install the Pandora FMS agent for CentOS/RHEL:

   ```
   # yum install wget perl-Sys-Syslog perl-YAML-Tiny
   # wget
   https://sourceforge.net/projects/pandora/files/Pandora%20FMS%207.0NG/743/RHEL_CentOS/pandorafms_agent_unix-7.0NG.743-1.noarch.rpm
   # yum install pandorafms_agent_unix-7.0NG.743-1.noarch.rpm
   ```

2. For Debian and Ubuntu Systems, run the following commands to download and install the Pandora FMS agent:

   ```
   $ wget
   https://sourceforge.net/projects/pandora/files/Pandora%20FMS%207.0NG/743/Debian_Ubuntu/pandorafms.agent_unix_7.0NG.743.deb
   $ sudo dpkg -i pandorafms.agent_unix_7.0NG.743.deb
   $ sudo apt-get -f install
   ```

After the Pandora FMS agents have been installed, we need to configure the agents to communicate with the Pandora host.

3. Open the Pandora agent config file by running the following:

```
# vi /etc/pandora/pandora_agent.conf
```

4. Look for the server configuration parameter and set it to the IP address of the Pandora FMS server. See attached screenshot in the appendix.
5. Save the config file and run the following commands to start the Pandora FMS daemon:

```
# systemctl start pandora_agent_daemon.service
# systemctl enable pandora_agent_daemon.service
# systemctl status pandora_agent_daemon.service
```

Adding Agents to the Pandora Server

Next we need to add a new agent in the Pandora FMS console.

1. On the CentOS machine, open a browser and log into the Pandora console, then go to **Resources ⇒ Manage Agents**. See attached screenshot in the appendix.
2. Click on the **Create Agent**
3. On the agent manager page click define a new agent by filling out all the fields. See attached screenshot. Once the fields have been filled, click **create.**

Configuring a Module for Remote Monitoring

1. To create a module go to **Resource ⇒ Monitor agents.** In the console, click on the agent name to change it.
2. Once it loads, click on the **Modules** link as seen in the attached screenshot.
3. Next select the module type (Create a new network server module) and click create.
4. On the next screen select the module component group (Network Management) and its actual check type (Host Alive). Next ensure that the target IP is that of the host to be monitored. Then click create.
5. Refresh the console and try to view the agent under agent details and highlight the module status indicator. It should show that all monitors are ok. See attached screenshot.
6. Now when you open the module, there should be monitoring information shown. See attached screenshots.

Relevant Info:

-

Appendix:

```
# Base config file for Pandora FMS agents
# Version 7.0NG.743, GNU/Linux
# Licensed under GPL license v2,
# Copyright (c) 2003-2014 Artica Soluciones Tecnologicas
# http://www.pandorafms.com

# General Parameters
# ==================

server_ip       192.168.58.9
server_path     /var/spool/pandora/data_in
temporal /tmp
logfile /var/log/pandora/pandora_agent.log

#include /etc/pandora/pandora_agent_alt.conf
#broker_agent name_agent

# Interval in seconds, 300 by default
interval        300

# Debug mode renames XML in the temp folder and continues running
debug           0
```

Figure 1: Step 4 for configuration of Pandora agents on Linux hosts

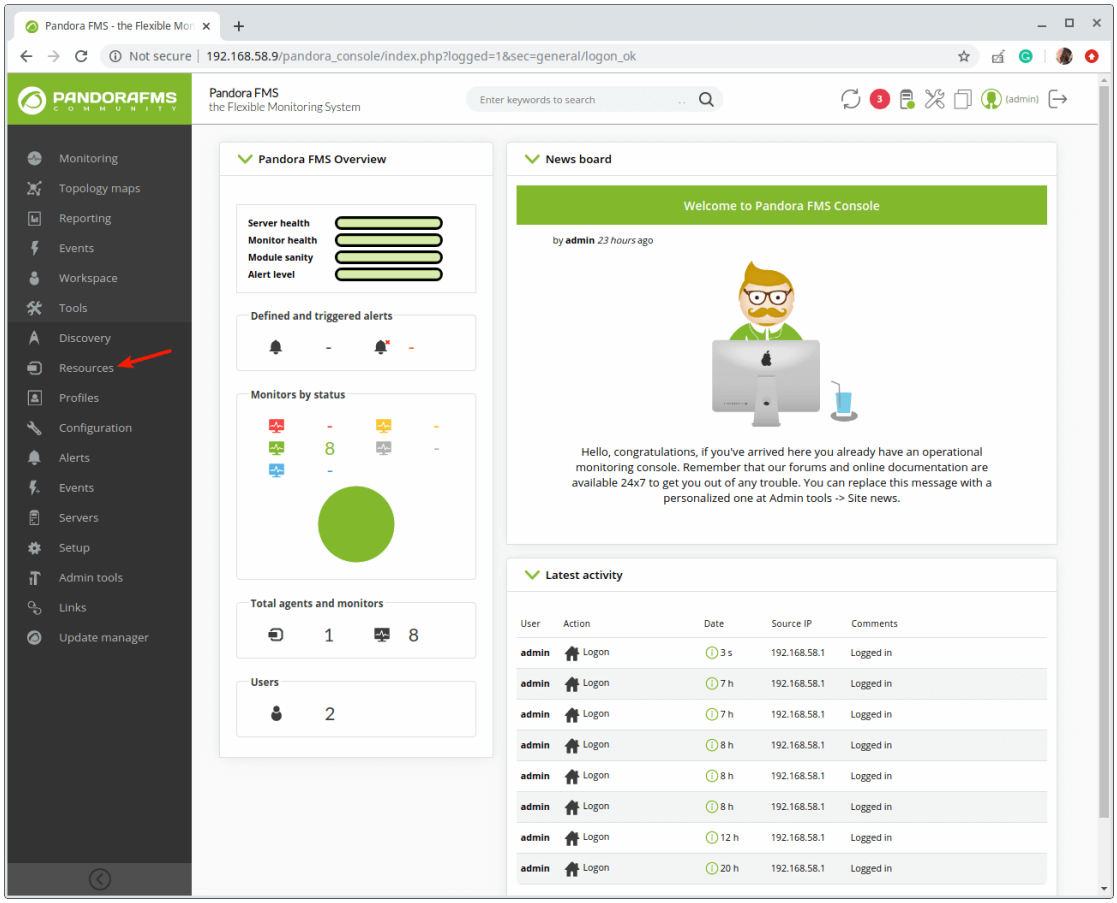

Figure 2: Step 1 for configuration of Pandora agents

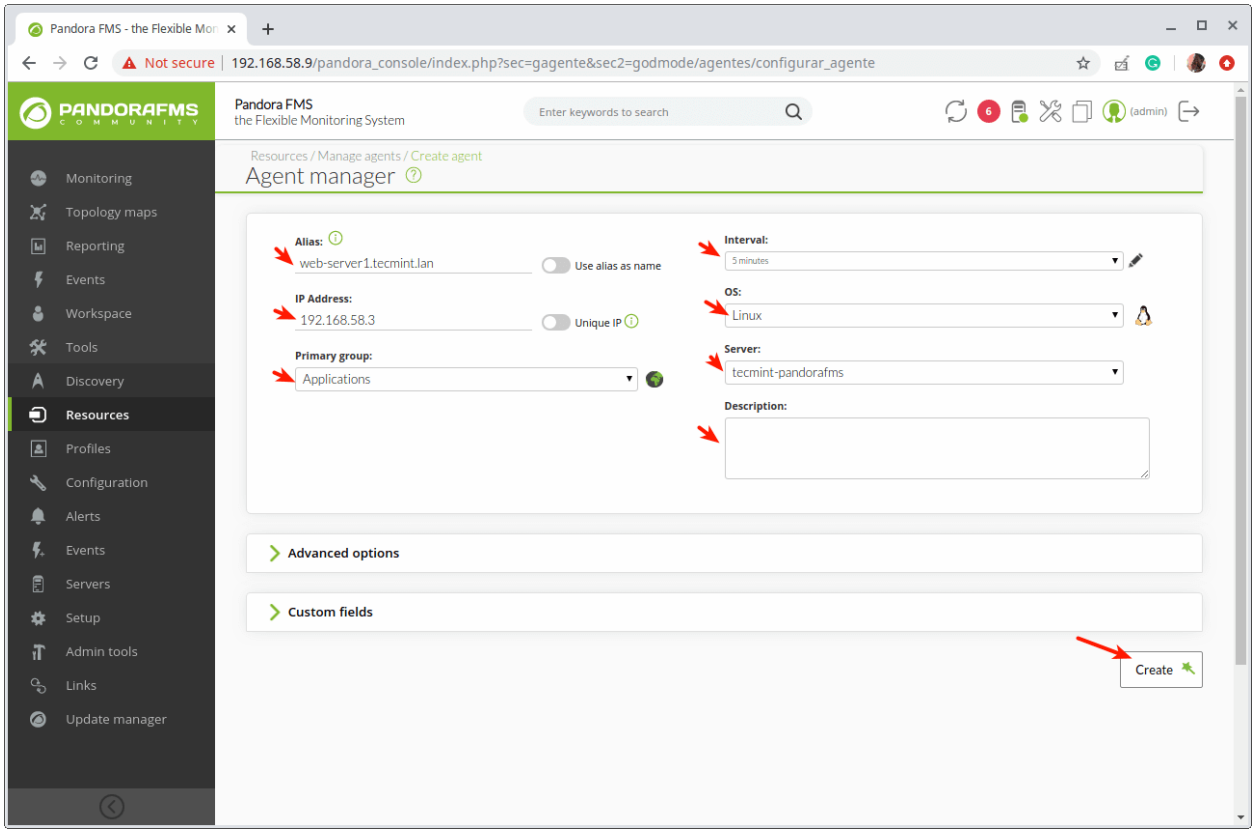

Figure 3: Step 3 for configuration of Pandora agents

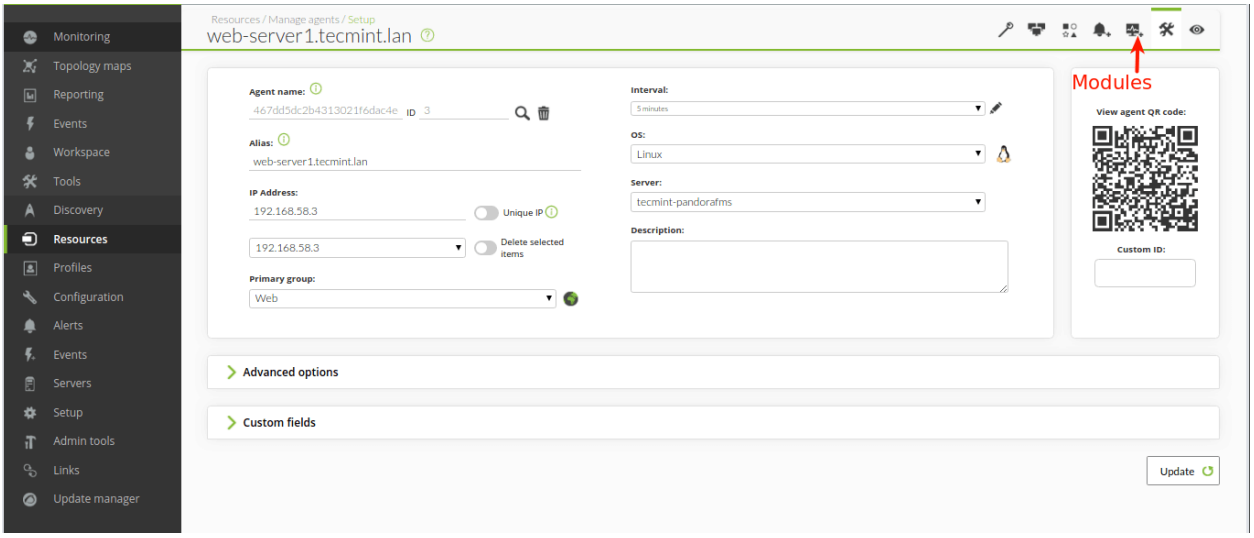

Figure 4: Step 2 for configuration of remote monitoring

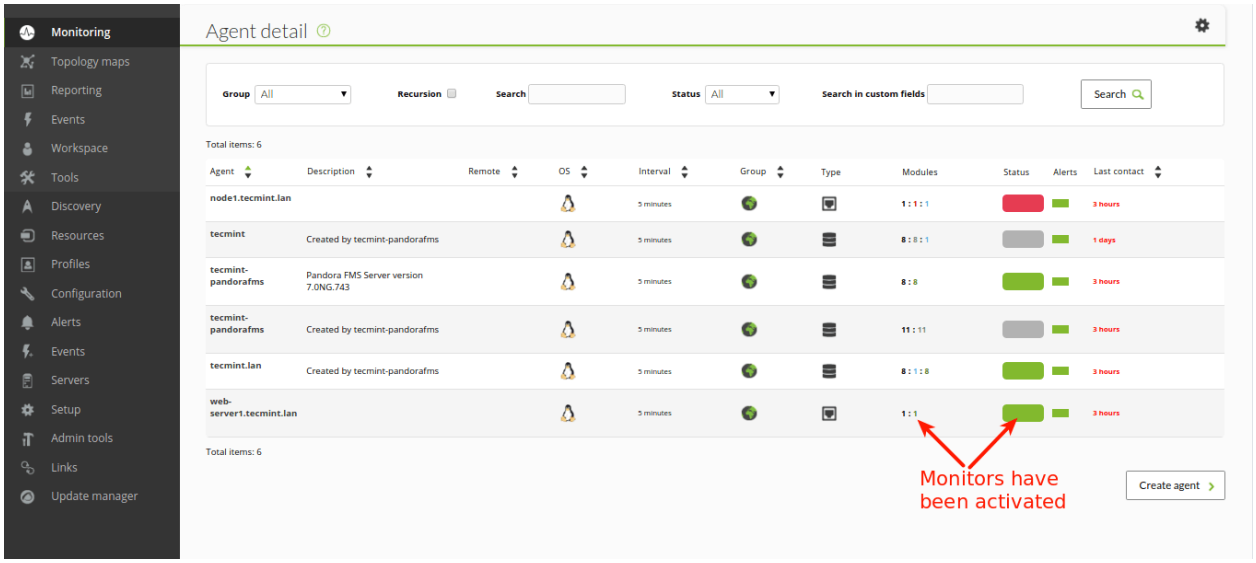

Figure 5: Step 5 for configuration of remote monitoring

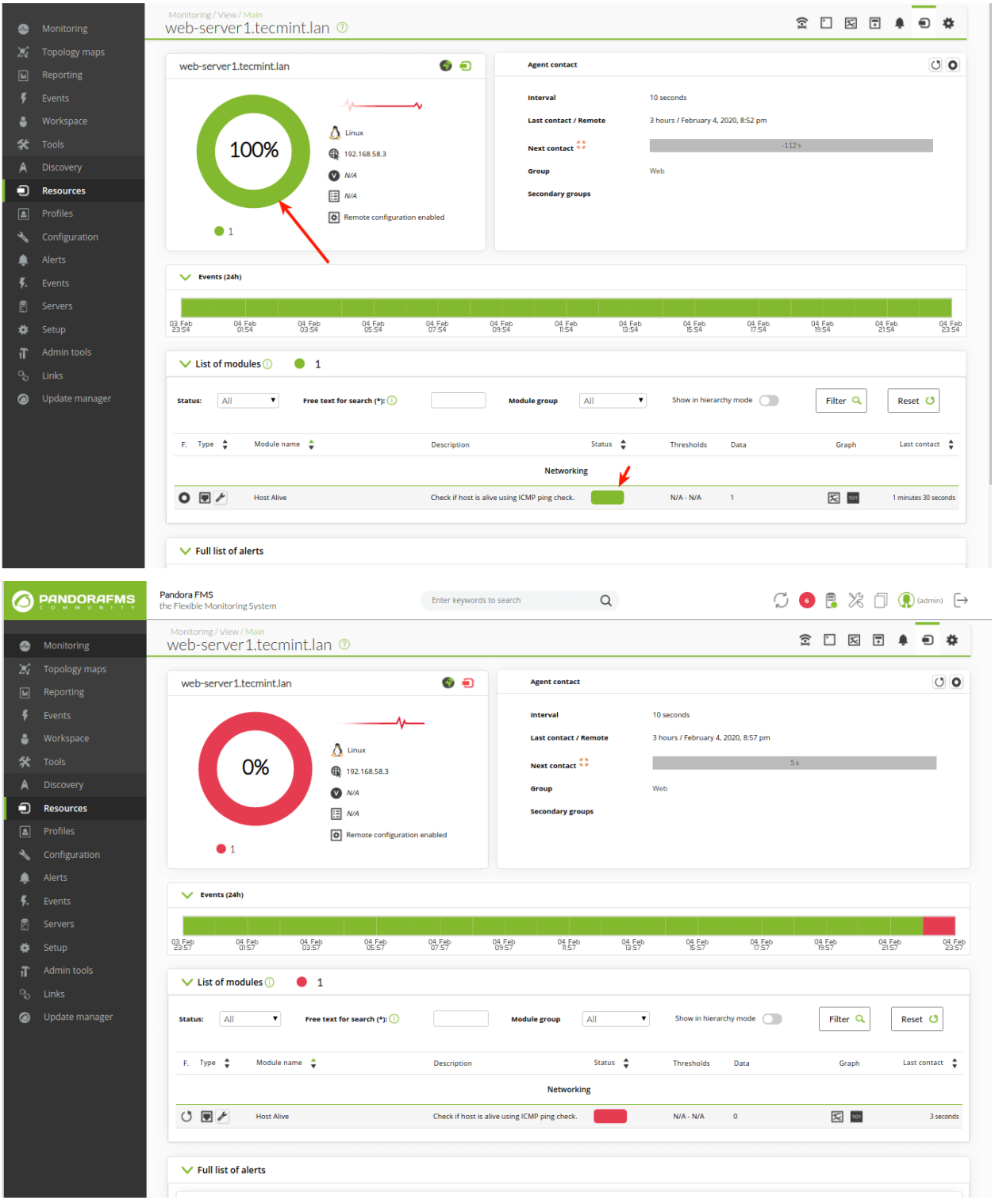

Figure 6+7: Example information displayed about agents in the Pandora console