Configure EMS event notifications with the CLI

ONTAP 9

NetApp
April 19, 2022

Table of Contents

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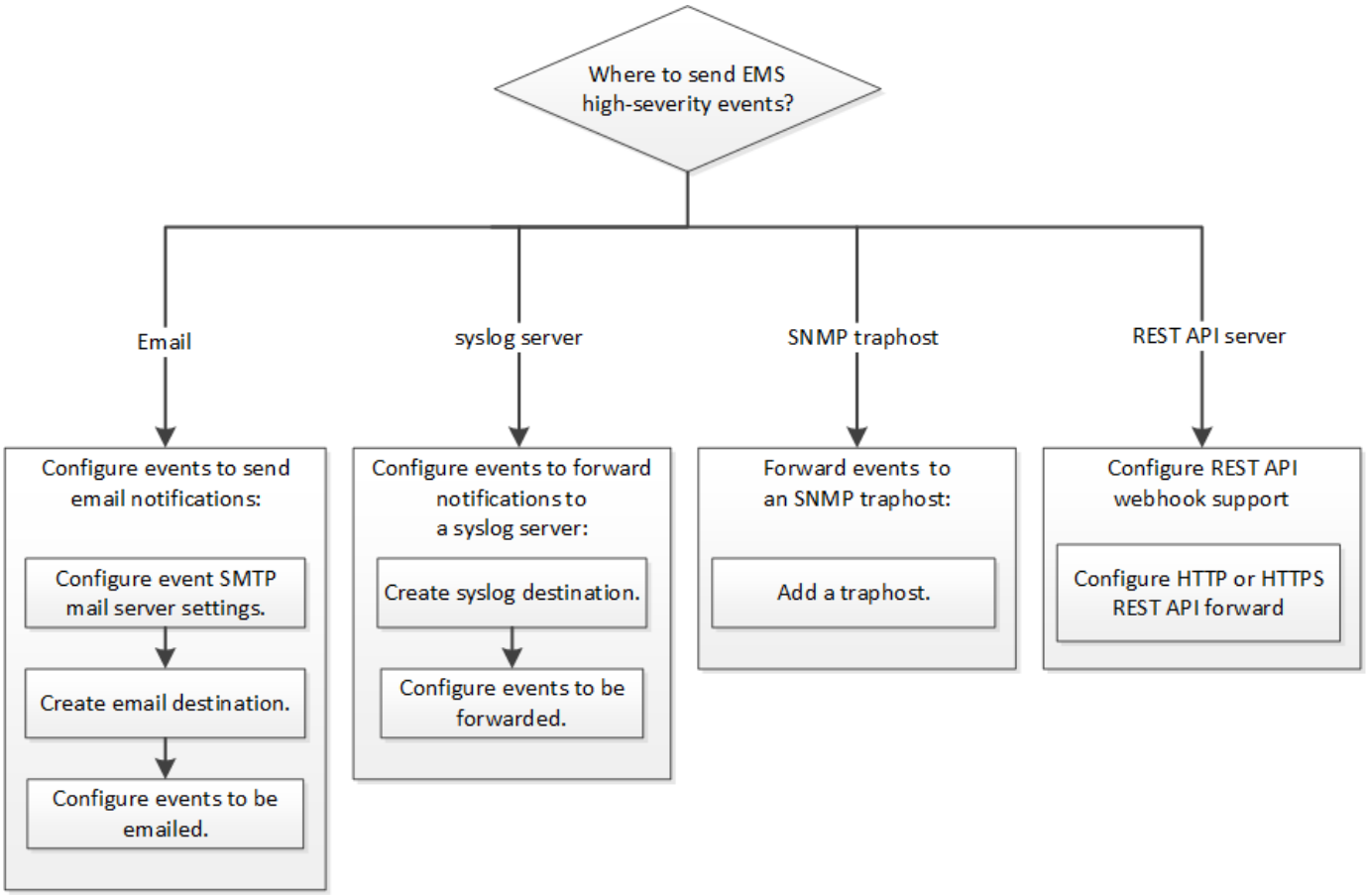
EMS configuration workflow

You must configure important EMS event notifications to be sent either as email, forwarded to a syslog server, forwarded to an SNMP traphost, or forwarded to a REST API server. This helps you to avoid system disruptions by taking corrective actions in a timely manner.



Decide where to send important event notifications

Before you configure important EMS event notifications, you need to decide whether to send the notifications to an email address, a syslog server, an SNMP traphost, or REST API server.

About this task

If your environment already contains a syslog server for aggregating the logged events from other systems, such as servers and applications, then it is easier to use that syslog server also for important event notifications from storage systems.

If your environment does not already contain a syslog server, then it is easier to use email for important event notifications.

If you already forward event notifications to an SNMP traphost, then you might want to monitor that traphost for

important events.

Choices

- Set EMS to send event notifications.

If you want…	Refer to this…
The EMS to send important event notifications to an email address	Configure important EMS events to send email notifications
The EMS to forward important event notifications to a syslog server	Configure important EMS events to forward notifications to a syslog server
If you want the EMS to forward event notifications to an SNMP traphost	Configure SNMP traphosts to receive event notifications
If you want the EMS to forward event notifications to a REST API server	Configure important EMS events to forward notifications to a REST API server

Configure important EMS events to send email notifications

To receive email notifications of the most important events, you must configure the EMS to send email messages for events that signal important activity.

What you'll need

DNS must be configured on the cluster to resolve the email addresses.

About this task

You can perform this task any time the cluster is running by entering the commands on the ONTAP command line.

Steps

1. Configure the event SMTP mail server settings:

   ```
   event config modify -mail-server mailhost.your_domain -mail-from
   cluster_admin@your_domain
   ```

2. Create an email destination for event notifications:

   ```
   event notification destination create -name storage-admins -email
   your_email@your_domain
   ```

3. Configure the important events to send email notifications:

   ```
   event notification create -filter-name important-events -destinations storage-
   admins
   ```

Configuring important EMS events to forward notifications to a syslog server

To log notifications of the most severe events on a syslog server, you must configure the EMS to forward notifications for events that signal important activity.

What you'll need

DNS must be configured on the cluster to resolve the syslog server name.

About this task

If your environment does not already contain a syslog server for event notifications, you must first create one. If your environment already contains a syslog server for logging events from other systems, then you might want to use that one for important event notifications.

You can perform this task any time the cluster is running by entering the commands on the ONTAP command line.

Steps

1. Create a syslog server destination for important events:

   ```
   event notification destination create -name syslog-ems -syslog syslog-server-address
   ```

2. Configure the important events to forward notifications to the syslog server:

   ```
   event notification create -filter-name important-events -destinations syslog-ems
   ```

Configure SNMP traphosts to receive event notifications

To receive event notifications on an SNMP traphost, you must configure a traphost.

What you'll need

- SNMP and SNMP traps must be enabled on the cluster.

  SNMP and SNMP traps are enabled by default.

- DNS must be configured on the cluster to resolve the traphost names.

About this task

If you do not already have an SNMP traphost configured to receive event notifications (SNMP traps), you must add one.

You can perform this task any time the cluster is running by entering the commands on the ONTAP command line.

Step

1. If your environment does not already have an SNMP traphost configured to receive event notifications, add one:

```
system snmp traphost add -peer-address snmp_traphost_name
```

All event notifications that are supported by SNMP by default are forwarded to the SNMP traphost.

Configure important EMS events to forward notifications to a REST API server

To receive event notifications on a REST API server, you must configure REST API webhook support.

Before you begin

- You need a server with REST API/webhook support capable of receiving EMS events.
- The REST API server can utilize server-side or client-side security certificates.
- Configuration for certificates is determined by destination. Refer to the following for an overview of certificate configuration based on destination:
  - **http**: - No certificate involved
  - **https**: - The server certificate is verified by the ONTAP system. Optionally, a client certificate can be configured that will be sent by the ONTAP system for the server to verify.
- Client-side certificates require both the private key and certificate available for installation on the source ONTAP system(s).

> If you are configuring both a client and server certificate REST API forward, a server-side certificate is required to utilize a client-side certificate. As a result, you must follow the client-side instructions to use both methods of authentication.

Configuring a HTTP Rest API forward

About this task

You can perform this task any time the cluster is running by entering the commands on the ONTAP command line.

Steps

1. Create a new destination `restapi-ems` destination for the filter `important-events`:

   ```
   event notification destination create -name restapi-ems -rest-api-url
   http://<url_to_rest_api_server>
   ```

2. Create the notification that links the `important-events` filter with the new `restapi-ems` destination:

   ```
   event notification create -filter-name important-events -destinations restapi-
   ems
   ```

Configuring a server certificate HTTPS Rest API forward

About this task

This procedure assumes you have previously generated a server-side private key and public certificate. It also assumes you have the root certificate available to install in ONTAP.

Steps

1. Install the appropriate server private key and public certificates in your REST API server.

   Specific instructions depend on the server.

2. Install the server root certificate in ONTAP.

   ```
   security certificate install -type server-ca
   ```

   The command will query for the public certificate.

3. Create the `restapi-ems` destination for the filter `important-events`.

   You must use the HTTPS scheme for the server-side certificate to be utilized.

   ```
   event notification destination create -name restapi-ems -rest-api-url
   https://<url_to_rest_api_server>
   ```

4. Create the notificaton that links the `important-events` filter with the new `restapi-ems` destination:

   ```
   event notification create -filter-name important-events -destinations restapi-
   ems
   ```

Configuring a client certificate HTTPS Rest API forward

About this task

The usage of a client certificate is optional and only necessary if client authentication by the server is desired. This procedure assumes you have previously generated a client private key and public certificate.

Steps

1. Install the appropriate root and intermediate certificates, in the Rest API server, to validate your client certificate.
2. Install the client certificate in ONTAP.

   ```
   security certificate install -type client
   ```

   The command will query for the private key and the public certificate.

3. Create the `restapi-ems` destination for the filter `important-events`.

   <code>event notification destination create -name restapi-ems -rest-api-url <a href="https://<url_to_rest_api_server&gt" class="bare">https://<url_to_rest_api_server&gt; -certificate-authority <issuer of the client certificate> -certificate-serial <serial of the client certificate></code>

4. Create the notification that links the `important-events` filter with the new `restapi-ems` destination.

   ```
   event notification create -filter-name important-events -destinations restapi-
   ems
   ```