



# **Forward audit logs to syslog/splunk servers**

## **ONTAP 9.15.1 REST API reference**

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# Forward audit logs to syslog/splunk servers

## Security audit destinations endpoint overview

### Overview

This API controls the forwarding of audit log information to remote syslog/splunk servers. Multiple destinations can be configured and all audit records are forwarded to all destinations.

A GET operation retrieves information about remote syslog/splunk server destinations. A POST operation creates a remote syslog/splunk server destination. A GET operation on `/security/audit/destinations/{address}/{port}` retrieves information about the syslog/splunk server destination given its address and port number. A PATCH operation on `/security/audit/destinations/{address}/{port}` updates information about the syslog/splunk server destination given its address and port number. A DELETE operation on `/security/audit/destinations/{address}/{port}` deletes a syslog/splunk server destination given its address and port number.

### Overview of fields used for creating a remote syslog/splunk destination

The fields used for creating a remote syslog/splunk destination fall into the following categories

#### Required properties

All of the following fields are required for creating a remote syslog/splunk destination

- `address`

#### Optional properties

All of the following fields are optional for creating a remote syslog/splunk destination

- `port`
- `ipspace`
- `protocol`
- `facility`
- `verify_server`
- `message_format` (Can be either "legacy\_netapp" or "rfc\_5424")
- `timestamp_format_override` (Can be either "no\_override", "rfc\_3164", "iso\_8601\_utc" or "iso\_8601\_local\_time")
- `hostname_format_override` (Can be either "no\_override", "fqdn" or "hostname\_only") +

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## Examples

### Retrieving remote syslog/splunk server destinations

The following example shows remote syslog/splunk server destinations

```
# The API:
/api/security/audit/destinations

# The call:
curl -X GET "https://<cluster-ip>/api/security/audit/destinations"

# The response:
{
  "records": [
    {
      "address": "1.1.1.1",
      "port": 514,
      "_links": {
        "self": {
          "href": "/api/security/audit/destinations/1.1.1.1/514"
        }
      }
    }
  ],
  "num_records": 1,
  "_links": {
    "self": {
      "href": "/api/security/audit/destinations"
    }
  }
}
```

---

## Creating remote syslog/splunk server destinations

The following example creates remote syslog/splunk server destinations.

```
# The API:
/api/security/audit/destinations

# The call:
curl -X POST "https://<cluster-
ip>/api/security/audit/destinations?force=true" -d '{ "address":
"1.1.1.1", "port": 514, "protocol": "udp_unencrypted", "facility":
"kern"}'
```

## Retrieving a remote syslog/splunk server destination given its destination address and port number

The following example retrieves a remote syslog/splunk server destination given its destination address and port number.

```
# The API:
/api/security/audit/destinations/{address}/{port}

# The call:
curl -X GET "https://<cluster-
ip>/api/security/audit/destinations/1.1.1.1/514"

# The response:
{
  "address": "1.1.1.1",
  "port": 514,
  "ipspace": {
    "name": "Default",
    "uuid": "a97a3549-f7ae-11ec-b6bc-005056a7c8ff"
  },
  "protocol": "udp_unencrypted",
  "facility": "kern",
  "verify_server": false,
  "message_format": "legacy_netapp",
  "timestamp_format_override": "no_override",
  "hostname_format_override": "no_override",
  "_links": {
    "self": {
      "href": "/api/security/audit/destinations/1.1.1.1/514"
    }
  }
}
```

## Updating a remote syslog/splunk server destination given its destination address and port number

The following example updates a remote syslog/splunk server destination configuration given its destination address and port number.

```
# The API:
/api/security/audit/destinations/{address}/{port}
```

```
# The call:
curl -X PATCH "https://<cluster-
ip>/api/security/audit/destinations/1.1.1.1/514" -d '{"facility":
"user}'
```

## Deleting a remote syslog/splunk server destination given its destination address and port number

The following example deletes a remote syslog/splunk server destination configuration given its destination address and port number.

```
# The API:
/api/security/audit/destinations/{address}/{port}
```

```
# The call:
curl -X DELETE "https://<cluster-
ip>/api/security/audit/destinations/1.1.1.1/514"
```

## Define a remote syslog or splunk server to receive audit information

GET /security/audit/destinations

Introduced In: 9.6

Defines a remote syslog/splunk server for sending audit information to.

### Parameters

Name	Type	In	Required	Description
protocol	string	query	False	Filter by protocol
message_format	string	query	False	Filter by message_format <ul style="list-style-type: none"><li>• Introduced in: 9.13</li></ul>

Name	Type	In	Required	Description
port	integer	query	False	Filter by port
ipSPACE.uuid	string	query	False	Filter by ipSPACE.uuid  • Introduced in: 9.12
ipSPACE.name	string	query	False	Filter by ipSPACE.name  • Introduced in: 9.12
verify_server	boolean	query	False	Filter by verify_server
facility	string	query	False	Filter by facility
address	string	query	False	Filter by address
hostname_format_override	string	query	False	Filter by hostname_format_override  • Introduced in: 9.13
timestamp_format_override	string	query	False	Filter by timestamp_format_override  • Introduced in: 9.13
order_by	array[string]	query	False	Order results by specified fields and optional [asc
desc] direction. Default direction is 'asc' for ascending.	fields	array[string]	query	False
Specify the fields to return.	max_records	integer	query	False
Limit the number of records returned.	return_timeout	integer	query	False

Name	Type	In	Required	Description
<p>The number of seconds to allow the call to execute before returning. When iterating over a collection, the default is 15 seconds. ONTAP returns earlier if either max records or the end of the collection is reached.</p> <ul style="list-style-type: none"> <li>• Default value: 1</li> <li>• Max value: 120</li> <li>• Min value: 0</li> </ul>	return_records	boolean	query	False

## Response

Status: 200, Ok

Name	Type	Description
_links	<a href="#">_links</a>	
num_records	integer	Number of records
records	array[ <a href="#">security_audit_log_forward</a> ]	



## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "address": "1.1.1.1",
      "facility": "string",
      "hostname_format_override": "string",
      "ipspace": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "Default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "message_format": "string",
      "port": 514,
      "protocol": "string",
      "timestamp_format_override": "string"
    }
  ]
}
```

## Error

Status: Default, Error

Name	Type	Description
error	<a href="#">returned_error</a>	

## Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

## Definitions

## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
next	<a href="#">href</a>	
self	<a href="#">href</a>	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipspace

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

security\_audit\_log\_forward

Name	Type	Description
address	string	Destination syslog splunk host to forward audit records to. This can be an IP address (IPv4 IPv6) or a hostname.
facility	string	This is the standard Syslog Facility value that is used when sending audit records to a remote server.
hostname_format_override	string	Syslog Hostname Format Override
ipspace	<a href="#">ipspace</a>	

Name	Type	Description
message_format	string	Syslog message format to be used. legacy_netapp format (variation of RFC-3164) is default message format.
port	integer	Destination Port. The default port depends on the protocol chosen: For un-encrypted destinations the default port is 514. For encrypted destinations the default port is 6514.
protocol	string	Log forwarding protocol
timestamp_format_override	string	Syslog Timestamp Format Override.
verify_server	boolean	This is only applicable when the protocol is tcp_encrypted. This controls whether the remote server's certificate is validated. Setting "verify_server" to "true" will enforce validation of remote server's certificate. Setting "verify_server" to "false" will not enforce validation of remote server's certificate.

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### returned\_error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

## Define the remote syslog or splunk server information

POST /security/audit/destinations

**Introduced In:** 9.6

Configures remote syslog/splunk server information.

### Required properties

All of the following fields are required for creating a remote syslog/splunk destination

- address

### Optional properties

All of the following fields are optional for creating a remote syslog/splunk destination

- port (1 - 65535)
- ipspace
- protocol
- facility
- verify\_server (Can only be "true" when protocol is "tcp\_encrypted")
- message\_format (Can be either "legacy-netapp" or "rfc-5424")
- timestamp\_format\_override (Can be either "no-override", "rfc-3164", "iso-8601-utc" or "iso-8601-local-time")
- hostname\_format\_override (Can be either "no-override", "fqdn" or "hostname-only")

### Parameters

Name	Type	In	Required	Description
force	boolean	query	False	Skip the Connectivity Test <ul style="list-style-type: none"> <li>• Default value:</li> </ul>

Name	Type	In	Required	Description
return_timeout	integer	query	False	<p>The number of seconds to allow the call to execute before returning. When doing a POST, PATCH, or DELETE operation on a single record, the default is 0 seconds. This means that if an asynchronous operation is started, the server immediately returns HTTP code 202 (Accepted) along with a link to the job. If a non-zero value is specified for POST, PATCH, or DELETE operations, ONTAP waits that length of time to see if the job completes so it can return something other than 202.</p> <ul style="list-style-type: none"> <li>• Default value: 1</li> <li>• Max value: 120</li> <li>• Min value: 0</li> </ul>
return_records	boolean	query	False	<p>The default is false. If set to true, the records are returned.</p> <ul style="list-style-type: none"> <li>• Default value:</li> </ul>

## Request Body

Name	Type	Description
address	string	Destination syslog splunk host to forward audit records to. This can be an IP address (IPv4 IPv6) or a hostname.

Name	Type	Description
facility	string	This is the standard Syslog Facility value that is used when sending audit records to a remote server.
hostname_format_override	string	Syslog Hostname Format Override
ipSPACE	ipSPACE	
message_format	string	Syslog message format to be used. legacy_netapp format (variation of RFC-3164) is default message format.
port	integer	Destination Port. The default port depends on the protocol chosen: For un-encrypted destinations the default port is 514. For encrypted destinations the default port is 6514.
protocol	string	Log forwarding protocol
timestamp_format_override	string	Syslog Timestamp Format Override.
verify_server	boolean	This is only applicable when the protocol is tcp_encrypted. This controls whether the remote server's certificate is validated. Setting "verify_server" to "true" will enforce validation of remote server's certificate. Setting "verify_server" to "false" will not enforce validation of remote server's certificate.

## Example request

```
{
  "address": "1.1.1.1",
  "facility": "string",
  "hostname_format_override": "string",
  "ipspace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "Default",
    "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
  },
  "message_format": "string",
  "port": 514,
  "protocol": "string",
  "timestamp_format_override": "string"
}
```

## Response

Status: 202, Accepted

Name	Type	Description
<a href="#">_links</a>	<a href="#">_links</a>	
num_records	integer	Number of records
records	array[ <a href="#">security_audit_log_forward</a> ]	



## Example response

```
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": [
    {
      "address": "1.1.1.1",
      "facility": "string",
      "hostname_format_override": "string",
      "ipspace": {
        "_links": {
          "self": {
            "href": "/api/resourcelink"
          }
        },
        "name": "Default",
        "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
      },
      "message_format": "string",
      "port": 514,
      "protocol": "string",
      "timestamp_format_override": "string"
    }
  ]
}
```

## Headers

Name	Description	Type
Location	Useful for tracking the resource location	string

## Response

Status: 201, Created

## Error

Status: Default

### ONTAP Error Response Codes

Error Code	Description
15661	The object specified could not be found
13114	Internal error
13115	Invalid input
4522285	Server verification cannot be enabled because it requires a protocol with encryption. Encryption can be selected using the protocol field.
9240603	Cannot ping destination host. Verify connectivity to desired host or skip the connectivity check with the -force parameter.
327698	Failed to create RPC client to destination host
9240609	Cannot connect to destination host.
9240604	Cannot resolve the destination host.

Name	Type	Description
error	<a href="#">returned_error</a>	

### Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

# Definitions

## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipospace

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

security\_audit\_log\_forward

Name	Type	Description
address	string	Destination syslog splunk host to forward audit records to. This can be an IP address (IPv4 IPv6) or a hostname.
facility	string	This is the standard Syslog Facility value that is used when sending audit records to a remote server.
hostname_format_override	string	Syslog Hostname Format Override
ipospace	<a href="#">ipospace</a>	
message_format	string	Syslog message format to be used. legacy_netapp format (variation of RFC-3164) is default message format.

Name	Type	Description
port	integer	Destination Port. The default port depends on the protocol chosen: For un-encrypted destinations the default port is 514. For encrypted destinations the default port is 6514.
protocol	string	Log forwarding protocol
timestamp_format_override	string	Syslog Timestamp Format Override.
verify_server	boolean	This is only applicable when the protocol is tcp_encrypted. This controls whether the remote server's certificate is validated. Setting "verify_server" to "true" will enforce validation of remote server's certificate. Setting "verify_server" to "false" will not enforce validation of remote server's certificate.

#### \_links

Name	Type	Description
next	<a href="#">href</a>	
self	<a href="#">href</a>	

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### returned\_error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message

Name	Type	Description
target	string	The target parameter that caused the error.

## Delete the remote syslog or splunk server information

DELETE /security/audit/destinations/{address}/{port}

**Introduced In:** 9.6

Deletes remote syslog/splunk server information.

### Parameters

Name	Type	In	Required	Description
address	string	path	True	IP address of remote syslog/splunk server.
port	integer	path	True	Port number of remote syslog/splunk server.

### Response

Status: 200, Ok

### Error

Status: Default, Error

Name	Type	Description
error	<a href="#">returned_error</a>	

## Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

## Definitions

### See Definitions

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### returned\_error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

# Retrieve the remote syslog or splunk server information

GET /security/audit/destinations/{address}/{port}

Introduced In: 9.6

Defines a remote syslog/splunk server for sending audit information to.

## Parameters

Name	Type	In	Required	Description
address	string	path	True	IP address of remote syslog/splunk server.
port	integer	path	True	Port number of remote syslog/splunk server.
fields	array[string]	query	False	Specify the fields to return.

## Response

Status: 200, Ok

Name	Type	Description
address	string	Destination syslog splunk host to forward audit records to. This can be an IP address (IPv4 IPv6) or a hostname.
facility	string	This is the standard Syslog Facility value that is used when sending audit records to a remote server.
hostname_format_override	string	Syslog Hostname Format Override
ipspace	<a href="#">ipspace</a>	
message_format	string	Syslog message format to be used. legacy_netapp format (variation of RFC-3164) is default message format.



Name	Type	Description
port	integer	Destination Port. The default port depends on the protocol chosen: For un-encrypted destinations the default port is 514. For encrypted destinations the default port is 6514.
protocol	string	Log forwarding protocol
timestamp_format_override	string	Syslog Timestamp Format Override.
verify_server	boolean	This is only applicable when the protocol is tcp_encrypted. This controls whether the remote server's certificate is validated. Setting "verify_server" to "true" will enforce validation of remote server's certificate. Setting "verify_server" to "false" will not enforce validation of remote server's certificate.

### Example response

```
{
  "address": "1.1.1.1",
  "facility": "string",
  "hostname_format_override": "string",
  "ipospace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "name": "Default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"message_format": "string",
"port": 514,
"protocol": "string",
"timestamp_format_override": "string"
}
```

## Error

Status: Default, Error

Name	Type	Description
error	<a href="#">returned_error</a>	

### Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

## Definitions

## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipspace

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

returned\_error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

## Update the remote syslog or splunk server information

PATCH /security/audit/destinations/{address}/{port}

## Introduced In: 9.6

Updates remote syslog/splunk server information.

## Parameters

Name	Type	In	Required	Description
address	string	path	True	IP address of remote syslog/splunk server.
port	integer	path	True	Port number of remote syslog/splunk server.

## Request Body

Name	Type	Description
address	string	Destination syslog splunk host to forward audit records to. This can be an IP address (IPv4 IPv6) or a hostname.
facility	string	This is the standard Syslog Facility value that is used when sending audit records to a remote server.
hostname_format_override	string	Syslog Hostname Format Override
ipspace	<a href="#">ipspace</a>	
message_format	string	Syslog message format to be used. legacy_netapp format (variation of RFC-3164) is default message format.
port	integer	Destination Port. The default port depends on the protocol chosen: For un-encrypted destinations the default port is 514. For encrypted destinations the default port is 6514.
protocol	string	Log forwarding protocol

Name	Type	Description
timestamp_format_override	string	Syslog Timestamp Format Override.
verify_server	boolean	This is only applicable when the protocol is tcp_encrypted. This controls whether the remote server's certificate is validated. Setting "verify_server" to "true" will enforce validation of remote server's certificate. Setting "verify_server" to "false" will not enforce validation of remote server's certificate.

### Example request

```
{
  "address": "1.1.1.1",
  "facility": "string",
  "hostname_format_override": "string",
  "ipspace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    }
  },
  "name": "Default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"message_format": "string",
"port": 514,
"protocol": "string",
"timestamp_format_override": "string"
}
```

### Response

Status: 200, Ok

Name	Type	Description
address	string	Destination syslog splunk host to forward audit records to. This can be an IP address (IPv4 IPv6) or a hostname.
facility	string	This is the standard Syslog Facility value that is used when sending audit records to a remote server.
hostname_format_override	string	Syslog Hostname Format Override
ipspace	ipspace	
message_format	string	Syslog message format to be used. legacy_netapp format (variation of RFC-3164) is default message format.
port	integer	Destination Port. The default port depends on the protocol chosen: For un-encrypted destinations the default port is 514. For encrypted destinations the default port is 6514.
protocol	string	Log forwarding protocol
timestamp_format_override	string	Syslog Timestamp Format Override.
verify_server	boolean	This is only applicable when the protocol is tcp_encrypted. This controls whether the remote server's certificate is validated. Setting "verify_server" to "true" will enforce validation of remote server's certificate. Setting "verify_server" to "false" will not enforce validation of remote server's certificate.

## Example response

```
{
  "address": "1.1.1.1",
  "facility": "string",
  "hostname_format_override": "string",
  "ipspace": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
  },
  "name": "Default",
  "uuid": "1cd8a442-86d1-11e0-ae1c-123478563412"
},
"message_format": "string",
"port": 514,
"protocol": "string",
"timestamp_format_override": "string"
}
```

## Error

Status: Default, Default

Name	Type	Description
error	<a href="#">returned_error</a>	

## Example error

```
{
  "error": {
    "arguments": [
      {
        "code": "string",
        "message": "string"
      }
    ],
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
```

## Definitions



## See Definitions

href

Name	Type	Description
href	string	

\_links

Name	Type	Description
self	<a href="#">href</a>	

ipospace

Name	Type	Description
_links	<a href="#">_links</a>	
name	string	IPspace name
uuid	string	IPspace UUID

security\_audit\_log\_forward

Name	Type	Description
address	string	Destination syslog splunk host to forward audit records to. This can be an IP address (IPv4 IPv6) or a hostname.
facility	string	This is the standard Syslog Facility value that is used when sending audit records to a remote server.
hostname_format_override	string	Syslog Hostname Format Override
ipospace	<a href="#">ipospace</a>	
message_format	string	Syslog message format to be used. legacy_netapp format (variation of RFC-3164) is default message format.

Name	Type	Description
port	integer	Destination Port. The default port depends on the protocol chosen: For un-encrypted destinations the default port is 514. For encrypted destinations the default port is 6514.
protocol	string	Log forwarding protocol
timestamp_format_override	string	Syslog Timestamp Format Override.
verify_server	boolean	This is only applicable when the protocol is tcp_encrypted. This controls whether the remote server's certificate is validated. Setting "verify_server" to "true" will enforce validation of remote server's certificate. Setting "verify_server" to "false" will not enforce validation of remote server's certificate.

#### error\_arguments

Name	Type	Description
code	string	Argument code
message	string	Message argument

#### returned\_error

Name	Type	Description
arguments	array[ <a href="#">error_arguments</a> ]	Message arguments
code	string	Error code
message	string	Error message
target	string	The target parameter that caused the error.

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