



Multi-factor authentication API methods

Element Software

NetApp

November 12, 2025

This PDF was generated from https://docs.netapp.com/us-en/element-software-128/api/reference_element_api_addidpclusteradmin.html on November 12, 2025. Always check docs.netapp.com for the latest.

Table of Contents

Multi-factor authentication API methods	1
AddIdpClusterAdmin	1
Parameters	1
Return values	2
Request example	2
Response example	2
New since version	3
CreateIdpConfiguration	3
Parameters	3
Return values	3
Request example	3
Response example	4
New since version	4
DeleteAuthSession	5
Parameters	5
Return values	5
Request example	5
Response example	5
New since version	6
DeleteAuthSessionsByClusterAdmin	6
Parameters	6
Return values	6
Request example	7
Response example	7
New since version	7
DeleteAuthSessionsByUsername	8
Parameters	8
Return values	9
Request example	10
Response example	10
New since version	10
DeleteIdpConfiguration	10
Parameters	11
Return values	11
Request example	11
Response example	11
New since version	11
DisableIdpAuthentication	12
Parameters	12
Return values	12
Request example	12
Response example	12
New since version	12

EnableIdpAuthentication	12
Parameters	13
Return values	13
Request example	13
Response example	13
New since version	13
GetIdpAuthenticationState	14
Parameters	14
Return values	14
Request example	14
Response example	14
New since version	14
ListActiveAuthSessions	14
Parameters	15
Return values	15
Request example	15
Response example	15
New since version	16
ListIdpConfigurations	16
Parameters	16
Return values	16
Request example	16
Response example	17
New since version	17
UpdateIdpConfiguration	17
Parameters	17
Return values	18
Request example	19
Response example	19
New since version	19

Multi-factor authentication API methods

AddIdpClusterAdmin

You can use the `AddIdpClusterAdmin` method to add a cluster administrator user authenticated by a third-party Identity Provider (IdP). IdP cluster admin accounts are configured based on SAML attribute-value information provided within the IdP's SAML assertion associated with the user. If a user successfully authenticates with the IdP and has SAML attribute statements within the SAML assertion matching multiple IdP cluster admin accounts, the user will have the combined access level of those matching IdP cluster admin accounts.

Parameters

This method has the following input parameters:

Name	Description	Type	Default value	Required
access	Controls which methods this IdP cluster admin can use.	string array	None	Yes
acceptEula	Accept the End User License Agreement. Set to true to add a cluster administrator account to the system. If omitted or set to false, the method call fails.	boolean	None	Yes
attributes	List of name-value pairs in JSON object format.	JSON object	None	No

Name	Description	Type	Default value	Required
username	A SAML attribute-value mapping to an IdP cluster admin (for example, email=test@example.com). This can be defined using a specific SAML subject using NameID or as an entry in the SAML attribute statement, such as eduPersonAffiliation.	string	None	Yes

Return values

This method has the following return value:

Name	Description	Type
clusterAdminID	Unique identifier for the newly created cluster admin.	integer

Request example

Requests for this method are similar to the following example:

```
{
  "method": "AddIdpClusterAdmin",
  "params": {
    "username": "email=test@example.com",
    "acceptEula": true,
    "access": ["administrator"]
  }
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {
    "clusterAdminID": 13
  }
}
```

New since version

12.0

CreateIdpConfiguration

You can use the `CreateIdpConfiguration` method to create a potential trust relationship for authentication using a third-party Identity Provider (IdP) for the cluster. A SAML Service Provider certificate is required for IdP communication. This certificate is generated as required, and returned by this API call.

Parameters

This method has the following input parameters:

Name	Description	Type	Default value	Required
idpMetadata	IdP metadata to store.	string	None	Yes
idpName	Name used to identify an IdP provider for SAML 2.0 single sign-on.	string	None	Yes

Return values

This method has the following return value:

Name	Description	Type
idpConfigInfo	Information about the third-party Identity Provider (IdP) configuration.	idpConfigInfo

Request example

Requests for this method are similar to the following example:

```
{
  "method": "CreateIdpConfiguration",
  "params": {
    "idpMetadata": "<?xml version=\"1.0\" encoding=\"UTF-8\"?>
      <EntityDescriptor
        xmlns=\"urn:oasis:names:tc:SAML:2.0:metadata\"
        xmlns:ds=\"http://www.w3.org/2000/09/xmldsig#\"
        xmlns:shibmd=\"urn:mace:shibboleth:metadata:1.0\"
        xmlns:xml=\"http://www.w3.org/XML/1998/namespace\"
        ...</Organization>
      </EntityDescriptor>",
    "idpName": "https://provider.name.url.com"
  },
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {
    "idpConfigInfo": {
      "enabled": false,
      "idpConfigurationID": "f983c602-12f9-4c67-b214-bf505185cfed",
      "idpMetadata": "<?xml version=\"1.0\" encoding=\"UTF-8\"?>\r\n
        <EntityDescriptor
          xmlns=\"urn:oasis:names:tc:SAML:2.0:metadata\"\r\n
          xmlns:ds=\"http://www.w3.org/2000/09/xmldsig#\"\r\n
          xmlns:shibmd=\"urn:mace:shibboleth:metadata:1.0\"\r\n
          xmlns:xml=\"http://www.w3.org/XML/1998/namespace\"\r\n
          ... </Organization>\r\n
        </EntityDescriptor>",
      "idpName": "https://prvider.name.url.com",
      "serviceProviderCertificate": "-----BEGIN CERTIFICATE-----\n
        MIID...SlBHi\n
        -----END CERTIFICATE-----\n",
      "spMetadataUrl": "https://10.193.100.100/auth/ui/saml2"
    }
  }
}
```

New since version

12.0

DeleteAuthSession

You can use the `DeleteAuthSession` method to delete an individual user authentication session. If the calling user is not in the ClusterAdmins / Administrator AccessGroup, only the authentication session belonging to the calling user can be deleted.

Parameters

This method has the following input parameter:

Name	Description	Type	Default value	Required
sessionID	Unique identifier for the auth session to be deleted.	UUID	None	Yes

Return values

This method has the following return value:

Name	Description	Type
session	Session information for the delete auth session.	authSessionInfo

Request example

Requests for this method are similar to the following example:

```
{
  "method": "DeleteAuthSession",
  "params": {
    "sessionID": "a862a8bb-2c5b-4774-a592-2148e2304713"
  },
  "id": 1
}
```

Response example

This method returns a response similar to the following example:


```

{
  "id": 1,
  "result": {
    "session": {
      "accessGroupList": [
        "administrator"
      ],
      "authMethod": "Cluster",
      "clusterAdminIDs": [
        1
      ],
      "finalTimeout": "2020-04-09T17:51:30Z",
      "idpConfigVersion": 0,
      "lastAccessTimeout": "2020-04-06T18:21:33Z",
      "sessionCreationTime": "2020-04-06T17:51:30Z",
      "sessionID": "a862a8bb-2c5b-4774-a592-2148e2304713",
      "username": "admin"
    }
  }
}

```

New since version

12.0

DeleteAuthSessionsByClusterAdmin

You can use the `DeleteAuthSessionsByClusterAdmin` method to delete all authentication sessions associated with the specified `ClusterAdminID`. If the specified `ClusterAdminID` maps to a group of users, all authentication sessions for all members of that group will be deleted. To view a list of sessions for possible deletion, use the `ListAuthSessionsByClusterAdmin` method with the `ClusterAdminID` parameter.

Parameters

This method has the following input parameter:

Name	Description	Type	Default value	Required
clusterAdminID	Unique identifier for the cluster admin.	integer	None	Yes

Return values

This method has the following return value:

Name	Description	Type
sessions	Session information for the deleted authentication sessions.	authSessionInfo

Request example

Requests for this method are similar to the following example:

```
{
  "method": "DeleteAuthSessionsByClusterAdmin",
  "params": {
    "clusterAdminID": 1
  }
}
```

Response example

This method returns a response similar to the following example:

```
{
  "sessions": [
    {
      "accessGroupList": [
        "administrator"
      ],
      "authMethod": "Cluster",
      "clusterAdminIDs": [
        1
      ],
      "finalTimeout": "2020-03-14T19:21:24Z",
      "idpConfigVersion": 0,
      "lastAccessTimeout": "2020-03-11T19:51:24Z",
      "sessionCreationTime": "2020-03-11T19:21:24Z",
      "sessionID": "b12bfc64-f233-44df-8b9f-6fb6c011abf7",
      "username": "admin"
    }
  ]
}
```

New since version

12.0

DeleteAuthSessionsByUsername

You can use the `DeleteAuthSessionsByUsername` method to delete all authentication sessions for a given user(s). A caller not in `AccessGroup ClusterAdmins/Administrator` can only delete their own sessions. A caller with `ClusterAdmins/Administrator` privileges can delete sessions belonging to any user. To see the list of sessions that could be deleted, use `ListAuthSessionsByUsername` with the same parameters. To view a list of sessions for possible deletion, use the `ListAuthSessionsByUsername` method with the same parameter.

Parameters

This method has the following input parameters:

Name	Description	Type	Default value	Required
authMethod	Authentication method of the user sessions to be deleted. Only a caller in the ClusterAdmins/Administrator AccessGroup can provide this parameter. Possible values are: • authMethod=Cluster specifies the ClusterAdmin username. • authMethod=Ldap specifies the user's LDAP DN. • authMethod=Idp specifies either the user's IdP UUID or NameID. If the IdP is not configured to return either option, this specifies a random UUID issued when the session was created.	authMethod	None	No
username	Unique identifier for the user.	string	None	No

Return values

This method has the following return value:

Name	Description	Type
sessions	Session information for the deleted authentication sessions.	authSessionInfo

Request example

Requests for this method are similar to the following example:

```
{
  "method": "DeleteAuthSessionsByUsername",
  "params": {
    "authMethod": "Cluster",
    "username": "admin"
  }
}
```

Response example

This method returns a response similar to the following example:

```
{
  "sessions": [
    {
      "accessGroupList": [
        "administrator"
      ],
      "authMethod": "Cluster",
      "clusterAdminIDs": [
        1
      ],
      "finalTimeout": "2020-03-14T19:21:24Z",
      "idpConfigVersion": 0,
      "lastAccessTimeout": "2020-03-11T19:51:24Z",
      "sessionCreationTime": "2020-03-11T19:21:24Z",
      "sessionID": "b12bfc64-f233-44df-8b9f-6fb6c011abf7",
      "username": "admin"
    }
  ]
}
```

New since version

12.0

DeleteIdpConfiguration

You can use the `DeleteIdpConfiguration` method to delete an existing configuration of a third-party IdP for the cluster. Deleting the last IdP configuration removes the SAML Service Provider certificate from the cluster.

Parameters

This method has the following input parameters:

Name	Description	Type	Default value	Required
idpConfigurationID	UUID for the third-party IdP configuration.	UUID	None	No
idpName	Name used to identify and retrieve an IdP provider for SAML 2.0 single sign-on.	string	None	No

Return values

This method has no return values.

Request example

Requests for this method are similar to the following example:

```
{
  "method": "DeleteIdpConfiguration",
  "params": {
    "idpConfigurationID": "f983c602-12f9-4c67-b214-bf505185cfed",
    "idpName": "https://provider.name.url.com"
  }
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {}
}
```

New since version

12.0

DisableIdpAuthentication

You can use the `DisableIdpAuthentication` method to disable support for authentication using third-party IdPs for the cluster. Once disabled, users authenticated by third party IdPs are no longer able to access the cluster and any active authenticated sessions are invalidated/disconnected. LDAP and cluster admins are able to access the cluster via supported UIs.

Parameters

This method has no input parameters.

Return values

This method has no return values.

Request example

Requests for this method are similar to the following example:

```
{
  "method": "DisableIdpAuthentication",
  "params": {}
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {}
}
```

New since version

12.0

EnableIdpAuthentication

You can use the `EnableIdpAuthentication` method to enable support for authentication using third-party IdPs for the cluster. Once IdP authentication is enabled, LDAP and cluster admins are no longer able to access the cluster via supported UIs and any active authenticated sessions are invalidated/disconnected. Only users authenticated by third party IdPs are able to access the cluster via supported UIs.

Parameters

This method has the following input parameter:

Name	Description	Type	Default value	Required
idpConfigurationID	UUID for the third-party IdP configuration. If only one IdP configuration exists, then the default is to enable that configuration. If you have only a single IdpConfiguration, you need not provide the idpConfigurationID parameter.	UUID	None	No

Return values

This method has no return values.

Request example

Requests for this method are similar to the following example:

```
{
  "method": "EnableIdpAuthentication",
  "params": {
    "idpConfigurationID": "f983c602-12f9-4c67-b214-bf505185cfed",
  }
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {}
}
```

New since version

12.0

GetIdpAuthenticationState

You can use the `GetIdpAuthenticationState` method to return information regarding the state of authentication using third-party IdPs.

Parameters

This method has no input parameters.

Return values

This method has the following return value:

Name	Description	Type
enabled	Indicates whether third-party IdP authentication is enabled.	boolean

Request example

Requests for this method are similar to the following example:

```
{
  "method": "GetIdpAuthenticationState"
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {"enabled": true}
}
```

New since version

12.0

ListActiveAuthSessions

You can use the `ListActiveAuthSessions` method to list all of the active authenticated sessions. Only users with Administrative access rights can call this method.

Parameters

This method has no input parameters.

Return values

This method has the following return value:

Name	Description	Type
sessions	Session information for the authentication sessions.	authSessionInfo

Request example

Requests for this method are similar to the following example:

```
{
  "method": "ListActiveAuthSessions"
}
```

Response example

This method returns a response similar to the following example:

```
{
  "sessions": [
    {
      "accessGroupList": [
        "administrator"
      ],
      "authMethod": "Cluster",
      "clusterAdminIDs": [
        1
      ],
      "finalTimeout": "2020-03-14T19:21:24Z",
      "idpConfigVersion": 0,
      "lastAccessTimeout": "2020-03-11T19:51:24Z",
      "sessionCreationTime": "2020-03-11T19:21:24Z",
      "sessionID": "b12bfc64-f233-44df-8b9f-6fb6c011abf7",
      "username": "admin"
    }
  ]
}
```

New since version

12.0

ListIdpConfigurations

You can use the `ListIdpConfigurations` method to list configurations for third-party IdPs. Optionally, you can provide either the `enabledOnly` flag to retrieve the currently enabled IdP configuration or an IdP metadata UUID or IdP name to query information for a specific IdP configuration.

Parameters

This method has the following input parameters:

Name	Description	Type	Default value	Required
<code>enabledOnly</code>	Filters the result to return the currently enabled IdP configuration.	boolean	None	No
<code>idpConfigurationID</code>	UUID for the third-party IdP configuration.	UUID	None	No
<code>idpName</code>	Retrieves IdP configuration information for a specific IdP name.	string	None	No

Return values

This method has the following return value:

Name	Description	Type
<code>idpConfigInfos</code>	Information on the third-party IdP configuration(s).	idpConfigInfo array

Request example

Requests for this method are similar to the following example:

```
{
  "method": "ListIdpConfigurations",
  "params": {}
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {
    "idpConfigInfo": {
      "enabled": true,
      "idpConfigurationID": "f983c602-12f9-4c67-b214-bf505185cfed",
      "idpMetadata": "<?xml version=\"1.0\" encoding=\"UTF-8\"?>\r\n
<EntityDescriptor
xmlns=\"urn:oasis:names:tc:SAML:2.0:metadata\" \r\n
xmlns:ds=\"http://www.w3.org/2000/09/xmldsig#\" \r\n
xmlns:shibmd=\"urn:mace:shibboleth:metadata:1.0\" \r\n
xmlns:xml=\"http://www.w3.org/XML/1998/namespace\" \r\n
...</Organization>\r\n
</EntityDescriptor>\",
      "idpName": "https://priver.name.url.com\",
      "serviceProviderCertificate": "-----BEGIN CERTIFICATE-----\n
MI...BHi\n
-----END CERTIFICATE-----\n\",
      "spMetadataUrl": "https://10.193.100.100/auth/ui/saml2\"
    }
  }
}
```

New since version

12.0

UpdateIdpConfiguration

You can use the `UpdateIdpConfiguration` method to update an existing configuration with a third-party IdP for the cluster.

Parameters

This method has the following input parameters:

Name	Description	Type	Default value	Required
generateNewCertificate	When specified as true, a new SAML key and certificate is generated and replaces the existing pair. Note: Replacing the existing certificate will disrupt the established trust between the cluster and the IdP until the cluster's Service Provider metadata is reloaded at the IdP. If not provided or set to false, the SAML certificate and key remains unchanged.	boolean	None	No
idpConfigurationID	UUID for the third-party IdP configuration.	UUID	None	No
idpMetadata	IdP metadata for configuration and integration details for SAML 2.0 single sign-on.	string	None	No
idpName	Name used to identify and retrieve an IdP provider for SAML 2.0 single sign-on.	string	None	No
newIdpName	If specified, this name replaces the old IdP name.	string	None	No

Return values

This method has the following return value:

Name	Description	Type
idpConfigInfo	Information around the third-party IdP configuration.	idpConfigInfo

Request example

Requests for this method are similar to the following example:

```
{
  "method": "UpdateIdpConfiguration",
  "params": {
    "idpConfigurationID": "f983c602-12f9-4c67-b214-bf505185cfed",
    "generateNewCertificate": true
  }
}
```

Response example

This method returns a response similar to the following example:

```
{
  "result": {
    "idpConfigInfo": {
      "enabled": true,
      "idpConfigurationID": "f983c602-12f9-4c67-b214-bf505185cfed",
      "idpMetadata": "<?xml version=\"1.0\" encoding=\"UTF-8\"?>\r\n
<EntityDescriptor
xmlns=\"urn:oasis:names:tc:SAML:2.0:metadata\" \r\n
xmlns:ds=\"http://www.w3.org/2000/09/xmldsig#\" \r\n
xmlns:shibmd=\"urn:mace:shibboleth:metadata:1.0\" \r\n
xmlns:xml=\"http://www.w3.org/XML/1998/namespace\" \r\n
...</Organization>\r\n
</EntityDescriptor>\",
      "idpName": "https://priver.name.url.com\",
      "serviceProviderCertificate": "-----BEGIN CERTIFICATE-----\n
MI...BHi\n
-----END CERTIFICATE-----\n\",
      "spMetadataUrl": "https://10.193.100.100/auth/ui/saml2\"
    }
  }
}
```

New since version

12.0

Copyright information

Copyright © 2025 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.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.