



Manage security certificates

ONTAP 9.14.1 REST API reference

NetApp
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Manage security certificates

Security certificates endpoint overview

Overview

This API displays security certificate information and manages the certificates in ONTAP.

Installing certificates in ONTAP

The security certificates GET request retrieves all of the certificates in the cluster.

Examples

Retrieving all certificates installed in the cluster with their common-names

```
# The API:
/api/security/certificates

# The call:
curl -X GET "https://<mgmt-
ip>/api/security/certificates?fields=common_name" -H "accept:
application/hal+json"

# The response:
{
  "records": [
    {
      "svm": {
        "name": "vs0"
      },
      "uuid": "dad2363b-8ac0-11e8-9058-005056b482fc",
      "common_name": "vs0",
      "_links": {
        "self": {
          "href": "/api/security/certificates/dad2363b-8ac0-11e8-9058-
005056b482fc"
        }
      }
    },
    {
      "uuid": "1941e048-8ac1-11e8-9058-005056b482fc",
      "common_name": "ROOT",
      "_links": {
        "self": {
          "href": "/api/security/certificates/1941e048-8ac1-11e8-9058-
```

```
005056b482fc"
  }
}
},
{
  "uuid": "5a3a77a8-892d-11e8-b7da-005056b482fc",
  "common_name": "gshancluster-4",
  "_links": {
    "self": {
      "href": "/api/security/certificates/5a3a77a8-892d-11e8-b7da-
005056b482fc"
    }
  }
}
],
"num_records": 3,
"_links": {
  "self": {
    "href": "/api/security/certificates?fields=common_name"
  }
}
}
```

Retrieving all certificates installed at cluster-scope with their common-names

```
# The API:
/api/security/certificates

# The call:
curl -X GET "https://<mgmt-
ip>/api/security/certificates?scope=cluster&fields=common_name" -H
"accept: application/hal+json"

# The response:
{
  "records": [
    {
      "uuid": "1941e048-8ac1-11e8-9058-005056b482fc",
      "scope": "cluster",
      "common_name": "ROOT",
      "_links": {
        "self": {
          "href": "/api/security/certificates/1941e048-8ac1-11e8-9058-
005056b482fc"
        }
      }
    },
    {
      "uuid": "5a3a77a8-892d-11e8-b7da-005056b482fc",
      "scope": "cluster",
      "common_name": "gshancluster-4",
      "_links": {
        "self": {
          "href": "/api/security/certificates/5a3a77a8-892d-11e8-b7da-
005056b482fc"
        }
      }
    }
  ],
  "num_records": 2,
  "_links": {
    "self": {
      "href": "/api/security/certificates?scope=cluster&fields=common_name"
    }
  }
}
```

Retrieving all certificates installed on a specific SVM with their common-names

```
# The API:
/api/security/certificates

# The call:
curl -X GET "https://<mgmt-
ip>/api/security/certificates?svm.name=vs0&fields=common_name" -H "accept:
application/hal+json"

# The response:
{
  "records": [
    {
      "svm": {
        "name": "vs0"
      },
      "uuid": "dad2363b-8ac0-11e8-9058-005056b482fc",
      "common_name": "vs0",
      "_links": {
        "self": {
          "href": "/api/security/certificates/dad2363b-8ac0-11e8-9058-
005056b482fc"
        }
      }
    },
    ],
  "num_records": 1,
  "_links": {
    "self": {
      "href": "/api/security/certificates?svm.name=vs0&fields=common_name"
    }
  }
}
```

Retrieving a certificate using its UUID for all fields

```
# The API:
/api/security/certificates/{uuid}
```

```

# The call:
curl -X GET "https://<mgmt-ip>/api/security/certificates/dad2363b-8ac0-11e8-9058-005056b482fc?fields=*" -H "accept: application/hal+json"

# The response:
{
  "svm": {
    "uuid": "d817293c-8ac0-11e8-9058-005056b482fc",
    "name": "vs0"
  },
  "uuid": "dad2363b-8ac0-11e8-9058-005056b482fc",
  "scope": "svm",
  "type": "server",
  "common_name": "vs0",
  "serial_number": "15428D45CF81CF56",
  "ca": "vs0",
  "hash_function": "sha256",
  "key_size": 2048,
  "expiry_time": "2019-07-18T15:29:14-04:00",
  "public_certificate": "-----BEGIN CERTIFICATE-----
\nMIIDQjCCAIqgAwIBAgIIFUKNRC+Bz1YwDQYJKoZIhvcNAQELBQAwGzEMMAoGA1UE\nAxMDdn
MwMQswCQYDVQQGEwJVUzAeFw0xODA3MTgxOTI1MTRaFw0xOTA3MTgxOTI1\nMTRaMBsxDDAKBg
NVBAMTA3ZmDELMakGA1UEBhMCMVVMwggEiMA0GCSqGSIb3DQEB\nAQUA4IBDwAwggEKAoIBAQCqFQb27th2ACOMJvWgLh1xRzobSb2ZTQfO561faXQ3\n\nIbiT+rnRWXetd/s2+iCv91d9LW0NOM
P3MN2f3SFbyze3dl7WrnVbjLmYuI9MfOxs\nfmA+Bh6gpap5Yn2YddqoV6rfNGAuUveNLArN18
wODk/mpawpEQ93QSa1Zfg1gnoH\nrFrYqiSYT06X5g6RbUuEl4LTGXspz+plU46Za0i6QyxtvZ
4bneibffXN3IigpqI6\nnTGUV8R/J3Ps338VxVmSO9ZXBZmvbcJVoySYNIC1/oi3fgPZlnBv0tb
swqg4FoZO/\nWT+XHGHlep6cr/Aqg7u6C4RfqbCwzB/XFKDIqnmAQkDBAgMBAAGjgYkkgYYwDA
YD\nVR0TBAUwAwEB/zALBgNVHQ8EBAMCAQYwHQYDVR0OBBYEFN/AnH8qLxocTtumNHIn\nnEN4I
FIDBMEoGA1UdIwRDMEGAFN/AnH8qLxocTtumNHInEN4IFIDBoR+kHTAbMQww\nnCgYDVQQDEwN2
czAxZzAJBgNVBAYTA1VTgggVQo1Fz4HPVjANBgkqhkiG9w0BAQsF\nnAAOCAQEAA0pUEepdeQnd
2Amwg8UFyxayb8eu3E6dlptvtyp+xtjhIC7Dh95CVXhy\nnkJS3Tsu60PGR/b2vc3MZtAUpcL4c
eD8XntKPQgBlqoB4bRogCe1TnlGswRXDX5TS\nngMvrRjaWTBF7ikT4UjR05rSxcDGplQRqnOt
hqi+yPT+29+8a4Uu6J+3Kdrflj4p\nn1nSWpuB9EyxtuCILNqXA2ncH7YKtoeNtChKCchhvPcoT
y6Opma6UQn5UMxstkvGT\nnVGaN5TlRWv0yiqPXIQblSqXi/uQsuRPHDu7+KWRfn08USa6QVo2
mDs9P7R9dd0K\nn9QAsTjTOF9PlAKgNxGoOJl2y0+48AA==\n-----END CERTIFICATE-----
\n",
  "_links": {
    "self": {
      "href": "/api/security/certificates/dad2363b-8ac0-11e8-9058-005056b482fc"
    }
  }
}

```

Creating a certificate in a cluster

These certificates can be used to help administrators enable certificate-based authentication and to enable SSL-based communication to the cluster.

```
# The API:
/api/security/certificates

# The call:
curl -X POST "https://<mgmt-ip>/api/security/certificates" -H "accept:
application/hal+json" -H "Content-Type: application/json" -d "{
  \"common_name\": \"TEST-SERVER\",  \"type\": \"server\"  }"
```

Installing a certificate in a cluster

These certificates can be used to help administrators enable certificate-based authentication and to enable-SSL based communication to the cluster.


```

# The API:
/api/security/certificates

# The call:
curl -X POST "https://<mgmt-ip>/api/security/certificates" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"type\":
\"server_ca\", \"public_certificate\": \"-----BEGIN CERTIFICATE-----
\nMIIFYDCCA0igAwIBAgIQCgFCgAAAAUjyES1AAAAAjANBgkqhkiG9w0BAQsFADBKMQswCQYD
VQQG\nEwJVUzESMBAGA1UEChMJSWRlbnRydXN0MScwJQYDVQQDEx5JZGVuVHJ1c3QgQ29tbWVy
Y2lhbCBS\nb290IENBIDEwHhcNMTQwMTE2MTg5MjIzWhcNMTQwMTE2MTg5MjIzWjBKMQswCQYD
VQQGEwJVUzES\nMBAGA1UEChMJSWRlbnRydXN0MScwJQYDVQQDEx5JZGVuVHJ1c3QgQ29tbWVy
Y2lhbCBSb290IENB\nnIDEwggIiMA0GCSqGSIb3DQEBAQUAA4ICDwAwggIKAoICAQCnUBneP5k9
1DNG8W9RYYKYqU+PZ4ld\nhNlT3Qwo2dfw/66VQ3KZ+bVdfIrBQuExUHRgQl8zZshq0PirK1e
hm7zCYofWjK9ouuU+ehcCuz/\nmNKvcb00U59Oh++SvL3sTzIwiEsXXlFEU8L2ApeN2WIrvyQf
Yo3fw7gpS0l4PJNgiCL8mdo2yMKi\nlCxUAGclbnO/AljwpN3lsKImesrgNqUZFvX9t++uP0D1
bVoE/c40yiTcdCMbXTMTEl3EASX2MN0C\nXZ/g1Ue9tOsobotJSdifWwLziuQkkORiT0/Br4s0
dBeo0XKIanoBScy0RnnGF7HamB4HWfp1IYVl\n3ZBWzvurpWCdxJ35UrClvYf5jysjCiN2O/cz
4ckA82n5S6LgTrx+kzmEB/dEcH7+B1rlsazRGMzy\nNeVJSQjKVsk9+w8YfYs7wRPCTY/JTw43
6R+hDmrfYi7LNQZReSzIJTj0+kuniVyc0uMNOYZkDhZV\nWYfCP04MXFL0PfdSgvHqo6z9STQa
KPNBiDoT7uje/5kdX7rL6B7yuVBgdHTc+XvvqDtMwt0viAg\nxGds8AgDelWAF0Z0lqf0Hj7h
9tgJ4TNkK2PXm16f+cb7D3hvl7yTmvmcEpB4eoCHFddyJxVdHix\nnuuFucAS6T6C6aMN7/zHw
cz09lCqxCOEOoP5NiGVreTO01wIDAQABo0IwQDAOBgNVHQ8BAf8EBAMC\nnAQYwDwYDVR0TAQH/
BAUwAwEB/zAdBgNVHQ4EFgQU7UQZwNPwBovupHu+QucmVMiONnYwDQYJKoZI\nnhvcNAQELBQAD
ggIBAA2ukDL2pkt8RHYZYR4nKM1eVO8lvOMIkPkp165oCOGUAFjvLi5+U1KMtlwH\n6oi6mYtQ
lNeCgN9hCQCTrQ0U5s7B8jeUeLBfnLOic7iPBZM4zy0+sLj7wM+x8uwtLRvM7Kqas6pg\nnghst
O8OEPVeKlh6cdbhTMM1gC1OQ045U8U1mwF10A0Cj7oV+wh93nAbowacYXVKV7cndJZ5t+qnt\n
ozo00F172u1Q8zW/7esUTTHHYPTa8Yec4kjixsU3+wYQ+nVZZjFHKdp2mhZpgq7vmr1R94gJmm
mV\nYjz1VYA211QC//G5Xc7UI2/YRYRKW2XviQzdFKcgyxilJbQN+QHwotL0AMh0jqEqSI5l2x
PE4iUX\nnfeu+h1sXIFRRk0pTAvsXcoz7WL9RccvW9xYoIA55vrX/hMUpu09lEpCdNTDd1lzzY
9Gv1U47/ro\nnkTLq11gEIt44w8y8bckzOmoKaT+gyOpyj4xjhi09bTyWnpXgSUyqorkqG5w2gX
jtw+hG4iZZRHUe\n2XWJUc0QhJ1hYmtD+ZciTY6Y5uN/9lu7rs3KSoFrXgvzUeF0K+l+J6fZmU
lO+KWA2yUPHGNiiskz\nZ2s8EIPGrd6ozRaOjfAHN3Gf8qv8QfXBi+wAN10J5U6A7/qxXDgGpR
tK4dw4LTzcx+QGtVKno7R\nncGzM7vRX+Bi6hG6H\n-----END CERTIFICATE-----\n\"
}"

```

Installing a certificate on a specific SVM

```

# The API:
/api/security/certificates

# The call:
curl -X POST "https://<mgmt-ip>/api/security/certificates" -H "accept:
application/json" -H "Content-Type: application/json" -d "{ \"svm\" : {
\"name\" : \"vs0\" }, \"type\": \"server_ca\", \"public_certificate\":
\"-----BEGIN CERTIFICATE-----
\nMIIFYDCCA0igAwIBAgIQCgFCgAAAAUjyES1AAAAjANBgkqhkiG9w0BAQsFADBKMQswCQYD
VQQG\nEwJVUzESMBAGA1UEChMJSWRlblRydXN0MScwJQYDVQQDEx5JZGVuVHJlc3QgQ29tbWVy
Y2lhbCBS\nb290IENBIDEwHhcNMTQwMTE2Mjg0MjIzWhcNMTQwMTE2Mjg0MjIzWjBKMQswCQYD
VQQGEwJVUzES\nMBAGA1UEChMJSWRlblRydXN0MScwJQYDVQQDEx5JZGVuVHJlc3QgQ29tbWVy
Y2lhbCBSb290IENB\nIDEwggIiMA0GCSqGSIb3DQEBAQUAA4ICDwAwggIKAoICAQCnUBneP5k9
1DNG8W9RYYKyqU+PZ4ld\nhNlT3Qwo2dfw/66VQ3KZ+bVdfIrBQuExUHTRgQ18zZshq0PirK1e
hm7zCYofWjK9ouuU+ehcCuz/\nmNKvcb00U590h++SvL3sTzIwiEsXXlFEU8L2ApeN2WIrVYQf
Yo3fw7gps014PJNgiCL8mdo2yMKi\nlCxAUAGclbnO/AljwpN3lsKImesrgNqUZfVx9t++uP0D1
bVoE/c40yiTcdCMbXTMTE13EASX2MN0C\nXZ/g1Ue9tOsbobTJSdifWwLziuQkkORiT0/Br4sO
dBeo0XKIanoBScy0RnnGF7HamB4HWfp1IYVl\n3ZBWzvurpWCdxJ35UrCLvYf5jysjCiN20/cz
4ckA82n5S6LgTrx+kzmEB/dEcH7+B1rlsazRGMzy\nNeVJSQjKVsk9+w8YfYs7wRPCTY/JTw43
6R+hDmrfYi7LNQZReSzIJTj0+kuniVyc0uMNOYZKdHzV\nWYfCP04MXFL0PfdSgvHqo6z9STQa
KPNBiDoT7uje/5kdX7rL6B7yuVBgwDHTc+XvvqDtMwt0viAg\nxGds8AgDelWaf0Z0lqf0Hj7h
9tgJ4TNkK2PXm16f+cB7D3hvl7yTmvmcEpB4eoCHFddyJxVdHix\nnuuFucAS6T6C6aMN7/zHw
cz09lCqxC0EOoP5NiGVreT001wIDAQABo0IwQDAOBgNVHQ8BAf8EBAMC\nAQYwDwYDVR0TAQH/
BAUwAwEB/zAdBgNVHQ4EFgQU7UQZwNPwBovupHu+QucmVMiONnYwDQYJKoZI\nnhvcNAQELBQAD
ggIBAA2ukDL2pkt8RHYZYR4nKM1eVO8lvOMIkPkp165oCOGUAFjvLi5+U1KMtlwH\n6oi6mYtQ
lNeCgN9hCQCTrQ0U5s7B8jeUeLBfnLOic7iPBZM4zY0+sLj7wM+x8uwTLRvM7Kqas6pg\nnghst
O8OEPVeKlh6cdbjTMM1gCIOQ045U8U1mwF10A0Cj7oV+wh93nAbowacYXVKV7cndJZ5t+qnt\n
ozo00F172u1Q8zW/7esUTTHHYPTa8Yec4kjixsU3+wYQ+nVZZjFHKdp2mhZpgq7vmr1R94gjmm
mV\nYjz1VYA211QC//G5Xc7UI2/YRYRKW2XviQzdFKcgyxilJbQN+QHwotL0AMh0jqEqSI512x
PE4iUX\nnfeu+h1sXIFRRk0pTAvvsXcoz7WL9RccvW9xYoIA55vrX/hMUpu091EpCdNTDd1lzzY
9GvlU47/ro\nnkTLq11gEIt44w8y8bckzOmoKaT+gyOpyj4xjhi09bTyWnpXgSUyqorkqG5w2gX
jtw+hG4iZZRHUe\n2XWJUc0QhJ1hYMtD+ZciTY6Y5uN/9lu7rs3KSoFrXgvzUeF0K+l+J6fZmU
lO+KWA2yUPHGNiiskz\n2s8EIPGrd6ozRaOjfAHN3Gf8qv8QfXBi+wAN10J5U6A7/qxXDgGpR
tK4dw4LTzcxq+QGtVKno7R\nncGzM7vRX+Bi6hG6H\n-----END CERTIFICATE-----\n\"
}"

```

Deleting a certificate using its UUID

```
# The API:  
/api/security/certificates/{uuid}  
  
# The call:  
curl -X DELETE "https://<mgmt-ip>/api/security/certificates/dad2363b-8ac0-  
11e8-9058-005056b482fc?fields=*" -H "accept: application/hal+json"
```

Signing a new certificate signing request using an existing CA certificate UUID

Once you have created a certificate of type "root_ca", you can use that certificate to act as a local Certificate Authority to sign new certificate signing requests. The following example signs a new certificate signing request using an existing CA certificate UUID. If successful, the API returns a signed certificate.

```

# The API:
/api/security/certificates/{ca.uuid}/sign

# The call:
curl -X POST "https://<mgmt-ip>/api/security/certificates/253add53-8ac9-11e8-9058-005056b482fc/sign" -H "accept: application/json" -H "Content-Type: application/json" -d "{ \"signing_request\": \"-----BEGIN CERTIFICATE REQUEST-----
\nMIICYTCCAUAkCAQAwhDENMAsGA1UEAxMEVEVTVDELMAkGA1UEBhMCVVMwggEiMA0G\nnCSqGSI
b3DQEBAQUAA4IBDwAwggEKAoIBAQCIBCuVfbYHNdOO7vjRQja4JqL2cHqK\ndr1Tj5hz9RVqFK
Z7VPPh8DSP9LoTbYWsvrTkbuD0Wi715MVQCsbkq/mHos+Y51fqs\nNP5K92fc6EhBzBDYFgZGFn
tZYJjEG5MPerIUE7CfVy7o6sjWolxeY33pjefObyvP\nBcJkBHg6SFJK/TDLvIYJkonLkJEOJo
TI6++a3I/1bCMfUeuRtLU9ThWlna1kMMYK\n4T16/Bxgm4bha2U2jtosc0Wltnld/capc+eqRV
07WVbMmEOTtop3cv0h3N0S61bn\nFkd96DXzeGWbSHFHckeCZ9bOHhnVbfEa/efkPLx7ziMC8G
tRHHlwbNk7AgMBAAGg\nADANBgkqhkiG9w0BAQsFAAOCAQEaf+rs1i5PHaOSI2HtTM+Hcv/p71
yzgoLL+aeU\ntB0V4iuoXdqY8oQeWoPI92ci0K08JuSpu6D0DwCK1stfwuGkAA2b0Wr7ZDRonT
Uq\nmJ4j3O47MLysW4Db2LbGws/AuDscIRBJDWHMPhaqsvRbpMx2xQ/V5oagUw5eGGpN\ne4fg
/E2k9mGkpxwUzT7w1RZirpND4xL+XTzpzzeZqgalpXug4yjIXlI5hpRESZ9/\nAkGJSCWxi15I
ZdxxFVX1Bcmm6WpJnnboqkcKeXz95GM6Re+oBy9tlgvwv1Vd5s8uHX+bycFiZp09Wsm8Ev727M
ziZ+0II9nxwkDKsdPvam+KLI9hLQ==\n-----END CERTIFICATE REQUEST-----\n\",
\"hash_function\": \"sha256\"}"

# The response:
{
  "public_certificate": "-----BEGIN CERTIFICATE-----
\nMIIDBzCCAe+gAwIBAgIIFUKQpcqeaUAWDQYJKoZIhvcNAQELBQAwhDENMAsGA1UE\nnAxMEUk
FDWDELMAkGA1UEBhMCVVMwHhcNMTgwNze4MjAzMTA1WhcNMTkwNze4MjAz\nnMTA1WjAcMQ0wCw
YDVQQDEWRURVNUMQswCQYDVQQGEWJVUzCCASIwDQYJKoZIhvcN\nnAQEBBQADggEPADCCAQoCgg
EBAKIEK5V9tgc1047u+NFCNrgmovZweop2uVOPmHP1\nnFWoUpntU+HwNI/0uhNthay+tORu4PR
aLvXkxVAKXuSr+Yeiz5jmV+qw0/kr3Z9zo\nnSEHMENgWBkYWellgmMQbkW96shQTsJ9XLujqyN
Y6XF5jfemN585vK88FwmQEeDpI\nnUkr9MMu8hgmSicuQkQ4mhMjr75rcj/VsIx9R65G0tT10Fa
WdrWQwxgrhPXR8HGCb\nnhuFrZTa02ixzRaW2eV39xqlz56pFXtTzVsyYQ502indy/SHc3RLqVu
cWR33oNfn4\nnZZtIcUdyR4Jn1s4eGdVt8Rr95+Q8vHvOIwLwa1EceXBucrsCAwEAAaNNMEswCQ
YD\nnVR0TBAlwADAdBgNVHQ4EFgQUJMPxjeW1G76TbbD2tXB8dwSpI3MwHwYDVR0jBBgw\nnFoAU
u5aH0mWR4cFoN9i7k96d2op3sPwwDQYJKoZIhvcNAQELBQADggEBAl5ai+Zi\nnFQZUXRTqJCgH
sgBThARneVWQYkYpyAXmTR7QeLfld4ZHL33i4xWCqX3uvW7SFJLe\nnZajT2AVmgiDbaWIHtDtv
qz1BY78PSgUwPH/IyARTEOBeikp6KdwMPraehDIBMAcc\nnANY58wXiTBbsl8UMD6tGecgnzw6s
xlMmadGvrfJeJmgY4zert6NNvgtTPhcZQdLS\nnE0fGzHS6+3ajCCfEEhPNPer9D0e5Me81i9Es
QGENrnJzTci8rzXPuF4bC3gghrK1\nnI1+kmJQ1kLYVUcsntcrIiHmNvtPFJY6stjDgQKS9aDd/
THhPpokPtZoCmE6PDxh6\nnR+dO6C0hcDKHFzA=\n-----END CERTIFICATE-----\n"
}

```

Generate a new Certificate Signing Request (CSR)

```
# The API:
/api/security/certificate-signing-request

# The call:
curl -X POST "https://<mgmt-ip>/api/security/certificate-signing-request"
-H "accept: application/json" -H "Content-Type: application/json" -d "{
  \"algorithm\": \"rsa\", \"extended_key_usage\": [\"serverauth\"],
  \"hash_function\": \"sha256\", \"key_usage\": [\"digitalsignature\"],
  \"security_strength\": \"112\", \"subject_alternatives\": { \"dns\": [
  \"*.example.com\", \"*.example1.com\" ], \"email\": [\"abc@example.com\",
  \"abc@example1.com\"], \"ip\": [\"10.225.34.223\", \"10.225.34.224\"],
  \"uri\": [\"http://example.com\", \"http://example1.com\"] },
  \"subject_name\": \"C=US,O=NTAP,CN=test.domain.com\"}
{
  \"csr\": \"-----BEGIN CERTIFICATE REQUEST-----\n-----END CERTIFICATE
REQUEST-----\n\",
  \"generated_private_key\": \"-----BEGIN PRIVATE KEY-----\n-----END PRIVATE
KEY-----\n\"
}
```

```
### Download and install a certificate from the Azure Key Vault.
```

The API:

```
/api/security/certificates
```

The call:

```
curl -X POST "https://<mgmt-ip>/api/security/certificates" -H "accept: application/json" -H "Content-Type:
application/json" -d "{\"svm\": {\"name\": \"vs0\"}, \"name\": \"vs0-client-cert\", \"type\": \"client\", \"azure\": {
  \"key_vault\": \"https://example.vault.azure.net\", \"client_id\": \"12345678-abcd-1234-12ad-dfasdffgfdaaa\",
  \"tenant_id\": \"12345678-abcd-abcd-test-720ef604b100\", \"client_secret\": \"clientSecretString\",
  \"verify_host\": false }}" { \"job\": { \"uuid\": \"be8d45cb-1d41-11ee-9725-005056ae0f31\", \"_links\": { \"self\": { \"href\":
\"/api/cluster/jobs/be8d45cb-1d41-11ee-9725-005056ae0f31\" } } } }</mgmt-ip>
```

```
...
```

```
[ [ID2ed5f606059bbf9e04072b6b34e4aaca] ]
```

= Retrieve security certificates

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-block]#`/security/certificates`#

Introduced In: 9.6

Retrieves security certificates.

== Related ONTAP commands

* `security certificate show`

== Parameters

[cols=5*,options=header]

|===

|Name

|Type

|In

|Required

|Description

|authority_key_identifier

|string

|query

|False

a|Filter by authority_key_identifier

* Introduced in: 9.8

|ca

|string

|query

|False

a|Filter by ca

* maxLength: 256

* minLength: 1

|svm.uuid

|string

|query

```
|False  
a|Filter by svm.uuid
```

```
|svm.name  
|string  
|query  
|False  
a|Filter by svm.name
```

```
|public_certificate  
|string  
|query  
|False  
a|Filter by public_certificate
```

```
* Introduced in: 9.8
```

```
|common_name  
|string  
|query  
|False  
a|Filter by common_name
```

```
|uuid  
|string  
|query  
|False  
a|Filter by uuid
```

```
* Introduced in: 9.8
```

```
|key_size  
|integer  
|query  
|False  
a|Filter by key_size
```

```
|serial_number  
|string  
|query  
|False
```

a|Filter by serial_number

* maxLength: 40

* minLength: 1

|expiry_time

|string

|query

|False

a|Filter by expiry_time

|type

|string

|query

|False

a|Filter by type

|name

|string

|query

|False

a|Filter by name

* Introduced in: 9.8

|scope

|string

|query

|False

a|Filter by scope

|subject_key_identifier

|string

|query

|False

a|Filter by subject_key_identifier

* Introduced in: 9.8

|hash_function

|string


```
|query
|False
a|Filter by hash_function
```

```
|fields
|array[string]
|query
|False
a|Specify the fields to return.
```

```
|max_records
|integer
|query
|False
a|Limit the number of records returned.
```

```
|return_timeout
|integer
|query
|False
a|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.
```

```
* Default value: 1
* Max value: 120
* Min value: 0
```

```
|return_records
|boolean
|query
|False
a|The default is true for GET calls. When set to false, only the number
of records is returned.
```

```
* Default value: 1
```

```
|order_by
|array[string]
|query
|False
```

a|Order results by specified fields and optional [asc|desc] direction.
Default direction is 'asc' for ascending.

|===

== Response

Status: 200, Ok

```
[cols=3*,options=header]
```

|===

|Name

|Type

|Description

|_links

|link:#_links[_links]

a|

|num_records

|integer

a|Number of records

|records

|array[link:#security_certificate[security_certificate]]

a|

|===

.Example response

[%collapsible%closed]

====

```
[source,json,subs=+macros]
```

```
{
```

```
  "_links": {
```

```
    "next": {
```

```
      "href": "/api/resourcelink"
```

```
    },
```

```
    "self": {
```

```
      "href": "/api/resourcelink"
```

```
    }
```

```
  },
```

```
  "num_records": 1,
```

```
  "records": {
```

```

    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "authority_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D7",
    "azure": {
      "client_certificate": "PEM Cert",
      "client_id": "aaaaaaaa-bbbb-aaaa-bbbb-aaaaaaaaaaaa",
      "client_secret": "abcdef",
      "key_vault": "https://kmip-akv-keyvault.vault.azure.net/",
      "oauth_host": "login.microsoftonline.com",
      "proxy": {
        "host": "proxy.eng.com",
        "password": "proxypassword",
        "port": 1234,
        "type": "http",
        "username": "proxyuser"
      },
      "tenant_id": "zzzzzzzz-yyyy-zzzz-yyyy-zzzzzzzzzzzz",
      "timeout": 25
    },
    "ca": "string",
    "common_name": "test.domain.com",
    "hash_function": "sha1",
    "intermediate_certificates": {
    },
    "private_key": "-----BEGIN PRIVATE KEY-----\nprivate-key\n-----END
PRIVATE KEY-----\n",
    "public_certificate": "-----BEGIN CERTIFICATE-----
MIIBuzCCAWWgAwIBAgIIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQAwHDEnMAsGA1UE
AxMEVEVETVDELMAkGA1UEBhMCVVMwHhcNMTgwNjA4MTgwOTAxWhcNMTkwNjA4MTgw
OTAxWjAcMQ0wCwYDVQQDEwRURVNUMQswCQYDVQQGEwJVUzBcMA0GCSqGSIb3DQEB
AQUAA0sAMEgCQQDaPvbqUJJFJ6NNTyK3Yb+ytSjJ9aa3yUmYTD9uMiP+6ycjxHWB
e8u9z6yCHsW03ync+dnhE5c5z8wuDAY0fv15AgMBAAGjgYowgYcwDAYDVR0TBAUw
AwEB/zALBgNVHQ8EBAMCAQYwHQYDVR0OBBYEFMJ7Ev/o/3+YNzYh5XNlqqjnw4zm
MEsGA1UdIwREMEKA FMJ7Ev/o/3+YNzYh5XNlqqjnw4zmoSCKHjAcMQ0wCwYDVQQD
EwRURVNUMQswCQYDVQQGEwJVU4IIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQADQQA
vDovYeyGNnknjGI+TVNX6nDbyzf7zUPqnri0KuvObEeybrbPW45sgsnT5dyeE/32U
9Yr6lklnkBTvBDTmLnrC -----END CERTIFICATE-----",
    "scope": "svm",
    "serial_number": "string",
    "subject_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D8",
    "svm": {

```

```

    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svml",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "client",
  "uuid": "string"
}
}
====

== Error

```

Status: Default, Error

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#returned_error[returned_error]
a|

|===

.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}

```

```

}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===

[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|next
|link:#href[href]
a|

|self
|link:#href[href]
a|

|===

```

```

[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===

[#proxy]
[.api-collapsible-fifth-title]
proxy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|host
|string
a|Proxy host.

|password
|string
a|Proxy password. Password is not audited.

|port
|integer
a|Proxy port.

|type
|string
a|Proxy type.

```

```
|username
|string
a|Proxy username.
```

```
|===
```

```
[#azure]
[.api-collapsible-fifth-title]
azure
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|client_certificate
|string
a|PKCS12 certificate used by the application to prove its identity to AKV.
```

```
|client_id
|string
a|Application client ID of the deployed Azure application with appropriate access to an AKV.
```

```
|client_secret
|string
a|Secret used by the application to prove its identity to AKV.
```

```
|key_vault
|string
a|URI of the deployed AKV that is used by ONTAP for storing keys.
```

```
* example: https://kmip-akv-keyvault.vault.azure.net/
* format: uri
* x-ntap-createOnly: true
* Introduced in: 9.14
* x-nullable: true
```

```
|oauth_host
```

```

|string
a|Open authorization server host name.

|proxy
|link:#proxy[proxy]
a|

|tenant_id
|string
a|Directory (tenant) ID of the deployed Azure application with appropriate
access to an AKV.

|timeout
|integer
a|AKV connection timeout, in seconds. The allowed range is between 0 to 30
seconds.

|verify_host
|boolean
a|Verify the identity of the AKV host name. By default, verify_host is set
to true.

|===

[#svm]
[.api-collapsible-fifth-title]
svm

SVM, applies only to SVM-scoped objects.

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|name

```



```
|string
a|The name of the SVM. This field cannot be specified in a PATCH method.
```

```
|uuid
|string
a|The unique identifier of the SVM. This field cannot be specified in a
PATCH method.
```

```
|===
```

```
[#security_certificate]
[.api-collapsible-fifth-title]
security_certificate
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
 |_links
|link:#_links[_links]
a|
```

```
|authority_key_identifier
|string
a|Provides the key identifier of the issuing CA certificate that signed
the SSL certificate.
```

```
|azure
|link:#azure[azure]
a|
```

```
|ca
|string
a|Certificate authority
```

```
|common_name
|string
a|FQDN or custom common name. Provide on POST when creating a self-signed
certificate.
```

|expiry_time
|string
a|Certificate expiration time. Can be provided on POST if creating self-signed certificate. The expiration time range is between 1 day to 10 years.

|hash_function
|string
a|Hashing function. Can be provided on POST when creating a self-signed certificate. Hash functions md5 and sha1 are not allowed on POST.

|intermediate_certificates
|array[string]
a|Chain of intermediate Certificates in PEM format. Only valid in POST when installing a certificate.

|key_size
|integer
a|Key size of requested Certificate in bits. One of 512, 1024, 1536, 2048, 3072. Can be provided on POST if creating self-signed certificate with a minimum permissible value of 2048.

|name
|string
a|Certificate name or name of the certificate to be downloaded from the Azure Key Vault (AKV). If not provided in POST, a unique name specific to the SVM is automatically generated.

|private_key
|string
a|Private key Certificate in PEM format. Only valid for create when installing a CA-signed certificate. This is not audited.

|public_certificate
|string
a|Public key Certificate in PEM format. If this is not provided in POST, a self-signed certificate is created.

|scope

```

|string
a|Set to "svm" for interfaces owned by an SVM. Otherwise, set to
"cluster".

|serial_number
|string
a|Serial number of certificate.

|subject_key_identifier
|string
a|Provides the key identifier used to identify the public key in the SSL
certificate.

|svm
|link:#svm[svm]
a|SVM, applies only to SVM-scoped objects.

|type
|string
a|Type of Certificate. The following types are supported:

* client - a certificate and its private key used by an SSL client in
ONTAP.
* server - a certificate and its private key used by an SSL server in
ONTAP.
* client_ca - a Certificate Authority certificate used by an SSL server in
ONTAP to verify an SSL client certificate.
* server_ca - a Certificate Authority certificate used by an SSL client in
ONTAP to verify an SSL server certificate.
* root_ca - a self-signed certificate used by ONTAP to sign other
certificates by acting as a Certificate Authority.
* enum: ["client", "server", "client_ca", "server_ca", "root_ca"]
* Introduced in: 9.6
* x-nullable: true

|uuid
|string
a|Unique ID that identifies a certificate.

|===

```

```
[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|code
```

```
|string
```

```
a|Argument code
```

```
|message
```

```
|string
```

```
a|Message argument
```

```
|===
```

```
[#returned_error]
```

```
[.api-collapsible-fifth-title]
```

```
returned_error
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|arguments
```

```
|array[link:#error_arguments[error_arguments]]
```

```
a|Message arguments
```

```
|code
```

```
|string
```

```
a|Error code
```

```
|message
```

```
|string
```

```
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.
```

```
|===
```

```
//end collapsible .Definitions block
=====
```

```
[[IDaa405f02f3fc79f9ed56ee059d4e6dfa]]
= Create or install security certificates
```

```
[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/security/certificates`#
```

```
*Introduced In:* 9.6
```

Creates or installs a certificate or downloads a certificate from Azure Key Vault (AKV) and installs it on the ONTAP cluster.

```
== Required properties
```

- * `svm.uuid` or `svm.name` - Existing SVM in which to create or install the certificate.
- * `common_name` - Common name of the certificate. Required when creating a certificate.
- * `type` - Type of certificate.
- * `public_certificate` - Public key certificate in PEM format. Required when installing a certificate.
- * `private_key` - Private key certificate in PEM format. Required when installing a CA-signed certificate.

```
== Recommended optional properties
```

- * `expiry_time` - Certificate expiration time. Specifying an expiration time is recommended when creating a certificate.
- * `key_size` - Key size of the certificate in bits. Specifying a strong key size is recommended when creating a certificate.
- * `name` - Unique certificate name per SVM or the name of the certificate in AKV, required for downloading AKV certificates. If one is not provided, it is automatically generated.

== AKV required properties for downloading a certificate

- * `azure.key_vault` - URI of the Azure Key Vault.
- * `azure.client_id` - Application (client) ID of the deployed Azure application with appropriate access to an AKV.
- * `azure.tenant_id` - Directory (tenant) ID of the deployed Azure application with appropriate access to an AKV.
- * `azure.client_secret` - Secret used by the application to prove its identity to AKV.
- * `azure.client_certificate` - PKCS12 certificate used by the application to prove its identity to AKV.

== AKV optional properties for downloading a certificate

- * `azure.oauth_host` - Open authorization server host name.
- * `azure.proxy.type` - Type of proxy (http, https etc.) if proxy configuration is used.
- * `azure.proxy.host` - Proxy hostname if proxy configuration is used.
- * `azure.proxy.port` - Proxy port number if proxy configuration is used.
- * `azure.proxy.username` - Proxy username if proxy configuration is used.
- * `azure.proxy.password` - Proxy password if proxy configuration is used.
- * `azure.timeout` - AKV connection timeout in seconds.
- * `azure.verify_host` - Verify the identity of the AKV host name.

== Default property values

If not specified in POST, the following default property values are assigned:

- * `key_size` - `_2048_`
- * `expiry_time` - `_P365DT_`
- * `hash_function` - `_sha256_`

== Related ONTAP commands

- * `security certificate create``
- * `security certificate install``
- * `security certificate azure-install``

== Parameters

[cols=5*,options=header]

|===

|Name

```

|Type
|In
|Required
|Description

|return_records
|boolean
|query
|False
a|The default is false. If set to true, the records are returned.

* Default value:

|===

== Request Body

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|authority_key_identifier
|string
a|Provides the key identifier of the issuing CA certificate that signed
the SSL certificate.

|azure
|link:#azure[azure]
a|

|ca
|string
a|Certificate authority

|common_name
|string
a|FQDN or custom common name. Provide on POST when creating a self-signed

```

certificate.

|expiry_time

|string

a|Certificate expiration time. Can be provided on POST if creating self-signed certificate. The expiration time range is between 1 day to 10 years.

|hash_function

|string

a|Hashing function. Can be provided on POST when creating a self-signed certificate. Hash functions md5 and sha1 are not allowed on POST.

|intermediate_certificates

|array[string]

a|Chain of intermediate Certificates in PEM format. Only valid in POST when installing a certificate.

|key_size

|integer

a|Key size of requested Certificate in bits. One of 512, 1024, 1536, 2048, 3072. Can be provided on POST if creating self-signed certificate with a minimum permissible value of 2048.

|name

|string

a|Certificate name or name of the certificate to be downloaded from the Azure Key Vault (AKV). If not provided in POST, a unique name specific to the SVM is automatically generated.

|private_key

|string

a|Private key Certificate in PEM format. Only valid for create when installing a CA-signed certificate. This is not audited.

|public_certificate

|string

a|Public key Certificate in PEM format. If this is not provided in POST, a self-signed certificate is created.


```
|scope
|string
a|Set to "svm" for interfaces owned by an SVM. Otherwise, set to
"cluster".

|serial_number
|string
a|Serial number of certificate.

|subject_key_identifier
|string
a|Provides the key identifier used to identify the public key in the SSL
certificate.

|svm
|link:#svm[svm]
a|SVM, applies only to SVM-scoped objects.

|type
|string
a|Type of Certificate. The following types are supported:

* client - a certificate and its private key used by an SSL client in
ONTAP.
* server - a certificate and its private key used by an SSL server in
ONTAP.
* client_ca - a Certificate Authority certificate used by an SSL server in
ONTAP to verify an SSL client certificate.
* server_ca - a Certificate Authority certificate used by an SSL client in
ONTAP to verify an SSL server certificate.
* root_ca - a self-signed certificate used by ONTAP to sign other
certificates by acting as a Certificate Authority.
* enum: ["client", "server", "client_ca", "server_ca", "root_ca"]
* Introduced in: 9.6
* x-nullable: true

|uuid
|string
a|Unique ID that identifies a certificate.
```

|===

.Example request

[%collapsible%closed]

====

[source,json,subs=+macros]

```
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "authority_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D7",
  "azure": {
    "client_certificate": "PEM Cert",
    "client_id": "aaaaaaaa-bbbb-aaaa-bbbb-aaaaaaaaaaaa",
    "client_secret": "abcdef",
    "key_vault": "https://kmip-akv-keyvault.vault.azure.net/",
    "oauth_host": "login.microsoftonline.com",
    "proxy": {
      "host": "proxy.eng.com",
      "password": "proxypassword",
      "port": 1234,
      "type": "http",
      "username": "proxyuser"
    },
    "tenant_id": "zzzzzzzz-yyyy-zzzz-yyyy-zzzzzzzzzzzz",
    "timeout": 25
  },
  "ca": "string",
  "common_name": "test.domain.com",
  "hash_function": "sha1",
  "intermediate_certificates": {
  },
  "private_key": "-----BEGIN PRIVATE KEY-----\nprivate-key\n-----END
PRIVATE KEY-----\n",
  "public_certificate": "-----BEGIN CERTIFICATE-----
MIIBuzCCAwwGawIBAgIIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQAwHdENMAsGA1UE
AxMEVEVETVDELMAkGA1UEBhMCVVMwHhcNMTgwNjA4MTgwOTAxWjcNMTkwNjA4MTgw
OTAxWjAcMQ0wCwYdVQ0DEwRURVNUMQswCQYdVQ0GEwJVUzBcMA0GCSqGSIb3DQEB
AQUAA0sAMEgCQQDaPvbqUJJFJ6NNTyK3Yb+ytSjJ9aa3yUmYTD9uMiP+6ycjxHWB
e8u9z6yCHsW03ync+dnhE5c5z8wuDAY0fv15AgMBAAGjgYowgYcwDAYDVR0TBAUw
AwEB/zALBgNVHQ8EBAMCAQYwHQYDVR0OBBYEFMJ7Ev/o/3+YNzYh5XNlqqjnw4zm
MEsGA1UdIwREMEKAFMJ7Ev/o/3+YNzYh5XNlqqjnw4zmoSCkhjAcMQ0wCwYdVQ0D
```

```

EwRURVNUMQswCQYDVQQGEwJVU4IIIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQADQQAv
DovYeyGNknjGI+TVNX6nDbyzf7zUPqnri0KuvObEeybrbPW45sgsnT5dyeE/32U
9Yr6lklnkBtVBDTmLnrC -----END CERTIFICATE-----",
  "scope": "svm",
  "serial_number": "string",
  "subject_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D8",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "client",
  "uuid": "string"
}
====

== Response

```

Status: 201, Created

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|num_records
|integer
a|Number of records

|records
|array[link:#security_certificate[security_certificate]]
a|

|===

```

```

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "next": {
      "href": "/api/resourcelink"
    },
    "self": {
      "href": "/api/resourcelink"
    }
  },
  "num_records": 1,
  "records": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "authority_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D7",
    "azure": {
      "client_certificate": "PEM Cert",
      "client_id": "aaaaaaaa-bbbb-aaaa-bbbb-aaaaaaaaaaaa",
      "client_secret": "abcdef",
      "key_vault": "https://kmip-akv-keyvault.vault.azure.net/",
      "oauth_host": "login.microsoftonline.com",
      "proxy": {
        "host": "proxy.eng.com",
        "password": "proxypassword",
        "port": 1234,
        "type": "http",
        "username": "proxyuser"
      },
      "tenant_id": "zzzzzzzz-yyyy-zzzz-yyyy-zzzzzzzzzzzz",
      "timeout": 25
    },
    "ca": "string",
    "common_name": "test.domain.com",
    "hash_function": "sha1",
    "intermediate_certificates": {
  },
    "private_key": "-----BEGIN PRIVATE KEY-----\\nprivate-key\\n-----END
PRIVATE KEY-----\\n",

```

```

"public_certificate": "-----BEGIN CERTIFICATE-----
MIIBuzCCAWWgAwIBAgIIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQAwHDEnMA0GA1UE
AxMEVEVETVDELMakGA1UEBhMCVVMwHhcNMTgwNjA4MTgwOTAxWhcNMTkwNjA4MTgw
OTAxWjAcMQ0wCwYDVQQDEwRURVNUMQswCQYDVQQGEwJVUzBcMA0GCSqGSIb3DQEB
AQUAA0sAMEgCQQDaPvbqUJJFJ6NNTyK3Yb+ytSjJ9aa3yUmYTD9uMiP+6ycjxHWB
e8u9z6yCHsW03ync+dnhE5c5z8wuDAY0fv15AgMBAAGjgYowgYcwDAYDVR0TBAUw
AwEB/zALBgNVHQ8EBAMCAQYwHQYDVR0OBBYEFMJ7Ev/o/3+YNzYh5XNlqqjnw4zm
MEsGA1UdIwREMEKAQFMJ7Ev/o/3+YNzYh5XNlqqjnw4zmoSCkhjAcMQ0wCwYDVQQD
EwRURVNUMQswCQYDVQQGEwJVU4IIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQADQQA
vDovYeyGNknkjGI+TVNX6nDbyzf7zUPqnri0KuvObEeybrbPW45sgsnT5dyeE/32U
9Yr6lklklnkBTvBDTmLnrC -----END CERTIFICATE-----",
  "scope": "svm",
  "serial_number": "string",
  "subject_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D8",
  "svm": {
    "_links": {
      "self": {
        "href": "/api/resourcelink"
      }
    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "client",
  "uuid": "string"
}
}
====

=== Headers

[cols=3*,options=header]
|===
//header
|Name
|Description
|Type
//end header

//start row
|Location
|Useful for tracking the resource location
|string
//end row
//end table

```

```
|===
```

```
== Error
```

Status: Default

```
ONTAP Error Response Codes
```

```
//start table
```

```
[cols=2*,options=header]
```

```
|===
```

```
//header
```

```
| Error Code | Description
```

```
//end header
```

```
//end row
```

```
//start row
```

```
|3735645 +
```

```
//end row
```

```
//start row
```

```
|Cannot specify a value for serial. It is generated automatically.
```

```
//end row
```

```
//start row
```

```
|
```

```
//end row
```

```
//start row
```

```
|3735622 +
```

```
//end row
```

```
//start row
```

```
|The certificate type is not supported.
```

```
//end row
```

```
//start row
```

```
|
```

```
//end row
```

```
//start row
```

```
|3735664 +
```

```
//end row
```

```
//start row
```

```
|The specified key size is not supported in FIPS mode.
```

```
//end row
```

```
//start row
```

```
|
```

```
//end row
```

```
//start row
```

```
|3735665 +
```

```
//end row
```

```
//start row
```

```
|The specified hash function is not supported in FIPS mode.
//end row
//start row
|
//end row
//start row
|3735553 +
//end row
//start row
|Failed to create self-signed Certificate.
//end row
//start row
|
//end row
//start row
|3735646 +
//end row
//start row
|Failed to store the certificates.
//end row
//start row
|
//end row
//start row
|3735693 +
//end row
//start row
|The certificate installation failed as private key was empty.
//end row
//start row
|
//end row
//start row
|3735618 +
//end row
//start row
|Cannot accept private key for server_ca or client_ca.
//end row
//start row
|
//end row
//start row
|52363365 +
//end row
//start row
|Failed to allocate memory.
```

```
//end row
//start row
|
//end row
//start row
|52559975 +
//end row
//start row
|Failed to read the certificate due to incorrect formatting.
//end row
//start row
|
//end row
//start row
|52363366 +
//end row
//start row
|Unsupported key type.
//end row
//start row
|
//end row
//start row
|52560123 +
//end row
//start row
|Failed to read the key due to incorrect formatting.
//end row
//start row
|
//end row
//start row
|52559972 +
//end row
//start row
|The certificates start date is later than the current date.
//end row
//start row
|
//end row
//start row
|52559976 +
//end row
//start row
|The certificate and private key do not match.
//end row
```



```
//start row
|
//end row
//start row
|52559973 +
//end row
//start row
|The certificate has expired.
//end row
//start row
|
//end row
//start row
|52363366 +
//end row
//start row
|Logic error: use of a dead object.
//end row
//start row
|
//end row
//start row
|3735696 +
//end row
//start row
|Intermediate certificates are not supported with client_ca and server_ca
type certificates.
//end row
//start row
|
//end row
//start row
|52559974 +
//end row
//start row
|The certificate is not supported in FIPS mode.
//end row
//start row
|
//end row
//start row
|3735676 +
//end row
//start row
|Cannot continue the installation without a value for the common name.
Since the subject field in the certificate is empty, the field
```

```
"common_name" must have a value to continue with the installation.
//end row
//start row
|
//end row
//start row
|3735558 +
//end row
//start row
|Failed to extract information about Common Name from the certificate.
//end row
//start row
|
//end row
//start row
|3735588 +
//end row
//start row
|The common name (CN) extracted from the certificate is not valid.
//end row
//start row
|
//end row
//start row
|3735632 +
//end row
//start row
|Failed to extract Certificate Authority Information from the certificate.
//end row
//start row
|
//end row
//start row
|3735700 +
//end row
//start row
|The specified key size is not supported.
//end row
//start row
|
//end row
//start row
|52560173 +
//end row
//start row
|The hash function is not supported for digital signatures.
```

```
//end row
//start row
|
//end row
//start row
|3735751 +
//end row
//start row
|Failed to authenticate and fetch the access token from Azure OAuth host.
//end row
//start row
|
//end row
//start row
|3735752 +
//end row
//start row
|Failed to extract the private key from the Azure Key Vault certificate.
//end row
//start row
|3735753 +
//end row
//start row
|Unsupported content_type in the Azure secrets response.
//end row
//start row
|3735754 +
//end row
//start row
|Internal error. Failed to parse the JSON response from Azure Key Vault.
//end row
//start row
|3735755 +
//end row
//start row
|REST call to Azure failed.
//end row
//start row
|3735756 +
//end row
//start row
|Invalid client certificate.
//end row
//start row
|3735757 +
//end row
```

```

//start row
|Internal error. Failed to generate client assertion.
//end row
//start row
|3735762 +
//end row
//start row
|Provided Azure Key Vault configuration is incorrect.
//end row
//start row
|3735763 +
//end row
//start row
|Provided Azure Key Vault configuration is incomplete.
//end row
//start row
|3735764 +
//end row
//start row
|Request to Azure failed. Reason - Azure error code and Azure error
message.
//end row
|===
//end table

```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|error
```

```
|link:#returned_error[returned_error]
```

```
a|
```

```
|===
```

```
.Example error
```

```
[%collapsible%closed]
```

```
=====
```

```
[source,json,subs=+macros]
```

```
{
```

```
  "error": {
```

```

    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

```

== Definitions

```

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====

```

```

[#href]
[.api-collapsible-fifth-title]
href

```

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```

|href
|string
a|

```

```

|===

```

```

[#_links]
[.api-collapsible-fifth-title]
_links

```

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```

|self

```

```
|link:#href[href]
a|

|===

[#proxy]
[.api-collapsible-fifth-title]
proxy

[cols=3*,options=header]
|===
|Name
|Type
|Description

|host
|string
a|Proxy host.

|password
|string
a|Proxy password. Password is not audited.

|port
|integer
a|Proxy port.

|type
|string
a|Proxy type.

|username
|string
a|Proxy username.

|===

[#azure]
[.api-collapsible-fifth-title]
azure
```

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|client_certificate
|string
a|PKCS12 certificate used by the application to prove its identity to AKV.

|client_id
|string
a|Application client ID of the deployed Azure application with appropriate
access to an AKV.

|client_secret
|string
a|Secret used by the application to prove its identity to AKV.

|key_vault
|string
a|URI of the deployed AKV that is used by ONTAP for storing keys.

* example: https://kmip-akv-keyvault.vault.azure.net/
* format: uri
* x-ntap-createOnly: true
* Introduced in: 9.14
* x-nullable: true

|oauth_host
|string
a|Open authorization server host name.

|proxy
|link:#proxy[proxy]
a|

|tenant_id
|string
a|Directory (tenant) ID of the deployed Azure application with appropriate
access to an AKV.

```

```
|timeout
|integer
a|AKV connection timeout, in seconds. The allowed range is between 0 to 30
seconds.
```

```
|verify_host
|boolean
a|Verify the identity of the AKV host name. By default, verify_host is set
to true.
```

```
|===
```

```
[#svm]
[.api-collapsible-fifth-title]
svm
```

SVM, applies only to SVM-scoped objects.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
 |_links
|link:#_links[_links]
a|
```

```
|name
|string
a|The name of the SVM. This field cannot be specified in a PATCH method.
```

```
|uuid
|string
a|The unique identifier of the SVM. This field cannot be specified in a
PATCH method.
```

```
|===
```



```

[#security_certificate]
[.api-collapsible-fifth-title]
security_certificate

[cols=3*,options=header]
|===
|Name
|Type
|Description

|_links
|link:#_links[_links]
a|

|authority_key_identifier
|string
a|Provides the key identifier of the issuing CA certificate that signed
the SSL certificate.

|azure
|link:#azure[azure]
a|

|ca
|string
a|Certificate authority

|common_name
|string
a|FQDN or custom common name. Provide on POST when creating a self-signed
certificate.

|expiry_time
|string
a|Certificate expiration time. Can be provided on POST if creating self-
signed certificate. The expiration time range is between 1 day to 10
years.

|hash_function
|string
a|Hashing function. Can be provided on POST when creating a self-signed
certificate. Hash functions md5 and sha1 are not allowed on POST.

```

```
|intermediate_certificates
|array[string]
a|Chain of intermediate Certificates in PEM format. Only valid in POST
when installing a certificate.

|key_size
|integer
a|Key size of requested Certificate in bits. One of 512, 1024, 1536, 2048,
3072. Can be provided on POST if creating self-signed certificate with a
minimum permissible value of 2048.

|name
|string
a|Certificate name or name of the certificate to be downloaded from the
Azure Key Vault (AKV). If not provided in POST, a unique name specific to
the SVM is automatically generated.

|private_key
|string
a|Private key Certificate in PEM format. Only valid for create when
installing a CA-signed certificate. This is not audited.

|public_certificate
|string
a|Public key Certificate in PEM format. If this is not provided in POST, a
self-signed certificate is created.

|scope
|string
a|Set to "svm" for interfaces owned by an SVM. Otherwise, set to
"cluster".

|serial_number
|string
a|Serial number of certificate.

|subject_key_identifier
|string
```

a|Provides the key identifier used to identify the public key in the SSL certificate.

|svm

|link:#svm[svm]

a|SVM, applies only to SVM-scoped objects.

|type

|string

a|Type of Certificate. The following types are supported:

* client - a certificate and its private key used by an SSL client in ONTAP.

* server - a certificate and its private key used by an SSL server in ONTAP.

* client_ca - a Certificate Authority certificate used by an SSL server in ONTAP to verify an SSL client certificate.

* server_ca - a Certificate Authority certificate used by an SSL client in ONTAP to verify an SSL server certificate.

* root_ca - a self-signed certificate used by ONTAP to sign other certificates by acting as a Certificate Authority.

* enum: ["client", "server", "client_ca", "server_ca", "root_ca"]

* Introduced in: 9.6

* x-nullable: true

|uuid

|string

a|Unique ID that identifies a certificate.

|===

[#_links]

[.api-collapsible-fifth-title]

_links

[cols=3*,options=header]

|===

|Name

|Type

|Description

|next

```

|link:#href[href]
a|

|self
|link:#href[href]
a|

|===

[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]
|===
|Name
|Type
|Description

|code
|string
a|Argument code

|message
|string
a|Message argument

|===

[#returned_error]
[.api-collapsible-fifth-title]
returned_error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

```

```
|code
|string
a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.
```

```
|===
```

```
//end collapsible .Definitions block
=====
```

```
[[IDebec9753ef29ab7ce1b03302b7847859]]
= Sign security certificates
```

```
[.api-doc-operation .api-doc-operation-post]#POST# [.api-doc-code-
block]#`/security/certificates/{ca.uuid}/sign`#
```

```
*Introduced In:* 9.6
```

```
Signs a certificate.
```

```
== Required properties
```

```
* `signing_request` - Certificate signing request to be signed by the
given certificate authority.
```

```
== Recommended optional properties
```

```
* `expiry_time` - Certificate expiration time. Specifying an expiration
time for a signed certificate is recommended.
```

```
* `hash_function` - Hashing function. Specifying a strong hashing function
is recommended when signing a certificate.
```

```
== Default property values
```

If not specified in POST, the following default property values are assigned:

```
* `expiry_time` - _P365DT_  
* `hash_function` - _sha256_
```

== Related ONTAP commands

```
* `security certificate sign`
```

This API is used to sign a certificate request using a pre-existing self-signed root certificate. The self-signed root certificate acts as a certificate authority within its scope and maintains the records of its signed certificates.

The root certificate can be created for a given SVM or for the cluster using [`POST security/certificates`].

== Parameters

```
[cols=5*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|In
```

```
|Required
```

```
|Description
```

```
|ca.uuid
```

```
|string
```

```
|path
```

```
|True
```

```
a|UUID of the existing certificate authority certificate
```

```
|return_records
```

```
|boolean
```

```
|query
```

```
|False
```

```
a|The default is false. If set to true, the records are returned.
```

```
* Default value:
```

```
|===
```

```
== Request Body
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|expiry_time
```

```
|string
```

```
a|Certificate expiration time. The allowed expiration time range is between 1 day to 10 years.
```

```
|hash_function
```

```
|string
```

```
a|Hashing function
```

```
|signing_request
```

```
|string
```

```
a|Certificate signing request to be signed by the given certificate authority. Request should be in X509 PEM format.
```

```
|===
```

```
.Example request
```

```
[%collapsible%closed]
```

```
====
```

```
[source,json,subs+=macros]
```

```
{
```

```
  "hash_function": "sha256",
```

```
  "signing_request": "'-----BEGIN CERTIFICATE REQUEST-----
```

```
MIICYDCCAUGCAQAwGzEMMAoGA1UEAxMDQUJDMQswCQYDVQQGEwJVUzCCASIwDQYJ  
KoZIhvcNAQEBBQADggEPADCCAQoCggEBAPF+82SlqT3Vyu3Jx4IAwHcO5EGwLOxy  
zQ6KNjz71Fca0n1/A1CbCPyOsSupGVObvdWxX7xLVMJ2Sxb7h43GCqYyX6FXJO4F  
HOpmLvB+jxdeiW7SDbiZyLUlsvA+oRO/uNlcug773QZdKLjJD64erZZMRUNbUJB8  
bARxAUi0FPvgTraSQ0UW5sRLiGKeAyKA4wekYe1VgjHRTBizFbD4dI3njfva/2B1  
jfk+kkulgcLJTUjNtkgeimqMKyraYuleYcYk2K+C//0NuNOuPbDfTXCM7O61vik09  
Szi8nLN70XE9KooAA93U/BCpSfpl8XIb4cGnEr8hgVHOotZSo+KZBFxMCAwEAAaAA  
MA0GCSqGSIB3DQEBwUAA4IBAQC2vFYpvgSfrm5GnPx8tOBD1xsTyYjbWJMD8hAF  
lFrvF9Sw9QGctDyacxkwgJhQx8l8JiIS5GOY6WWLB19FMkLQNAhDL9xF3WF7vfYq  
RKgrz3bd/Vg96fsRZNYIPLGmoEaQLoh3FOCGc2VbdsR9PwOn3fwthxkIRd6ds6/q
```

```
jc5cpSmVsCOgu+OKcpRXikYDbkWXfTZ1AhSfn6njBYFdZ9+PNAu/0JRQh5bX60nO
5heniTcAJLwUZP/CQ8nxHY0Wqy+1rAtM33d5cVmhU1BXQSIru/0ZkA/b9fK5Zv8E
ZMADYUoEvIG59VxhyCi8lzYf+Mxl8qBSF+ZdC4yWhzDqZtM9 -----END CERTIFICATE
REQUEST-----'"
}
====

== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|public_certificate
|string
a|CA signed public key Certificate

|===

== Error
```

Status: Default

```
ONTAP Error Response Codes

|===
| Error Code | Description

| 3735628
| Failed to use CA certificate for signing.

| 3735665
| The specified hash function is not supported in FIPS mode.

| 52559974
| The certificate is not supported in FIPS mode.

| 3735626
| Failed to generate signed Certificate.
```



```
| 3735558
| Failed to extract information about Common Name from the certificate.

| 3735588
| The common name (CN) extracted from the certificate is not valid.

| 3735632
| Failed to extract Certificate Authority Information from the
certificate.

| 3735629
| Failed to sign the certificate because Common Name of signing
certificate and Common Name of CA certificate are same.

| 3735630
| Failed to sign the certificate because expiry date of signing
certificate exceeds the expiry date of CA certificate.
|===
```

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#returned_error[returned_error]
a|

|===
```

```
.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
```

```

    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]
.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#security_certificate_sign]
[.api-collapsible-fifth-title]
security_certificate_sign

[cols=3*,options=header]
|===
|Name
|Type
|Description

|expiry_time
|string
a|Certificate expiration time. The allowed expiration time range is
between 1 day to 10 years.

|hash_function
|string
a|Hashing function

|signing_request
|string
a|Certificate signing request to be signed by the given certificate
authority. Request should be in X509 PEM format.

|===

[#error_arguments]
[.api-collapsible-fifth-title]
error_arguments

[cols=3*,options=header]

```

```

|===
|Name
|Type
|Description

|code
|string
a|Argument code

|message
|string
a|Message argument

|===

[#returned_error]
[.api-collapsible-fifth-title]
returned_error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

|code
|string
a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.

```

```

|===

//end collapsible .Definitions block
=====

[[ID5ae405fb64ffc4f431a6876d3bfb0354]]
= Delete security certificates

[.api-doc-operation .api-doc-operation-delete]#DELETE# [.api-doc-code-
block]#`/security/certificates/{uuid}`#

*Introduced In:* 9.6

Deletes a security certificate.

== Related ONTAP commands

* `security certificate delete`

== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|uuid
|string
|path
|True
a|Certificate UUID

|===

== Response

```

Status: 200, Ok

== Error

Status: Default

ONTAP Error Response Codes

|===

| Error Code | Description |
|------------|-------------|
|------------|-------------|

| | |
|---------|---|
| 3735644 | Cannot delete server-chain certificate. Reason: There is a corresponding server certificate for it. |
|---------|---|

| | |
|---------|---|
| 3735679 | Cannot delete pre-installed server_ca certificates through REST. Use CLI or ZAPI. |
|---------|---|

| | |
|---------|---|
| 3735650 | Deleting this client_ca certificate directly is not supported. Delete the corresponding root-ca certificate using type `root_ca` to delete the root, client, and server certificates. |
|---------|---|

| | |
|---------|---|
| 3735627 | Deleting this server_ca certificate directly is not supported. Delete the corresponding root-ca certificate using type `root_ca` to delete the root, client, and server certificates. |
|---------|---|

| | |
|---------|----------------------------|
| 3735589 | Cannot delete certificate. |
|---------|----------------------------|

| | |
|---------|--|
| 3735590 | Cannot delete certificate. Failed to remove SSL configuration for the certificate. |
|---------|--|

| | |
|---------|--|
| 3735683 | Cannot remove this certificate while external key manager is configured. |
|---------|--|

| | |
|---------|---|
| 3735681 | Cannot delete preinstalled `server-ca` certificates. Use the CLI to complete the operation. |
|---------|---|

| | |
|----------|---|
| 52560272 | The certificate could not be removed due to being in use by one or more subsystems. |
|----------|---|

|===

```
[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#returned_error[returned_error]
a|
```

```
|===
```

```
.Example error
```

```
[%collapsible%closed]
```

```
====
```

```
[source,json,subs=+macros]
```

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

```
====
```

```
== Definitions
```

```
[.api-def-first-level]
```

```
.See Definitions
```

```
[%collapsible%closed]
```

```
//Start collapsible Definitions block
```

```
====
```

```
[#error_arguments]
```

```
[.api-collapsible-fifth-title]
```

```
error_arguments
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description

|code
|string
a|Argument code
```

```
|message
|string
a|Message argument
```

```
|===
```

```
[#returned_error]
[.api-collapsible-fifth-title]
returned_error
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments
```

```
|code
|string
a|Error code
```

```
|message
|string
a|Error message
```

```
|target
|string
a|The target parameter that caused the error.
```

```

|===

//end collapsible .Definitions block
=====

[[ID7d4766e1e5f722755b467d5aba7d48bc]]
= Retrieve security certificates

[.api-doc-operation .api-doc-operation-get]#GET# [.api-doc-code-
block]#`/security/certificates/{uuid}`#

*Introduced In:* 9.6

Retrieves security certificates.

== Related ONTAP commands

* `security certificate show`

== Parameters

[cols=5*,options=header]
|===

|Name
|Type
|In
|Required
|Description

|uuid
|string
|path
|True
a|Certificate UUID

|fields
|array[string]
|query
|False
a|Specify the fields to return.

```



```
|===
```

```
== Response
```

Status: 200, Ok

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

```
|link:#_links[_links]
```

```
a|
```

```
|authority_key_identifier
```

```
|string
```

```
a|Provides the key identifier of the issuing CA certificate that signed the SSL certificate.
```

```
|azure
```

```
|link:#azure[azure]
```

```
a|
```

```
|ca
```

```
|string
```

```
a|Certificate authority
```

```
|common_name
```

```
|string
```

```
a|FQDN or custom common name. Provide on POST when creating a self-signed certificate.
```

```
|expiry_time
```

```
|string
```

```
a|Certificate expiration time. Can be provided on POST if creating self-signed certificate. The expiration time range is between 1 day to 10 years.
```

```
|hash_function
```

```
|string
```

a|Hashing function. Can be provided on POST when creating a self-signed certificate. Hash functions md5 and sha1 are not allowed on POST.

|intermediate_certificates

|array[string]

a|Chain of intermediate Certificates in PEM format. Only valid in POST when installing a certificate.

|key_size

|integer

a|Key size of requested Certificate in bits. One of 512, 1024, 1536, 2048, 3072. Can be provided on POST if creating self-signed certificate with a minimum permissible value of 2048.

|name

|string

a|Certificate name or name of the certificate to be downloaded from the Azure Key Vault (AKV). If not provided in POST, a unique name specific to the SVM is automatically generated.

|private_key

|string

a|Private key Certificate in PEM format. Only valid for create when installing a CA-signed certificate. This is not audited.

|public_certificate

|string

a|Public key Certificate in PEM format. If this is not provided in POST, a self-signed certificate is created.

|scope

|string

a|Set to "svm" for interfaces owned by an SVM. Otherwise, set to "cluster".

|serial_number

|string

a|Serial number of certificate.

```

|subject_key_identifier
|string
a|Provides the key identifier used to identify the public key in the SSL
certificate.

|svm
|link:#svm[svm]
a|SVM, applies only to SVM-scoped objects.

|type
|string
a|Type of Certificate. The following types are supported:

* client - a certificate and its private key used by an SSL client in
ONTAP.
* server - a certificate and its private key used by an SSL server in
ONTAP.
* client_ca - a Certificate Authority certificate used by an SSL server in
ONTAP to verify an SSL client certificate.
* server_ca - a Certificate Authority certificate used by an SSL client in
ONTAP to verify an SSL server certificate.
* root_ca - a self-signed certificate used by ONTAP to sign other
certificates by acting as a Certificate Authority.
* enum: ["client", "server", "client_ca", "server_ca", "root_ca"]
* Introduced in: 9.6
* x-nullable: true

|uuid
|string
a|Unique ID that identifies a certificate.

|===

.Example response
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
}

```

```

},
"authority_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D7",
"azure": {
  "client_certificate": "PEM Cert",
  "client_id": "aaaaaaaa-bbbb-aaaa-bbbb-aaaaaaaaaaaa",
  "client_secret": "abcdef",
  "key_vault": "https://kmip-akv-keyvault.vault.azure.net/",
  "oauth_host": "login.microsoftonline.com",
  "proxy": {
    "host": "proxy.eng.com",
    "password": "proxypassword",
    "port": 1234,
    "type": "http",
    "username": "proxyuser"
  },
  "tenant_id": "zzzzzzzz-yyyy-zzzz-yyyy-zzzzzzzzzzzz",
  "timeout": 25
},
"ca": "string",
"common_name": "test.domain.com",
"hash_function": "sha1",
"intermediate_certificates": {
},
"private_key": "-----BEGIN PRIVATE KEY-----\nprivate-key\n-----END
PRIVATE KEY-----\n",
"public_certificate": "-----BEGIN CERTIFICATE-----
MIIBuzCCAwwGawIBAgIIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQAwhDENMASGA1UE
AxMEVEVTVDELMAkGA1UEBhMCVVMwHhcNMTgwNjA4MTgwOTAxWhcNMTkwNjA4MTgw
OTAxWjAcMQ0wCwYDVQQDEwRURVNUMQswCQYDVQQGEwJVUzBcMA0GCSqGSIb3DQEB
AQUAA0sAMEgCQQDaPvbqUJJFJ6NNTyK3Yb+ytSjJ9aa3yUmYTD9uMiP+6ycjxHWB
e8u9z6yCHsW03ync+dnhE5c5z8wuDAY0fv15AgMBAAGjgYowgYcwDAYDVR0TBAUw
AwEB/zALBgNVHQ8EBAMCAQYwHQYDVR0OBBYEFMJ7Ev/o/3+YNzYh5XNlqqjnw4zm
MEsGA1UdIwREMEKAFMJ7Ev/o/3+YNzYh5XNlqqjnw4zmoSCKHjAcMQ0wCwYDVQQD
EwRURVNUMQswCQYDVQQGEwJVU4IIFTZBrqZwUUMwDQYJKoZIhvcNAQELBQADQQAv
DovYeyGNknkjGI+TVNX6nDbyzf7zUPqnri0KuvObEeybrbPW45sgsnT5dyeE/32U
9Yr6lklnkbtVBDTmLnrC -----END CERTIFICATE-----",
"scope": "svm",
"serial_number": "string",
"subject_key_identifier":
"26:1F:C5:53:5B:D7:9E:E2:37:74:F4:F4:06:09:03:3D:EB:41:75:D8",
"svm": {
  "_links": {
    "self": {
      "href": "/api/resourcelink"
    }
  }
}

```

```

    },
    "name": "svm1",
    "uuid": "02c9e252-41be-11e9-81d5-00a0986138f7"
  },
  "type": "client",
  "uuid": "string"
}
====

== Error

```

Status: Default, Error

```

[cols=3*,options=header]
|===
|Name
|Type
|Description

|error
|link:#returned_error[returned_error]
a|

|===

.Example error
[%collapsible%closed]
====
[source,json,subs=+macros]
{
  "error": {
    "arguments": {
      "code": "string",
      "message": "string"
    },
    "code": "4",
    "message": "entry doesn't exist",
    "target": "uuid"
  }
}
====

== Definitions

[.api-def-first-level]

```

```

.See Definitions
[%collapsible%closed]
//Start collapsible Definitions block
====
[#href]
[.api-collapsible-fifth-title]
href

[cols=3*,options=header]
|===
|Name
|Type
|Description

|href
|string
a|

|===

[#_links]
[.api-collapsible-fifth-title]
_links

[cols=3*,options=header]
|===
|Name
|Type
|Description

|self
|link:#href[href]
a|

|===

[#proxy]
[.api-collapsible-fifth-title]
proxy

[cols=3*,options=header]
|===
|Name
|Type
|Description

```

```
|host
|string
a|Proxy host.
```

```
|password
|string
a|Proxy password. Password is not audited.
```

```
|port
|integer
a|Proxy port.
```

```
|type
|string
a|Proxy type.
```

```
|username
|string
a|Proxy username.
```

```
|===
```

```
[#azure]
[.api-collapsible-fifth-title]
azure
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
|Type
|Description
```

```
|client_certificate
|string
a|PKCS12 certificate used by the application to prove its identity to AKV.
```

```
|client_id
|string
a|Application client ID of the deployed Azure application with appropriate
```

access to an AKV.

|client_secret

|string

a|Secret used by the application to prove its identity to AKV.

|key_vault

|string

a|URI of the deployed AKV that is used by ONTAP for storing keys.

* example: https://kmip-akv-keyvault.vault.azure.net/

* format: uri

* x-ntap-createOnly: true

* Introduced in: 9.14

* x-nullable: true

|oauth_host

|string

a|Open authorization server host name.

|proxy

|link:#proxy[proxy]

a|

|tenant_id

|string

a|Directory (tenant) ID of the deployed Azure application with appropriate access to an AKV.

|timeout

|integer

a|AKV connection timeout, in seconds. The allowed range is between 0 to 30 seconds.

|verify_host

|boolean

a|Verify the identity of the AKV host name. By default, verify_host is set to true.

|===


```
[#svm]
[.api-collapsible-fifth-title]
svm
```

SVM, applies only to SVM-scoped objects.

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|_links
```

```
|link:#_links[_links]
```

```
a|
```

```
|name
```

```
|string
```

```
a|The name of the SVM. This field cannot be specified in a PATCH method.
```

```
|uuid
```

```
|string
```

```
a|The unique identifier of the SVM. This field cannot be specified in a PATCH method.
```

```
|===
```

```
[#error_arguments]
```

```
[.api-collapsible-fifth-title]
```

```
error_arguments
```

```
[cols=3*,options=header]
```

```
|===
```

```
|Name
```

```
|Type
```

```
|Description
```

```
|code
```

```
|string
```

```
a|Argument code
```

```

|message
|string
a|Message argument

|===

[#returned_error]
[.api-collapsible-fifth-title]
returned_error

[cols=3*,options=header]
|===
|Name
|Type
|Description

|arguments
|array[link:#error_arguments[error_arguments]]
a|Message arguments

|code
|string
a|Error code

|message
|string
a|Error message

|target
|string
a|The target parameter that caused the error.

|===

//end collapsible .Definitions block
=====

```

:leveloffset: -1

:leveloffset: -1

<<<

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