



Sharing Certificates Across Tenants

Avi Technical Reference (v20.1)

Copyright © 2020

Sharing Certificates Across Tenants

[view online](#)

Overview

Starting with Avi Vantage 18.2.5, certificates from the admin tenant can be shared by non-admin tenants when the `shared_ssl_certificates` flag is set to True in the Controller.

Default Behavior

System default certificates can be used by objects in any tenant. For example, these include `System-Default-Cert`, `System-Default-Cert-EC`, `System-Default-Portal-Cert`, `System-Default-Portal-Cert-EC256`, `System-Default-Root-CA`, and `System-Default-Secure-Channel-Cert`, a set of objects that can be expected to expand over time. Objects created in a specific tenant (including the admin tenant) can only be viewed and used in their respective tenant. Certificates are automatically chained, and will only be chained to certificates in the respective tenant.

Shared SSL Certificates

With Avi Vantage release 18.2.5, the `shared_ssl_certificates` has been added to the `ControllerProperties` object. By default, this is set to False. If `shared_ssl_certificates` is set to True, the following behavior applies:

- All certificates from the admin tenant are viewable from non-admin tenants.
- Certificates from the admin tenant can be used in non-admin objects (i.e., virtual services, pools, etc.).
- Application certificates in non-admin tenants will be chained to issuer certificates in the admin tenant.
- Avi Vantage will not chain certificates from the admin tenant to issuer certificates in non-admin tenants. Consequently, if there is an intermediate certificate in the admin tenant, and the corresponding CA certificate is in the non-admin tenant, these objects will not be linked.
- If there are any cross-tenant links (i.e., intermediate certificate in the admin tenant, and application certificate in the non-admin tenant), Avi Vantage will prevent changing the `shared_ssl_certificates` flag.
- For unchained application certificate in a non-admin tenant, and the corresponding intermediate certificate is in the admin tenant, and the user toggles the `shared_ssl_certificates` flag from False to True, the intermediate and application certificates will not be chained. If you want these certificates to be chained, delete and recreate the application certificate.
- You can configure this feature using Avi REST API or CLI. This is currently not supported on Avi UI.

Usage Guidelines

The following guidelines are applicable as the certificates in the admin tenant can be chained to any certificate in the system:

- Toggle the `shared_ssl_certificates` flag to True and create shared intermediate/root certificates in the admin tenant *before* creating application certificates.
- Application certificates should be in the tenant with the corresponding application.
- Although certificate additions or updates in the admin tenant are CPU-intensive, these should have minimal impact, as they are infrequent operations.

CLI Configuration

```
[admin:10-10-28-16]: > configure controller properties
Updating an existing object. Currently, the object is:
```

Field	Value
uuid	global
unresponsive_se_reboot	300 sec
crashed_se_reboot	900 sec
se_offline_del	172000 sec
vs_se_create_fail	1500 sec
vs_se_vnic_fail	300 sec
vs_se_bootup_fail	480 sec
se_vnic_cooldown	120 sec
vs_se_vnic_ip_fail	120 sec
fatal_error_lease_time	120 sec
upgrade_lease_time	360 sec
query_host_fail	180 sec
vnic_op_fail_time	180 sec
dns_refresh_period	60 min
se_create_timeout	900 sec
max_dead_se_in_grp	1
dead_se_detection_timer	360 sec
api_idle_timeout	15 min
allow_unauthenticated_nodes	False
cluster_ip_gratuitous_arp_period	60 min
vs_key_rotate_period	360 min
secure_channel_controller_token_timeout	60 min
secure_channel_se_token_timeout	60 min
max_seq_vnic_failures	3
vs_awaiting_se_timeout	60 sec
vs_apic_scaleout_timeout	360 sec
secure_channel_cleanup_timeout	60 min
attach_ip_retry_interval	360 sec
attach_ip_retry_limit	4
persistence_key_rotate_period	0 min
allow_unauthenticated_apis	False
warmstart_se_reconnect_wait_time	480 sec
vs_se_ping_fail	60 sec
se_failover_attempt_interval	300 sec
max_pcap_per_tenant	4
ssl_certificate_expiry_warning_days[1]	30 days days
ssl_certificate_expiry_warning_days[2]	7 days days
ssl_certificate_expiry_warning_days[3]	1 days days
seupgrade_fabric_pool_size	20
seupgrade_segroup_min_dead_timeout	360 sec
allow_ip_forwarding	False
appviewx_compat_mode	False
upgrade_dns_ttl	5 sec
bm_use_ansible	True
vs_se_attach_ip_fail	600 sec
max_seq_attach_ip_failures	3
cleanup_expired_authtoken_timeout_period	60 min
cleanup_sessions_timeout_period	60 min

```

| consistency_check_timeout_period | 60 min |
| process_locked_useraccounts_timeout_period | 1 min |
| process_pki_profile_timeout_period | 1440 min |
| enable_memory_balancer | True |
| warmstart_vs_resync_wait_time | 300 sec |
| api_perf_logging_threshold | 10000 milliseconds |
| se_from_marketplace | IMAGE |
| cloud_reconcile | True |
| enable_api_sharding | True |
| vs_scaleout_ready_check_interval | 60 sec |
| shared_ssl_certificates | False |
+-----+-----+
[admin:10-10-28-16]: controllerproperties> shared_ssl_certificates
Overwriting the previously entered value for shared_ssl_certificates
[admin:10-10-28-16]: controllerproperties> save
+-----+-----+
| Field | Value |
+-----+-----+
| uuid | global |
| unresponsive_se_reboot | 300 sec |
| crashed_se_reboot | 900 sec |
| se_offline_del | 172000 sec |
| vs_se_create_fail | 1500 sec |
| vs_se_vnic_fail | 300 sec |
| vs_se_bootup_fail | 480 sec |
| se_vnic_cooldown | 120 sec |
| vs_se_vnic_ip_fail | 120 sec |
| fatal_error_release_time | 120 sec |
| upgrade_release_time | 360 sec |
| query_host_fail | 180 sec |
| vnic_op_fail_time | 180 sec |
| dns_refresh_period | 60 min |
| se_create_timeout | 900 sec |
| max_dead_se_in_grp | 1 |
| dead_se_detection_timer | 360 sec |
| api_idle_timeout | 15 min |
| allow_unauthenticated_nodes | False |
| cluster_ip_gratuitous_arp_period | 60 min |
| vs_key_rotate_period | 360 min |
| secure_channel_controller_token_timeout | 60 min |
| secure_channel_se_token_timeout | 60 min |
| max_seq_vnic_failures | 3 |
| vs_awaiting_se_timeout | 60 sec |
| vs_apic_scaleout_timeout | 360 sec |
| secure_channel_cleanup_timeout | 60 min |
| attach_ip_retry_interval | 360 sec |
| attach_ip_retry_limit | 4 |
| persistence_key_rotate_period | 0 min |
| allow_unauthenticated_apis | False |
| warmstart_se_reconnect_wait_time | 480 sec |
| vs_se_ping_fail | 60 sec |

```

se_failover_attempt_interval	300 sec
max_pcap_per_tenant	4
ssl_certificate_expiry_warning_days[1]	30 days days
ssl_certificate_expiry_warning_days[2]	7 days days
ssl_certificate_expiry_warning_days[3]	1 days days
seupgrade_fabric_pool_size	20
seupgrade_seggroup_min_dead_timeout	360 sec
allow_ip_forwarding	False
appviewx_compat_mode	False
upgrade_dns_ttl	5 sec
bm_use_ansible	True
vs_se_attach_ip_fail	600 sec
max_seq_attach_ip_failures	3
cleanup_expired_authtoken_timeout_period	60 min
cleanup_sessions_timeout_period	60 min
consistency_check_timeout_period	60 min
process_locked_useraccounts_timeout_period	1 min
process_pki_profile_timeout_period	1440 min
enable_memory_balancer	True
warmstart_vs_resync_wait_time	300 sec
api_perf_logging_threshold	10000 milliseconds
se_from_marketplace	IMAGE
cloud_reconcile	True
enable_api_sharding	True
vs_scaleout_ready_check_interval	60 sec
shared_ssl_certificates	True

```
+-----+
[admin:10-10-28-16]: > configure sslkeyandcertificate admin-intermediate
```

```
[admin:10-10-28-16]: sslkeyandcertificate> certificate
[admin:10-10-28-16]: sslkeyandcertificate:certificate> certificate --
```

```
-----BEGIN CERTIFICATE-----
MIFZzCCA0+gAwIBAgICEAIwDQYJKoZIhvcNAQELBQAwPzELMAkGA1UEBhMCVVMx
CzAJBgNVBAMkMkNBMQwwCgYDVQQKDANBdmkxFTATBgNVBAMMDEludGVyYVWkaWFO
ZTAeFw0xNzEyMjM0MzVaFw0zNzEyMTUyMzY0MzVAMEkxMzYwNzYwNzYwNzYw
MQswCQYDVQQIDAJDQEMMAoGA1UECgwDQXZpMR8wHQYDVQQDDDBZTYW11LU5hbWUt
SW50ZXJtZWRRYXRlMlMlICljANBgkqhkiG9w0BAQEFAAOCAg8AMIICCgKCAQEAY0kq
S48NgxglKJlhmwMxbSEJnGuz0bfx/fbcVK00QZzOf17K1nrg8CIjLyywEkgzBqf
/b1GwEwNRNvCxAgIP78kCw39chdGzW2jRcjWPV6OrOizrKXHK1hCJ7LnONSeQH1
rGehFSzpLT8g6KY+DCkeVQBvscV4cFJFTL484EoOhgxMuqj0jij3T+Gctqsk5p2Y
VCy71ZEBjvvt3x6/rDNlJU9njJxCvlJyk3T78sTSsW7+xjhCRVsvBAHyUhuGUwC
9o16EcJdOBUVUKIJX8t+qTliGtMED2oV0rUv+2cvHJrhZW24BSVnebW05n32z9Je
oPcHgdRH0ZJN900DV46QP1HTdVe7GvYlFd+UjUFh4oIjwQyYSpO/smBHuffCmtyX
w1jCbmjYM2yKyQe04C/+s8ZO+AFFtqx6srvnElQTXtfxkTWYPSrodDKmxqY81aR9
TFd5wWtApMeFT9DK5dDlneBpqn0gDE+JixlEx+peZM6SDd01arAg3PKZotuzndo0
1c0mqG6Lp5r46x4i5g4kbPHNe1Pfe+2tDCEw9BuYADe0v8PvpHMBGJNXOt+w8CcV
R/muH/KoKys8Y9Ej03MRobl7Xpv4/NO/1KLhHggxlihiUib1GVDguRNjMMYloo+
8FfoSMixPRjXUg03yZA479e4QSNi+5AryxzoXUCAwEAAANjMGEwHQYDVr0OBBYE
FEamhG8kGg3PCElsgH8XYIWO04BXMB8GA1UdIwQYMBaAFeqs0+NaumvRXzkP+sTw
NMNvbr61MA8GA1UdEwEB/wQFMAMBAf8wDgYDVR0PAQH/BAQDAGGMA0GCSqSIB3
DQEBcwUAA4ICAQCvEqKhOIDK0z8XdoHL/vkypGGayBtU171FfwZEiWuIeeLnZDrB
```

```
vzz1T1j91tx6MBWFEbP2FoJYCwaU9YSuOP8mhtmJM4v1MgC3aOgdMa3nKo2Pbs9M
ECMLFB6Jpo7zvVjVxwEz7WXA7/YJgR0g5ft/turJnbbUis0K0FBO/aYzc9gyBvg8I
GTB6GX6DDNuwT5EOjkynt3SqnRrD2piZ0oQ2IIDMaYm/r/DFaMLoU6GRlmj74N0
P3Lefks4JX5C2KKEuM3/6/udM1mNrObjkIACe34icImkdxSXjmKj8Mg4YG8PBRU1
/jlyizB6GokGq2//0BkRMzBLJfUifOVa9mH/C303kA/CvJ42nQyDPLU77nunng3f
T//+/dQYk+OuMTTuVu12Wsef+wW+kEspE8uTo/GH1ZmMRV0T7aPxt8/ASDbhEcQM
Okhbo49AhxuTH1OWS3xKxVIbxJ4P/P0v8c5bb/4D5gdGgBCoXQptiBRtS2suBt1M
g0eCtusMuUgPkWB5o5IU2MPGbHiipZb4up5ZJHYe97rtKduM1cD+0v+w7ZxDrqdD
ebfAJjqaZLKNWEmy5fYt0lWUGDsA8aWUSLN2j/R3BbtXHcClmsZap3CSFzJlhbPz
9tQBVsfx6UJYZR2eAXTpEtEMyous6tKHCRS04/mCPBq+WhoYG39ax85g2Q==
-----END CERTIFICATE-----
```

END

```
[admin:10-10-28-16]: sslkeyandcertificate:certificate> save
[admin:10-10-28-16]: sslkeyandcertificate> save
```

```
+-----+
| Field | Value |
+-----+
| uuid | sslkeyandcertificate-2348ba24-1a56-4e9d-9833-c8c3c1158714 |
| name | admin-intermediate |
| type | SSL_CERTIFICATE_TYPE_CA |
| certificate | |
| version | 2 |
| serial_number | 4098 |
| self_signed | False |
| issuer | |
| common_name | Intermediate |
| organization | Avi |
| state | CA |
| country | US |
| distinguished_name | C=US, ST=CA, O=Avi, CN=Intermediate |
| subject | |
| common_name | Same-Name-Intermediate |
| organization | Avi |
| state | CA |
| country | US |
| distinguished_name | C=US, ST=CA, O=Avi, CN=Same-Name-Intermediate |
| signature_algorithm | sha256WithRSAEncryption |
| not_before | 2017-12-20 23:34:35 |
| not_after | 2037-12-15 23:34:35 |
| fingerprint | SHA1 Fingerprint=CD:96:22:87:B2:58:39:7C:7A:26:4B:3A:18:B2:99:CD:DB:73:B5:79 |
| expiry_status | SSL_CERTIFICATE_GOOD |
| days_until_expire | 365 |
| key_params | |
| algorithm | SSL_KEY_ALGORITHM_RSA |
| rsa_params | |
| key_size | SSL_KEY_4096_BITS |
| exponent | 65537 |
| status | SSL_CERTIFICATE_FINISHED |
| ca_certs[1] | |
| name | Intermediate |
```

```

| format          | SSL_PEM          |
| certificate_base64 | False          |
| key_base64      | False          |
| tenant_ref      | admin          |
+-----+-----+
[admin:10-10-28-16]: > switchto tenant t1
Switching to tenant t1
[t1:10-10-28-16]: > show sslkeyandcertificate
+-----+-----+-----+-----+-----+-----+
| Name              | Issuer           | Subject           | Self | Algorithm |
+-----+-----+-----+-----+-----+-----+
| System-Default-Cert | System Default Cert | System Default Cert | True | -         |
| System-Default-Cert-EC | System Default EC Cert | System Default EC Cert | True | -         |
| System-Default-Portal-Cert | Default Portal Cert | Default Portal Cert | True | -         |
| System-Default-Portal-Cert-EC256 | Default Portal EC Cert | Default Portal EC Cert | True | -         |
| System-Default-Root-CA | ca.local         | ca.local         | True | -         |
| System-Default-Secure-Channel-Cert | ca.local         | node.controller.local | -   | -         |
| admin-intermediate | Intermediate     | Same-Name-Intermediate | -   | -         |
+-----+-----+-----+-----+-----+-----+
[t1:10-10-28-16]: > configure sslkeyandcertificate t1-app

[t1:10-10-28-16]: sslkeyandcertificate> key --
-----BEGIN PRIVATE KEY-----
MIIEVAIBADANBgqhkiG9w0BAQEFAASCBywggSiAgEAAoIBAQC+CGpOcfqXuUv1
sCa1+iYUu7EyrVjObDSdorIbjbu5qXpqL7lScGQq6uhbKKMAGM/JIiI75h0AEHN9
hYa/0v8BndV/AJlZGpK3K5ahuVfrtsNIHk6q0SSw3YtB63/8nhwUiz/ZBgthfCJ/
eroG7RBEh8uOpPhXLJf88o1UOF5FcbRfS5qVXQHMRSKK2I9wFkSSgNMCoGOB7W
X+6aDG0ZAZt9eOqPQNOxw9dEavqOZFqkHTSkyfWYHuw605dmRs2Cz8IZMhhEZvq
LUpe6HMPopxwTzt/5NyW0FJJWlK8lWS46ab/tOIOlBkgNV9wLWMNeKvAEWzYPONS
QDzBohrIagMBAECggEAewNKh5C10WRFqLROGxrtBnQE9ZolWglPclod0c3rc1b2
jXs64nmmO/kGyGAXduIEoA4POMj7OIZUn8FlSvn0U5gUDUHLfuewuCzFRE0D8+x0
0ln06vhD4II59Zl3T7IOAywvdio5p0ZBOVnxFNJRJloizqHIywgGK0Onqj59iBr9
pw/LtThm1mozfUxVYxftSwDr9lC7PTaYDE9prmw8wH1TL6I4skxKRVmagFwY0rtr
ViNhNigPjUB3x1Etv6RuwFeEmfcZMzkLCAoXbglYv6Av5tGJwdCVwDwrp6I/FHz
PwQdFmzRGZJI8QdEcWYI/ewXYevCfDrQIWH+gFVIQKBgQDrCmclzSgQt4xczJ2
ajXAaxnxLSJC/WYOIsIp3L5b/gqs+SUAIJXoVZMinOcygtJs3J4f0Zuy9NkddNn9
JVeMXs7rr7quXKSzX0100acB1NR4SfglRWboOxoiSgrUSx8D/oaJE0JS1j0DtH1
+FVlSECAK2wpM8dFEMf9cAEIeQKBgQDOoRlQzkdnoDVL+gyIXnsA3ArnXDciglxl
tSj0VqCEaGhhjngYHsmiSSaIw9ABlWZkt9maylX9PrLaAceGXPzeBv1K0PcgImZ+
2hYVp00znj4//JOSFe9joruKfaXrTLPvY8N0jYAmip6FJJleq4x8rL8gU/NdlMQf
5diVimhizQKBGc82bAgfnwgpOUJ2nZ3TUXOuQRxxJ3nUbJ6aRonEyDxjash4o
iwimZntIkhE5gRutGrj2ZEzelMePlTZORw1+6h3wDsWt3qkBCrTI4Bh09scV3dRb
zvJcscpByPhAn/kUSXCfzJ0Nk1elXwSD1sMb6I3sqBXkoBYS5mgrwXoRAoGAXJmB
uN7YzS3U9LmYiDyflYFtmYwQB92KwAlxzx5LTUtii0w0M5rWoh3xK7MNwoxiU2D
LYVjx9wjuVPZQPPhntE1Qzwm07YG705bW1TgmjNeflp463PhFmvFVck/BBYzXTyW
SVNojN0ucU1zZeXHTdA0zw4QUG3s/saIq2udoDkCgYBS9FJXyZV/3eWZTV7E8RHO
4ABpujonzZcrxB/pilQJehVABopbMAGE0aGc7gGacu0DKsLNYL8Wkdqgs6WN9Yo
er1GXlJe1gs4CS1ZulInntFgdqC9Rj0sHjx6gCvEgg1lGkB++YrCLj2YuYN7L9JW
wk/YYUmjGLjqcHvBND1OGw==
-----END PRIVATE KEY-----
END

```

```
[t1:10-10-28-16]: sslkeyandcertificate> certificate
[t1:10-10-28-16]: sslkeyandcertificate:certificate> certificate --
-----BEGIN CERTIFICATE-----
MIIFAzCCAaugAwIBAgICEAEwDQYJKoZIhvcNAQELBQAwSTELMAkGA1UEBhMCVVMx
CzAJBgNVBAGMAkNBMQwwCgYDVQQKDANBdmkxHzAdBgNVBAMMF1NhbWUtTmFtZS1J
bnRlcm1lZG1hdGUwHhcNMTcxMjIwMjMzNDU2WbcNMzcMjE1MjMzNDU2WjA3MQsw
CQYDVQQGEwJVUzELMAkGA1UECAwCQ0ExDDAKBgNVBAoMA0F2aTENMASGA1UEAwE
QXBwMTCASAwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAL4Iak5x+rG5S+Ww
JrX6JhS7sTKu8k5sNJ2ishuNu7mpemovuVjwZCrq6FsoowAYz8kiIjvmE4B4c32F
hr/S/wGd1X8ANXmakrcrlqG5V+u2w0geTqrRjLDdi0Hrf/yeHBSLP9kGC2F8In96
ugbtEESHY46k+Fcs1/zyjVQ4XkVxusWxbmq9dAcxFIorYj3AWRJKAOwKg4Y4HtZf
7poMbRkEm3l6hCQ9A07HD10Rq+o5kWqQdNKTJ9bIe7DrTl2ZGzYLPwhkyGERm+ot
S17ocwWinHBPO3/k3JbQUklbUrzVZLjppv+04g4tuSAlX3AtYw14q8ARbNg841JA
PME6GuUCAwEAooCAQUwggEBMAkGA1UdEwQCMAAwEQYJYIZIAAYz4QgEBBAQDAGZA
MDMGCWCGSAGG+EIBDQmFIRPcGVuU1NMIEdlbmVYXRlZCBTZjZ2ZXIgcQ2VydGlm
aWNoZGUwHjYDVDR0BBYEFBFU4BzZ35LC8gZlhXQG6pB9sDxNMGGGA1UdIWRhMF+A
FEamhG8kGg3PCElsgH8XYIWO04BXoUOkQTA/MQswCQYDVQQGEwJVUzELMAkGA1UE
CAwCQ0ExDDAKBgNVBAoMA0F2aTEVMBMGA1UEAwMSW50ZXJtZWZlZWRpYXRlZG1jAO
BgNVHQ8BAf8EBAMCBaAwEwYDVDR01BAwwCgYIKwYBBQUHAwEwDQYJKoZIhvcNAQEL
BQADggIBAAfp7d3STNGOQvPxMb+w9b4MjxXAdcFLCLiowcnh6wRS5/ALiJr+7oAt
5T+SzFxljiZlRf7wk50t48+lKwSJ93oaqow82QAZZFeNvkYecL/HHqW7squC7Su
lmdxQ0DT/fkpedu3koWjUvf90zb/LotdKN9GN4R2KwKY+p/73w1oDMxyqyPiSOH
dCX1fkG1du4HEujg+zVtLE05Wc94zer4+C9g/QwTVkBH1lMOLd9RS1StadYzy8Qs
wulpPEXZbePA7urZGggiYUTYKbW+Ck/EKqt8NxyqvmYBqmfuEnOW1W7XH7ZlZli
dAFefZ5U9we1YlduDT7KUHizBn8Uex1O1TCjn2Xmt+5KhJ8yfNjgbwTyg7G1pHcG
ifl+u/PYTyLrwnf0s09/iw27oacSczDxB/yRe5W6wmhsgL0RryltZvAcIhPR2c5t
xstiAJVZVp+WSqJRbCR+KZYZS7IX3J09gtZy8ZDaEhCGtiE/liin4yxLEP4cgbCd
ctIdYP+3pYFC7Ij4BvT+cHtKFAIQ8gD3pSx+NHjX/cWnhjQIo41jt+ash9YQz+70
hbsp3zDB+Qbnc6j1MuITHQneKkxVPBkvYK7bcqKmkRfjOIpFgtClWd9+YRBriBko
CayuZ7LuJYYgVqnU6waCJaA9eZC/BSNUqqHzBYV49oBÜpyDIWOTW
-----END CERTIFICATE-----
END
[t1:10-10-28-16]: sslkeyandcertificate:certificate> save
[t1:10-10-28-16]: sslkeyandcertificate> save
+-----+
| Field | Value |
+-----+
| uuid | sslkeyandcertificate-9ec6948b-f57c-49ac-b9da-28092a3fd72a |
| name | t1-app |
| type | SSL_CERTIFICATE_TYPE_VIRTUALSERVICE |
| certificate | |
| version | 2 |
| serial_number | 4097 |
| self_signed | False |
| issuer | |
| common_name | Same-Name-Intermediate |
| organization | Avi |
| state | CA |
| country | US |
| distinguished_name | C=US, ST=CA, O=Avi, CN=Same-Name-Intermediate |
| subject | |
+-----+
```



```
| common_name      | App1  
| organization     | Avi  
| state           | CA  
| country         | US  
| distinguished_name | C=US, ST=CA, O=Avi, CN=App1  
| signature_algorithm | sha256WithRSAEncryption  
| not_before      | 2017-12-20 23:34:56  
| not_after       | 2037-12-15 23:34:56  
| fingerprint     | SHA1 Fingerprint=18:B1:FD:DC:AF:F0:62:0C:73:E1:56:FC:75:AE:86:93:2E:56:1E:75  
|  
| expiry_status   | SSL_CERTIFICATE_GOOD  
| days_until_expire | 365  
| key_params      |  
| algorithm       | SSL_KEY_ALGORITHM_RSA  
| rsa_params      |  
| key_size        | SSL_KEY_2048_BITS  
| exponent        | 65537  
| status          | SSL_CERTIFICATE_FINISHED  
| ca_certs[1]     |  
| name            | Same-Name-Intermediate  
| ca_ref          | admin-intermediate  
| ca_certs[2]     |  
| name            | Intermediate  
| format          | SSL_PEM  
| certificate_base64 | False  
| key_base64      | False  
| tenant_ref      | t1  
+-----+  
[t1:10-10-28-16]: >
```