



Configure Secure Storage

Secure Storage feature allows you to secure critical configuration information by encrypting it. It encrypts VPN, IPSec, and other asymmetric key-pairs, pre-shared secrets, the type 6 password encryption key and certain credentials. An instance-unique encryption key is stored in the hardware trust anchor to prevent it from being compromised.

By default, this feature is enabled on platforms that come with a hardware trust anchor. This feature is not supported on platforms that do not have hardware trust anchor.

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Enable Secure Storage

Before you begin

By default, this feature is enabled on a platform. Use this procedure on a platform where it is disabled.

Procedure

Step 1 Config terminal

Example:

```
router#config terminal
```

Enters the configuration mode.

Step 2 service private-config-encryption

Example:

```
router(config)# service private-config-encryption
```

Enables the Secure Storage feature on your platform.

Step 3 do write memory

Example:

```
router(config)# do write memory
```

Encrypts the private-config file and saves the file in an encrypted format.

Example

This example shows how to enable Secure Storage:

```
router#config terminal
router(config)# service private-config-encryption
router(config)# do write memory
```

Disable Secure Storage

Before you begin

To disable Secure Storage feature on a platform, perform this task:

Procedure

Step 1 Config terminal

Example:

```
router#config terminal
```

Enters the configuration mode.

Step 2 no service private-config-encryption

Example:

```
router(config)# no service private-config-encryption
```

Disables the Secure Storage feature on your platform.

Step 3 do write memory

Example:

```
router(config)# do write memory
```

Decrypts the private-config file and saves the file in plane format.

Example

This example shows how to disable Secure Storage:

```
router#config terminal
router(config)# no service private-config-encryption
router(config)# do write memory
```

Verify the status of encryption

Use the **show parser encrypt file status** command to verify the status of encryption. This command output indicates that the feature is available but the file is not encrypted. The file is in 'plain text' format.

```
router#show parser encrypt file status
Feature: Enabled
File Format: Plain Text
Encryption Version: Ver1
```

This command output indicates that the feature is enabled and the file is encrypted. The file is in 'cipher text' format.

```
router#show parser encrypt file status
Feature: Enabled
File Format: Cipher Text
Encryption Version: Ver1
```

Verify the platform identity

Use the **show platform sudi certificate** command to display the SUDI certificate in standard PEM format. The command output helps you verify the platform identity.

In the command output, the first certificate is the Cisco Root CA 2048 and the second is the Cisco subordinate CA (ACT2 SUDI CA). The third is the SUDI certificate.

```
router#show platform sudi certificate sign nonce 123
-----BEGIN CERTIFICATE-----
MIIDQzCCAiuGAWIBAgIQX/h7KctU3I1CoxW1aMmt/zANBgkqhkiG9w0BAQUFADA1
MRYwFAYDVQQKEw1DaXNjbyBTeXN0ZW1zMRSwGQYDVQQDExJDAXNjbyBSb290IENB
ID1wNDgwHhcNMjQwNTU0MjAxNzEyWhcNMjkwNTU0MjAxNTQyWjA1MRYwFAYDVQQK
Ew1DaXNjbyBTeXN0ZW1zMRSwGQYDVQQDExJDAXNjbyBSb290IENBID1wNDgwGgEg
MA0GCSqGSIb3DQEBAQUAA4IBDQAwggEIAoIBAQCWmrmp68Kd6f1cBa0ZmKUEIhH
xmJVhEAYv8CrLqUccda8bnuoqrpu0hWISewdovyD0My5jOAmAHBKeN8hF570YQXJ
FcjPftolYYmUQ6iEqDGYeJu5Tm8sUxJsZr2tKyS7McQr/4NEb7Y9JHcJ6r8qqB9q
VvYgDxFU14FlpyXOWWqCZe+36ufijXWLBvLdT6ZeYpzPEApk0E5tzivMW/VgpSdH
jWn0f84bcN5wGyDWbs2mAag8EtKpP6BrXruOIit6keOlaO6g58QBdKhTCytKmg9l
Eg6CTY5j/e/rmxrbU6YTYK/CfdfHbBcl1HP7R2RQgYCUTOG/rksc35LtLgXfAgED
olEwTzALBgNVHQ8EBAMCAYYwDwYDVR0TAQH/BAUwAwEB/zAdBgNVHQ4EFgQUUJ/PI
FRSumgIJFq0roIlgX9p7L6owEAYJKwYBBAGCNxUBBAMCAQAwDQYJKoZIhvcNAQEF
BQADggEBAJ2dhISjQa18dwy3U8pORFbi71R803UXHOjgxxkhLtv5MOhmBvrbW7hmW
Yqpao2TB9k5UM8Z3/sUcuuVdJcr18JOagxEu5sv4dEX+5wW4q+ffY0vhn4TauYuX
cB7w4ovXsNgOnbFpl1qRe6lJT37mjpXYgyC8lWhJdTSd9i7rp77rMKSsH0T8lasz
Bvt9YArEtIpjsJyp8qS5UwGH0GikJ3+r/+n6yUA4iGe0OcaEb1fJU9u6ju7AQ7L4
CYNu/2bPPu8Xs1gYJQk0XuPL1hS27PKSb3TkL4Eq1ZKR4OCXPDJoBYVL0fdX4lId
kxpUnwVwEpxYB5DC2Ae/qPogRnhCzU=
-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
MIIEPDCCAYsGAWIBAgIKYQlufQAAAAAADANBgkqhkiG9w0BAQUFADA1MRYwFAYD
VQQKEw1DaXNjbyBTeXN0ZW1zMRSwGQYDVQQDExJDAXNjbyBSb290IENBID1wNDgw
HhcNMTEwNjMwMjU0MjU3WhcNMjkwNTU0MjAxNTQyWjAnMQ4wDAYDVQQKEwVDAxNj
bzEVMBMGA1UEAxMMQUNUMiBTvURJ1ENBIMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8A
```

Verify the platform identity

```

MIIBCgKCAQEAA0m5l3THixA9tN/hS5qR/6UZRpdd+9aE2JbFkNjht6gfHKd477AkS
5XAtUs5oxDYVt/zEbslZq3+LR6grqKQVu6JYvH05UYLBqCj38s76NLk53905Wzp
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88gVhm6aAgkWrSugiWBf2nsvqjBDBGNVHR8EPDA6MDigNqA0hjJodHRwOi8vd3d3
LmNpc2NvLmNvbS9zZW50cm9wa2kvY3JsL2NyY2EyMDQ4LmNybDBQBggrBgEF
BQcBAQREMEIwQAYIKwYBBQUHMAKGNh0dHA6Ly93d3cuY2l2Y28uY29tL3NlY3Vy
aXR5L3BraS9jZXJ0cy9jcmNhMjA0OC5jZXIwXAYDVR0gBFUwUzBRBgorBgEEAQkV
AQwAMEMwQQYIKwYBBQUHAgEWNWh0dHA6Ly93d3cuY2l2Y28uY29tL3NlY3VyYXR5
L3BraS9wb2xpy2llcy9pbmRlcC5odGlsMBIGA1UdEwEwB/wQIMAYBAf8CAQAwDQYJ
KoZIHvcNAQEFBQAggEBAGh1qclr9tx4hzWgDERm37lyeuEmqcIfi9b9+GbMSJbi
ZHc/CcC10lJu0a9zTXA9w47H9/t6leduGxb4WeLxcwCiUgvFtCa51Iklt8nNbcKY
/4dwlex+7amATUQ04QggIE67wVIPu6bgAE3Ja/nRS3xKYSnj8H5TehimBSv6TECi
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hyl47d7cZR4DY4LIuFM2PlAs8YyjoNpK/urSRI4WdIlplR1nH7KND15618yfvP
0IFJZBGrooCRBjOSwFv8cpWCbmWdPaCQT2nwIjTfY8c=
-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
MIIDhzCCAm+gAwIBAgIEAJT3DDANBgkqhkiG9w0BAQsFADANMQ4wDAYDVQQKEwVD
aXNjb2EVMBMGA1UEAxMMQUNUMiBTvURJIEBMB4XDTE1MTE5NDA5MzMzN1oXDTI1
MTE5NDA5MzMzN1owczEsMCcGA1UEBRMjUElEOldTLUMzNjUwLTEyWDQ4VVEgU046
RkRPMtK0NkJHMDUXDjAMBGNVBAoTBUNpc2NvMRgwFgYDVQQLEw9BQ1QtMiBMaXRl
IFNVREkxGTAXBGNVBAMTEFdTLUMzNjUwLTEyWDQ4VVEwggeiMA0GCSqGSIb3DQEB
AQUAA4IBDwAwggEKAoIBAQC6SARWYImWrRV/x7XQogAE+02WmzKki+4arMBVb19o
GgvJfkoJDDaHOROSUKEE3qXtd8N3lfKy3TZ+jtHD85m2aGz6+IRx/e/lLsQzi6d1
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DwEB/wQEAwIF4DAMBgNVHRMBAf8EAJAAME0GA1UdEQRGMEsgQgYJKwYBBAEJFQID
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U0EwS0NnPTANBgkqhkiG9w0BAQsFAAOCAQEADjtm8vdlf+p1WKSXK1ClqQ4aEnD5
p8T5e4iTer7Y1fbCrHIEEm3mnip+568j299z0H8V7PDp1l1juLHyMFTC+945F9RfA
eAuVWVb5A9dnGL8MssBJe2lVSnzWrWkTlEIdxLYrTiPAQHtl16CN77S4u/f7loYE
tzPE5AGfyGw7rolMEPVGffaqmYUDAwKFNBHluI7c2S1qlwk4WWZ6xxci+1haQnIG
pWzapaiAYL1XrcBz4KwFc1Z2pQT6hHw24jzYaYimvCo+/kSKuA9xNdtSu18ycox0
zKnXQ17s6aChMMt7Y8Nh4iz9BDejoOF6/b3sM0wRi+2/4j+6/GhcMRs0Og==
-----END CERTIFICATE
Signature version: 1
Signature:
405C70D802B73947EDBF8D0D2C8180F10D4B3EF9694514219C579D2ED52F7D583E0F40813FC4E9F549B2EB1C21725F7C
B1C79F98271E47E780E703E67472380FB52D4963E1D1FB9787B38E28B8E696570A180B7A2F131B1F174EA79F5DB4765DF67386126D8
9E07EDF6C26E0A81272EA1437D03F2692937082756AE1F1BFAFBFACD6BE9CF9C84C961FACE9FA0FE64D85AE4FA086969D0702C536ABD
B8FBFDC47C14C17D02FEBF4F7F5B24D2932FA876F56B4C07816270A0B4195C53D975C85AEAE3A74F2DBF293F52423ECB7B853967080A
9C57DA3E4B08B2B2CA623B2CBAF7080A0AEB09B2E5B756970A3A27E0F1D17C8A243

```