



Kerberos Authentication with CA SSO Using Linux Policy Server

Document Version / Date: v1.0 / 12/01/2016

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1 OVERVIEW

This document has been created to provide a reference based on my experience, challenges faced during configuration. It is still recommended that this document compliment the official product documentation.

2 ENVIRONMENT DETAILS

```
Policy Server = SSO 12.6 running on RHEL 7
Policy & User Store = CA Directory 12.0.18
KDC = Win2012 / AD2012
Web Server = Apache 2.4 64bit on Win2012 (same host as KDC)
Agent = 12.52 QMR01, Update HF-05, Label 2112
```

3 GENERAL INFO

Server	Name
Active Directory Domain	DEMO (This is an AD domain, not a web domain)
Kerberos Realm	DEMO.COM
KDC (Active Directory Controller)	win2012.demo.com
Policy Server	sso.demo.com
Policy Server service principal name	smps/sso.demo.com@DEMO.COM
Web server hosting HTTP service	win2012.demo.com
Web Agent service principal name	HTTP/win2012.demo.com@DEMO.COM
Account Description	AD Account Names

User Test Account	smadmin
Policy Server Service Account	krbsvc-smps
Web Agent Service Account	krbsvc-smwa

4 PERFORM ON WINDOWS AD KDC SERVER

Created 2 service account **krbsvc-smwa** & **krbsvc-smps** in AD.

Set Accounts to never expire passwords.

SSO Policy Server Service Account Properties

Organization Member Of Dial-in Environment Sessions
Remote control Remote Desktop Services Profile COM+
General Address Account Profile Telephones Delegation

User logon name:
smps/sso.demo.com @demo.com

User logon name (pre-Windows 2000):
DEMO\krbsvc-smps

Logon Hours... Log On To...

☐ Unlock account

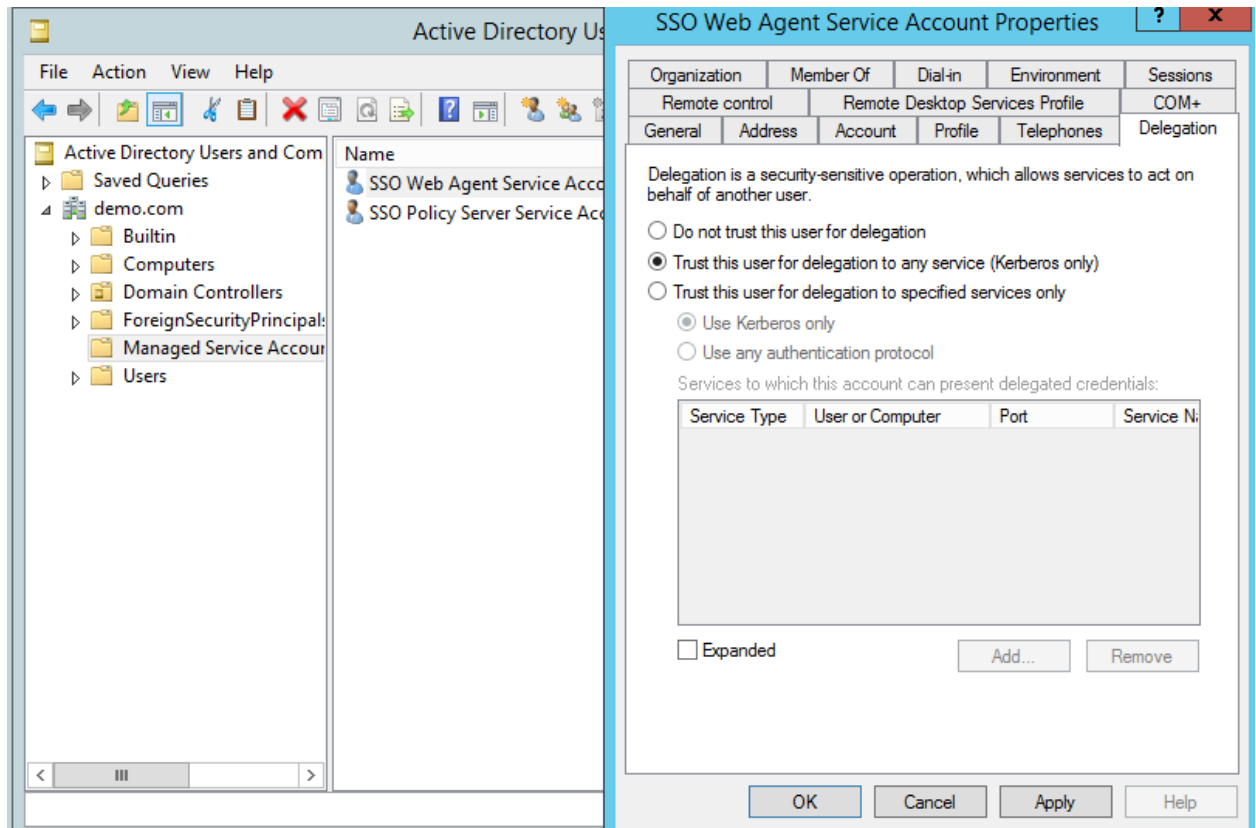
Account options:

☐ User must change password at next logon
☐ User cannot change password
☒ Password never expires
☐ Store password using reversible encryption

Account expires
☒ Never
☐ End of: Wednesday, January 4, 2017

OK Cancel Apply Help

Enabled Delegation on krbsvc-smwa



Generated keytab file for Apache web server hosting protected resource by running below command.

```
ktpass -out c:\krbsvc-smwa.keytab -princ HTTP/win2012.demo.com@DEMO.COM -ptype KRB5_NT_PRINCIPAL -mapuser DEMO\krbsvc-smwa -pass *
```

Enter password at prompt and confirm.

Output generated:

```
C:\Users\Administrator>ktpass -out c:\krbsvc-smwa.keytab -princ HTTP/win2012.dem
o.com@DEMO.COM -ptype KRB5_NT_PRINCIPAL -mapuser DEMO\krbsvc-smwa -pass *
Targeting domain controller: Win2012.demo.com
Using legacy password setting method
Successfully mapped HTTP/win2012.demo.com to krbsvc-smwa.
Type the password for HTTP/win2012.demo.com:
Type the password again to confirm:
Key created.
Output keytab to c:\krbsvc-smwa.keytab:
Keytab version: 0x502
keysize 65 HTTP/win2012.demo.com@DEMO.COM ptype 1 (KRB5_NT_PRINCIPAL) vno 3
etyp
e 0x17 (RC4-HMAC) keylength 16 (0x87dcb3ed87d5ba8ccd051a630e39863d)
```

Generate keytab file for policy server host by running the below command.

```
ktpass -out c:\krbsvc-smps.keytab -princ smps/sso.demo.com@DEMO.COM -ptype KRB5_NT_PRINCIPAL -mapuser DEMO\krbsvc-smps -pass *
```

Enter password at prompt and confirm.

Output generated

```
C:\Users\Administrator>ktpass -out c:\krbsvc-smps.keytab -princ smps/sso.demo.com@DEMO.COM -ptype KRB5_NT_PRINCIPAL -mapuser DEMO\krbsvc-smps -pass *
Targeting domain controller: Win2012.demo.com
Using legacy password setting method
Successfully mapped smps/sso.demo.com to krbsvc-smps.
Type the password for smps/sso.demo.com:
Type the password again to confirm:
Key created.
Output keytab to c:\krbsvc-smps.keytab:
Keytab version: 0x502
keysize 61 smps/sso.demo.com@DEMO.COM ptype 1 (KRB5_NT_PRINCIPAL) vno 4 etype 0x17 (RC4-HMAC) keylength 16 (0x87dcb3ed87d5ba8ccd051a630e39863d)
```

SSO Policy Server Service Account Properties

Organization	Member Of	Dial-in	Environment	Sessions
Remote control	Remote Desktop Services Profile	COM+		
General	Address	Account	Profile	Telephones
Delegation				

User login name: smps/sso.demo.com @demo.com

User login name (pre-Windows 2000): DEMO\krbsvc-smps

Logon Hours... Log On To...

☐ Unlock account

Account options:

- ☐ User must change password at next logon
- ☐ User cannot change password
- ☒ Password never expires
- ☐ Store password using reversible encryption

Account expires:

☒ Never

☐ End of: Friday, December 30, 2016

OK Cancel Apply Help

Copy krbsvc-smps.keytab to the linux policy server host (sso.demo.com) to /home/smsuser
 Copy krbsvc-smwa.keytab to the local windows host running Apache (win2012.demo.com) in
 C:\WINDOWS
 Create c:\windows\krb5.ini using the following:

```
[libdefaults]
default_realm = DEMO.COM
default_keytab_name = C:\WINDOWS\krbsvc-smwa.keytab
default_tkt_enctypes = rc4-hmac
default_tgs_enctypes = rc4-hmac
[realms]
DEMO.COM = {
kdc = win2012.demo.com:88
}
```

5 APACHE WEBSERVER – RUNS ON WINDOWS KDC SERVER

WebAgent changes

Filter ☐ All ☐ Active Parameters ☐ Inactive Parameters

Name	Value
KCCExt	.kcc

Add .kcc to IgnoreExt ACO parameter.

IgnoreExt	.class,.gif,.jpg,.jpeg,.png,.fcc,.scc,.sfcc,.ccc,.ntc,.kcc
-----------	--

[Agent Configuration Objects](#) • [Modify Agent Configuration: Apache_Win2012_ACO](#)

• = Required

General

• Name Description

Parameters

Filter ☐ All ☒ Active Parameters ☐ Inactive Parameters

Name	Value
HttpServicePrincipal	HTTP/win2012.demo.com@DEMO.COM
SmgsServicePrincipal	smgs@sso.demo.com

6 PERFORM ON POLICY SERVER LINUX HOST

Added Environment variable to smuser's profile (.bash_profile)

```
export KRB5_CONFIG="${HOME}/krb5.conf"
```

Source it by running command “. /home/smuser/.bash_profile”

Create **/home/smuser/krb5.conf** file like shown below.

```
[libdefaults]
default_keytab_name = /home/smuser/krbsvc-smgs.keytab
default_tkt_enctypes = rc4-hmac
default_tgs_enctypes = rc4-hmac
```

Create Kerberos Auth Scheme

☒ Use Relative Target

• Server Name:

Port:

☐ Use SSL Connection

• Target:

• Principal Name

• User DN Lookup

Kerberos Realms to Windows Domain Mappings

Realm Name	Domain Name
Add New Mapping	

Advanced

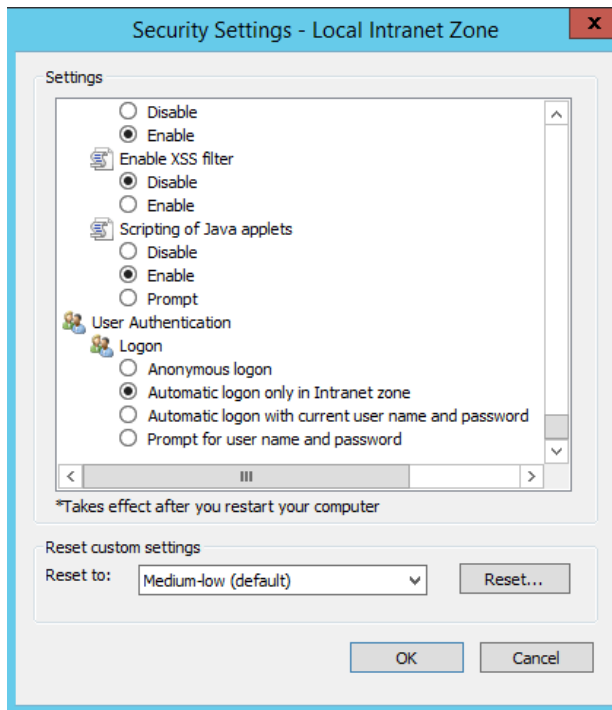
Library

Parameter

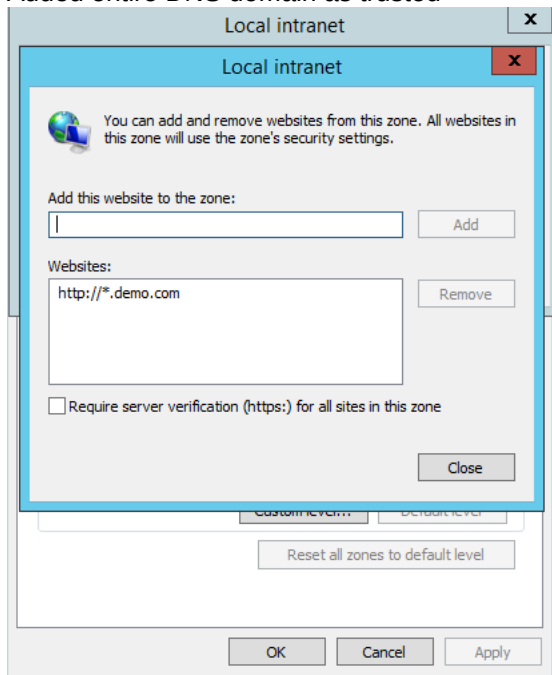
☐ Enable this scheme for CA Single Sign-On Administrators

7 WEB BROWSER – RUNNING ON KDC

Note: During testing IE11 and FireFox would timeout and abort connection during Kerberos ticket negotiation. It was found that there seems to be an issue with running the web browser on the same machine as the Windows KDC. I performed my web client testing using “curl” as shown further below. Based on experience I also recommend not using a web server running on the KDC for a LAB/POC environment as performing packet traces is almost impossible.



Added entire DNS domain as trusted



8 CLIENT TESTING – CURL

Running curl before requesting / storing the Kerberos authorization ticket.
This verifies resource is protected and proper .kcc url redirection occurs.

```
[smuser@sso log]$ curl --verbose --silent --location http://win2012.demo.com
* Rebuilt URL to: http://win2012.demo.com/
```

```
* Trying 192.168.98.132...
* Connected to win2012.demo.com (192.168.98.132) port 80 (#0)
> GET / HTTP/1.1
> Host: win2012.demo.com
> User-Agent: curl/7.29.0
> Accept: */*
>
< HTTP/1.1 302 Found
< Date: Wed, 30 Nov 2016 22:34:24 GMT
< Server: Apache/2.4.23 (Win64)
< Cache-Control: no-store
<
Location:
/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsG5IBP8zVSww5bsd3Ntr4tMiJRFcRov0W643BdeZu61s
KkKMgJS2kp4HMKYOP&TARGET=-SM-http%3a%2f%2fwin2012%2edemo%2ecom%2f
< Content-Length: 353
< Content-Type: text/html; charset=iso-8859-1
<
* Ignoring the response-body
* Connection #0 to host win2012.demo.com left intact
*
Issue another request to this URL:
'http://win2012.demo.com/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsG5IBP8zVSww5bsd3Ntr4tMiJ
RFcRov0W643BdeZu61sKkKMgJS2kp4HMKYOP&TARGET=-SM-http%3a%2f%2fwin2012%2edemo%2ecom%2f'
* Found bundle for host win2012.demo.com: 0x6946d0 [can pipeline]
* Re-using existing connection! (#0) with host win2012.demo.com
* Connected to win2012.demo.com (192.168.98.132) port 80 (#0)
>
GET
/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsG5IBP8zVSww5bsd3Ntr4tMiJRFcRov0W643BdeZu61s
KkKMgJS2kp4HMKYOP&TARGET=-SM-http%3a%2f%2fwin2012%2edemo%2ecom%2f HTTP/1.1
> Host: win2012.demo.com
> User-Agent: curl/7.29.0
> Accept: */*
>
< HTTP/1.1 401 Unauthorized
< Date: Wed, 30 Nov 2016 22:34:24 GMT
< Server: Apache/2.4.23 (Win64)
< WWW-authenticate: Negotiate
< Content-Length: 31
< Content-Type: text/html; charset=iso-8859-1
<
* Connection #0 to host win2012.demo.com left intact
Negotiated Credentials Required[smsuser@sso log]$
```

Install Kerberos client tools on linux host by running the following command.

```
yum install krb5-workstation.x86_64
```

Run the below command to clear any previous authorization tickets cached.

```
kdestroy
```

Run command to retrieve initial ticket-granting ticket for user principal. In the example “smadmin” is a user stored in Active Directory.

```
kinit -f smadmin
```

Run command to list the Kerberos principal and Kerberos tickets held in a credentials cache.

```
klist
```

Run curl command below to validate Kerberos authentication is successful, store the SMSESSION and successfully access protected resource.

```
curl --verbose --silent --location --user ':' --negotiate --cookie-jar cookies.txt --delegation always
http://win2012.demo.com
```

```
* About to connect() to win2012.demo.com port 80 (#0)
* Trying 192.168.98.132...
* Connected to win2012.demo.com (192.168.98.132) port 80 (#0)
> GET / HTTP/1.1
> User-Agent: curl/7.29.0
> Host: win2012.demo.com
> Accept: */*
```

```
>
< HTTP/1.1 302 Found
< Date: Thu, 01 Dec 2016 21:27:14 GMT
< Server: Apache/2.4.23 (Win64)
< Cache-Control: no-store
<
Location:
/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsg5lBP8zVSww5bsd3Ntr4tMiJRFcRov0W643B
deZu61sKkKMGjS2kp4HMKYOP&TARGET=-SM-http%3a%2f%2fwin2012%2edemo%2ecom%2f
< Content-Length: 353
< Content-Type: text/html; charset=iso-8859-1
<
* Ignoring the response-body
* Connection #0 to host win2012.demo.com left intact
*
*      Issue          another      request      to      this      URL:
'http://win2012.demo.com/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsg5lBP8zVSww5bsd3
Ntr4tMiJRFcRov0W643BdeZu61sKkKMGjS2kp4HMKYOP&TARGET=-SM-
http%3a%2f%2fwin2012%2edemo%2ecom%2f'
* Found bundle for host win2012.demo.com: 0x1d62e70
* Re-using existing connection! (#0) with host win2012.demo.com
* Connected to win2012.demo.com (192.168.98.132) port 80 (#0)
>
GET
/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsg5lBP8zVSww5bsd3Ntr4tMiJRFcRov0W643B
deZu61sKkKMGjS2kp4HMKYOP&TARGET=-SM-http%3a%2f%2fwin2012%2edemo%2ecom%2f HTTP/1.1
> User-Agent: curl/7.29.0
> Host: win2012.demo.com
> Accept: */*
>
< HTTP/1.1 401 Unauthorized
< Date: Thu, 01 Dec 2016 21:27:14 GMT
< Server: Apache/2.4.23 (Win64)
< WWW-authenticate: Negotiate
< Content-Length: 31
< Content-Type: text/html; charset=iso-8859-1
<
* Ignoring the response-body
* Connection #0 to host win2012.demo.com left intact
*
*      Issue          another      request      to      this      URL:
'http://win2012.demo.com/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsg5lBP8zVSww5bsd3
Ntr4tMiJRFcRov0W643BdeZu61sKkKMGjS2kp4HMKYOP&TARGET=-SM-
http%3a%2f%2fwin2012%2edemo%2ecom%2f'
* Found bundle for host win2012.demo.com: 0x1d62e70
* Re-using existing connection! (#0) with host win2012.demo.com
* Connected to win2012.demo.com (192.168.98.132) port 80 (#0)
* Server auth using GSS-Negotiate with user "
>
GET
/siteminderagent/Kerberos/creds.kcc?&SMAGENTNAME=jXRsg5lBP8zVSww5bsd3Ntr4tMiJRFcRov0W643B
deZu61sKkKMGjS2kp4HMKYOP&TARGET=-SM-http%3a%2f%2fwin2012%2edemo%2ecom%2f HTTP/1.1
>
Authorization: Negotiate
YIIKgwYJKoZlHvcSAQICAQBuggpyMIIKbqADAgEFoQMCAQ6iBwMFACAAAACjggRAYYIEPDCCBDigAwIBBa
EKGwhERU1PLkNPTalJmCGgAwIBA6EaMBgbBEHUVFABEHdpbjlwMTIuZGVtby5jb22jggP+ MIID+ qADAgEXo
QMCAQOigGPsBIID6GjvvWJSCS9UwXQckANHEYu7uiEMa0GKpGMmL1x1H9zopLvMacX6FiEom3jbZxRXOrF/
QsUWJ4MjXJu5HO/JnF76bxvoZWVuDF+ 0QqVkb2QIRfuWyHDcErXJg/M9CNjJ47dYU0u/nINm6rVj1eflCLsVj9y
B7aFDo5HEsQ/OxCZHNxVpi/HFoiwMmRpLE4PW3NFMBC+ jRnt5oGR0YRvt/870KMsCXZjj59q+ KKADjfkIM9I
UDqlXuoRACdztMmUwL/dnlEhsmfdC2vU9Xo7x8KtqrraRGoSJs0WaFecw0py/Ihly+ G4P/9KI+ EZ1GmnjMKRVR
WTRPi6NfkQBQGTmaWXYdQMfkd5NXOmThZc6q0eYT2N3N9ir0tUaBPXEZtWfxtzDC4FWJ6yQZKromSweVo
sqIXd39tQI4NiHoZ+ vTzsAs5uF5F7gF7RC21UqTNHpyVII1m0ZhT6MzgGl8rmSMHUlj25bPBjky2umw8tBIBsA
mcqYsoF0pHiX8SLy6GFQSV1NQb94166Vlv9nCsfp2YSt0gv/qCsQlykcak6ob9X5Bq2YMMI+ k4r1EX8qUru/MZi
83TSV7AWunjNRJVpoMctHr+ QG6xiYmXdSnDQsrJfzszEM5O7BXuA5at8pF8d2U6EtyntfG4pUWB0rdhAUA
NGI8BcO4H3mNHZwPvhicTQ2HXsIVN7MW/hPNyZNwSpzTzZdAc/Vom6n21WpD8DBWz5zYH7hvJekNV758/
wkyi42uJYwAlIBsOcEKUxjIB4tLA3mX5E/eebn6kbiVZFFWpuYRZj+ D4J7Yi9fkUH9NQJi7rkJnWzovcJXVgVpBLj
epakucBILWCZ/ulZFhBR/gOpFFcJsMy6lTCb+ 5GelkZBtl+ wVukeKqQm2xeHLIBscsqGP+ NDKYq66uMakaWX
8u+ olEukkavZXrx+ TVtjH6I1VcB5ehTPzyy7IROW8mAEOsHla6e6wa8pQFjx00whwZWZ9PrmATspCBFLRphW
```

```
UzM1oHBldT8hybuSnByzKpVFJwFinrL9+ XPgaXq9+ kIARubZToNaAj/36mv3xe8a3mfAhvu1qZX0flmg/91N2A
TExE3m7LR2oCv+ vWS0TMWgyF6MYHs6CD1STf8vfBEzhLcxzKhPJHSDbX4cVEdiubrgF2U+ c/BEo/at5BK0+
XLyoMhgXeld2ljsdxLyToeuTlnE/hlBa9OnhREoYxDt+ qCilSfg5MITA3b0GRj/HEuZ3uJRMehPfjxFOVPwSPqU2
noEbJJCeFcL2pp41315nPdGdNf2myMtZSdhi1XF9xkBJpPdVKwtbobC02ge9rr4JzPWwRhW64PakggYTMIGD6A
DAgEXooIGBgSCBgIAOECJRE0504jGHEOhNsqtYUBcljP+ uW98ntNwbFHRZOJ7VAI6Zxd3rUfYX8qm3if6keji2
7+ oWJrcy8ryTTKdA9nKa9TILokATPqrgU2SCEo//d05aR6+ TGhv4P1UDyRU2cChPPITa7A0KQB2zHj3bBzqv
q9Ln3+ zZB7cnMqJowyJ+ w7UHQtnrNxUL2qoAAWUvoqM7AXPo+ ajfgKYzIWm/tvBC2mliaqsy137RqAadQK
Eqg3J5kjFxFjzz8/BailCwJCgFXekVb5yNU/fz6ES3uu2VLZFikOG1+ TYWvVkhvIw3KRtZ5uf2Rlh5lGoE9rxoiWn
WQLKQAuHB97N7K4iLMj+ ahs2P6Y06FsTs5CbFK7FtKYR4vjf9L8P0WhBuliflr51C/uEsP5h/bOSs24w9jzdrIH
4og4hnpztYr/rzzyRpm4so10U2AVU8ZvCeEmeZzevdluLQNa4gS2eD38Rdt4D+ 27sezUx2bYOfIT3MnOpD0shRl
70li90siR1WKOLYPyRekOwEOG34zvrIJ5SwaD1b+ J3hZSyJMIEwDqBI1S0uvE5oonXhbsZ6y3FhiQyXM+ sQV5
g6AkTccsW2DweOCuL4GkTzyKtfw8ZWLnTzsyU5Krtk9XeU27zc56JbGnexYE+ xzpbe3mezBt+ auJBC/d11
oY9llgr8ijYw7APXU5Vm+ wAt1OM6jMhNEH5iT5oRiY9xLcs6y666q7B8E1LxZjd55gaVTL3SiPE1ta0oAKo8xj+
y11aa6u3dXYMGbDli27B5KMVnvFbzXJIXxVPHNxyOlhvK8DGQNFbVedUIRB+ Pb58P2NTzKxeXi6kZ39mX1f2r
vxtv3/N/RfJnuLxLjyVdeMxdSw1fXU4roT6jOPVhzwmsdnkcOf7DjZV7MhxluMXUy16NIZ48HQNGUqNw/ns9O
EleOjv1HZMsZ9cB0/S5g8MFvWxHOpX+ th8IPi5KV6L1n27KuxmerT6FRUCPKZFyfMsokOw1FQ/8cxpA2PJIQh
lnZfb0Smf0BMBVI3i43+ pQWBJL+ TeVPwvtR+ bCksPpVdIAOf2TKOiQJDRSCXGAggJrKpXGD9DGisQXbmbBFs
1OeXKE4QUCEyxZSiJloVH3809Ks84r771+ VG5WWTYg6BtUsVEsWxYvk8+ 1ioz/2lhWEYzcnITg5PJ5eVrGXJ
hEP7P8SiAKrj0XTCNT9kRmt0R20oJvwkQBmms1B1CX9y4Ve3keTuIwWsrzVl0vRor14pwh5ml4XlhrWRLozPp
qwU8JqintxkVqeQKjZMEuslnujNCgK/qmwePhvk9WgJHywDH+ uJfqxYxCsP5G130YEAac81jklq68KEvVBB7Wv
GrgUXldRIwcEA4Y6NPpFp4rHrwxDR3SLYjs4kBzz6xT033YuNK13laW0/zgJntGiOvu/3hgpJL+ y/qvvW0Di3kFZ
PpgMg4NHgBgZREMqjmHXpIq2hfRAuQSIpEasLv2CHFFRsd1ct2LMLej4m119vhmNIBYNLqYdX50uUntCdYvek
rOa6D7ikXUynjN3nKVjGfYN28IV5/xNaw/OflaKf5NmbSc45TvyXc8dolBmZz9zKzsKSpb92o3eLV9/4aRv9jGwY
o8ttmN+ OR1pKbipxCzJHCi8LW/k8xaOALwfPG44eXz5gThfNYoujmeLhThYzldD03ipVO+ KOxAgIS40XPhEJM
XyO5pJvCfHP75liHgH7VuLctM13/X2wHMIPTpM3SdndgPmJkrFI+ G75dbzmpGMtttLwVu9nsfyCM8EgxBSckC
6wABissJtbvhkbMzdOCuP4NzRZvZqVpgdxcFusL5P4oSdrihA4yLzWCLh5y00D9QXlkq7n0tWCWMFUiCC2mfc1
TKf+ YLK9uQ4YlpNBLu3AcRsDDg8AHlvy/2RqJu6SZEU32xQ/XWjM6pupoTxbeomG4J6hMck7SA6sSYovin19E
CPt8jcAod6/dWkKb3lINyHKJSilmnSlqpls8+ s+ oC3tqNj4VOzliVwTMuukDw4IXXUn9tSbssGiK5RMEUvnpNDs
wXjwQ==
```

> User-Agent: curl/7.29.0

> Host: win2012.demo.com

> Accept: */*

>

< HTTP/1.1 302 Found

< Date: Thu, 01 Dec 2016 21:27:14 GMT

< Server: Apache/2.4.23 (Win64)

* Added cookie SMCHALLENGE="NTC_CHALLENGE_DONE" for domain demo.com, path /, expire 0

< Set-Cookie: SMCHALLENGE=NTC_CHALLENGE_DONE; path=/; domain=.demo.com

* Added cookie

```
SMSESSION="Q9i/WPfbjBceAq3vF8Ks42JKkG4DyBQWxuREOPYKBbBOWxPhLxsOnzHZbEE+ MIVrzJsyJlbKWb
fJOoqhVP3Vj3ArN0nViu6mJ0+ nvJvAiMOH8fxdzszPP8YEGeOKsDoqM40vWx8oh2kB8ty1yk/g6AC+ H2RdiZ4u
QHf6PWZEKnP5GukIVGzR7DpI0YQUQ97ldntT11PJoNeLntX6zPkLuGrEscrdzVOyE1UOaMaIBDCw/UstY9oRn
0B1oo3iU5dtxmCJkVGD8jLZdA3vAZwragcoNXUiS0zvfKtFA0/PgvoPnburPNJn0w+ 64WFAJLKFUnRI9t2iFS5
QEjxY8EczT2jWuDDidczF95EE0idd8CfOKtXy2MYW5Y2kU69CYwWH4xQ/70ZbjMuUIK2i02pO4j3gCHFOzZqp
CUXEpTthZLkPjMpJRYQQRsAPHLrAyfH8rEP4Q+ rKfAvpKZ3yriC4qijijssqJGAjTdmorKcOiIrnnyvtHNNu4oiz
aNBtclTWsIodeMVPJXbTHL6ldXfavUXQ6YDAXJvCHdbG13LmqMJQnRWXUOPdlrMwUR1sr0b/Z8RxDPkjbM9
BKAB/KOQCYEsTWBYnB4pbgUZB7umfXcWAXMBKKmdS8Rx7phMNfYD+ 6po2J63Nc6z6O6PwvSC4RSspKoHd
PoG4Aq8xZYP+ yl50w6FkmslBc4FvuUTD6K9IWPUXV64imTNg5jhdXmheIvY5j12RN1EAzXJ5iQ6eEVkiuMuT
Mb+ ReSbQwdr/WiK4SwK82YxthBJDLdbt3XlkV7Z6Wdpjs09Rm31/NVxxG9xkehQDGRD7Td7es3kRPVc9GuD
D5DpqICGkhiklPPTjsT3b3A8P6bthNgZP+ YV6GdtKVOGkx0nCbJzIKT3wJXxkhixAya+ RwpbU3FsQ0o5TkkxZQx
1lrWkwgZjdEdeYSNTA0G1WhynR0133YGRPCOLru1wSbjpdRiR4Luz1kRMIPKWR9ZOM5i3TvjHk7MiZHpRfFa
vLMOA3slAseukzmqWZ75RtXxaeQYmQtfveA6GUMHsY6hiudSSMxsKpsMNDyPMrW0AzvHu21H5pq3YtljvTD
6WOR5S72LuVdF4nQvh+ qjrKCLCptSQsrX41yIRJbDOuUHWL1g98MQfeWY3" for domain demo.com, path /,
expire 0
```

< Set-Cookie:

```
SMSESSION=Q9i/WPfbjBceAq3vF8Ks42JKkG4DyBQWxuREOPYKBbBOWxPhLxsOnzHZbEE+ MIVrzJsyJlbKWb
fJOoqhVP3Vj3ArN0nViu6mJ0+ nvJvAiMOH8fxdzszPP8YEGeOKsDoqM40vWx8oh2kB8ty1yk/g6AC+ H2RdiZ4u
QHf6PWZEKnP5GukIVGzR7DpI0YQUQ97ldntT11PJoNeLntX6zPkLuGrEscrdzVOyE1UOaMaIBDCw/UstY9oRn
0B1oo3iU5dtxmCJkVGD8jLZdA3vAZwragcoNXUiS0zvfKtFA0/PgvoPnburPNJn0w+ 64WFAJLKFUnRI9t2iFS5
QEjxY8EczT2jWuDDidczF95EE0idd8CfOKtXy2MYW5Y2kU69CYwWH4xQ/70ZbjMuUIK2i02pO4j3gCHFOzZqp
CUXEpTthZLkPjMpJRYQQRsAPHLrAyfH8rEP4Q+ rKfAvpKZ3yriC4qijijssqJGAjTdmorKcOiIrnnyvtHNNu4oiz
aNBtclTWsIodeMVPJXbTHL6ldXfavUXQ6YDAXJvCHdbG13LmqMJQnRWXUOPdlrMwUR1sr0b/Z8RxDPkjbM9
```

```

BKaB/KOQCYEsTWBYnB4pbgUZB7umfXcWAXMBKKmdS8Rx7phMNfYD+ 6po2J63Nc6z6O6PvwSC4RSpKoHd
PoG4Aq8xZYP+ yl50w6FkmslBc4FvuUTD6K9IWPUXV64imTNg5jhdXmheIvY5j12RN1EAzxJ5iQ6eEVkiuMuT
Mb+ ReSbQwdr/WiK4SwK82YxthBJDLDbt3XlkV7Z6Wdpjs09Rm31/NVxxG9xkehQDGRD7Td7es3kRPVc9GuD
D5DpqICGkhiklPPTjsT3b3A8P6bthNgZP+ YV6GDtkV0Gkx0nCbJzIKT3wJXxkhixAya+ RwpbU3FsQ0o5TkkZQx
1lrWkwgZjdEdeYSNTA0G1WhynR0133YGRPCOLru1wSbjpdtRiR4Luz1kRMIPKWR9ZOm5I3TvjHk7MiZHpRfFa
vLMOA3sIAseukzmqWZ75RtTxaeQYMqTfveA6GUMHsY6hiudSSMxsKpsMNDyPMrW0AzvHu21H5pq3YtljvTD
6WOR5S72LuVDF4nQvh+ qjrKCLCptSQsrX41yRJBdOUuHWL1g98MQfeWY3; path=/; domain=.demo.com
< Cache-Control: no-store
< Location: http://win2012.demo.com/
< Content-Length: 208
< Content-Type: text/html; charset=iso-8859-1
<
* Ignoring the response-body
* Closing connection 0
* Issue another request to this URL: 'http://win2012.demo.com/'
* About to connect() to win2012.demo.com port 80 (#1)
* Trying 192.168.98.132...
* Connected to win2012.demo.com (192.168.98.132) port 80 (#1)
> GET / HTTP/1.1
> User-Agent: curl/7.29.0
> Host: win2012.demo.com
> Accept: */*
>
Cookie:
SMSESSION=Q9i/WPfpjBceAq3vF8Ks42JKkG4DyBQWxuREOPYKBbBOWxPhLxsOnzHZbEE+ MIVrzJsyJlbKWbf
JOoqhVP3Vj3ArN0nViu6mJ0+ nvJvAiMOH8fxdzszPP8YEGeOKsDoqM40vWx8oh2kB8ty1yk/g6AC+ H2RdiZ4u
QHF6PWZEKnP5GukIVGzR7DpI0YQUQ97ldntT11PJoNeLntX6zPkLuGrEscrdzVOyE1UOaMaIBDCw/UstY9oRn
0B1oo3iU5dtxmCJkVGD8jLZdA3vAZwragcoNXUiSosOzvfKtFA0/PgvoPnburPNJn0w+ 64WFAJLKFUnRI9t2iFS5
QEjxY8EcZT2jWuDDidczF95EE0idd8CfOKtXy2MYWsY2kU69CYwWH4xQ/70ZbjMuUIKI2i02pO4j3gCHFOzZqp
CUXEpTthZLkPjMpJRYQQRsAPHLrAyfH8rEP4Q+ rKfAvpKZ3yriC4qijijjsqJGApjTdmorKcOilrnnvytHNNu4oiz
aNbctTWsIodeMVPJXbTHL6ldXfavUXQ6YDAXJvCHdbG13LmqMJQnRWXUOPdlrMwUR1sr0b/Z8RxDPKjBm9
BKaB/KOQCYEsTWBYnB4pbgUZB7umfXcWAXMBKKmdS8Rx7phMNfYD+ 6po2J63Nc6z6O6PvwSC4RSpKoHd
PoG4Aq8xZYP+ yl50w6FkmslBc4FvuUTD6K9IWPUXV64imTNg5jhdXmheIvY5j12RN1EAzxJ5iQ6eEVkiuMuT
Mb+ ReSbQwdr/WiK4SwK82YxthBJDLDbt3XlkV7Z6Wdpjs09Rm31/NVxxG9xkehQDGRD7Td7es3kRPVc9GuD
D5DpqICGkhiklPPTjsT3b3A8P6bthNgZP+ YV6GDtkV0Gkx0nCbJzIKT3wJXxkhixAya+ RwpbU3FsQ0o5TkkZQx
1lrWkwgZjdEdeYSNTA0G1WhynR0133YGRPCOLru1wSbjpdtRiR4Luz1kRMIPKWR9ZOm5I3TvjHk7MiZHpRfFa
vLMOA3sIAseukzmqWZ75RtTxaeQYMqTfveA6GUMHsY6hiudSSMxsKpsMNDyPMrW0AzvHu21H5pq3YtljvTD
6WOR5S72LuVDF4nQvh+ qjrKCLCptSQsrX41yRJBdOUuHWL1g98MQfeWY3;
SMCHALLENGE=NTC_CHALLENGE_DONE
>
< HTTP/1.1 200 OK
< Date: Thu, 01 Dec 2016 21:27:14 GMT
< Server: Apache/2.4.23 (Win64)
* Replaced cookie SMCHALLENGE="NTC_CHALLENGE_DONE" for domain demo.com, path /, expire 0
< Set-Cookie: SMCHALLENGE=NTC_CHALLENGE_DONE; path=/; domain=.demo.com
* Replaced cookie SMCHALLENGE="" for domain demo.com, path /, expire 1465075634
< Set-Cookie: SMCHALLENGE=; expires=Sat, 04 Jun 2016 21:27:14 GMT; path=/; domain=.demo.com
< Last-Modified: Tue, 12 Jun 2007 01:53:14 GMT
< ETag: "2e-432abc2b0b680"
< Accept-Ranges: bytes
< Content-Length: 46
< Content-Type: text/html
<
<html><body><h1>It works!</h1></body></html>
* Connection #1 to host win2012.demo.com left intact

```


9 POLICY SERVER TRACE LOG

You can see the Kerberos Realm name is stripped off and user is added to the `%{UID}` variable defined in previous authentication scheme configuration step.

[illegible]

```

realm.][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][OnAuthAccept][
][
[12/01/2016][19:54:39.257][19:54:39][52780][139952905795328][SmAuthorization.cpp:1453][CSmAz::IsOk][][smadmin@DE
MO.COM][][docroot][Apache_Win2012_TestApp][][Start of user policy analysis for
realm.][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][X@.O....][Send response attribute 153, data size is 8][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][58 40 c6 4f 00 00 00 00 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][X@.O....][Send response attribute 154, data size is 8][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][58 40 c6 4f 00 00 00 00 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][X@.O....][Send response attribute 155, data size is 8][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][58 40 c6 4f 00 00 00 00 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][X@.O....][Send response attribute 155, data size is 8][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][00 00 0e 10 00 00 00 00 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][.....][Send response attribute 225, data size is 8][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][00 00 1c 20 00 00 00 00 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][... ..][Send response attribute 226, data size is 8][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][ff ff ff ff 00 00 00 00 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][nc8BMAUEadUln6o/Zu70+jD7YAs=][Send response attribute 205, data size is 28][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][6e 63 38 42 4d 41 55 45 61 64 55 6c 6e 36 6f 2f 5a 75 37 30 2b 6a 44 37 59 41 73 3d
][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][Send response attribute 218, data size is
49][Kerberos Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][75 69 64 3d 73 6d 61 64 6d 69 6e 2c 6f 75 3d 41 64 6d 69 6e 73 2c 6f 75 3d 70 6f 6c 69 63 79
73 74 6f 72 65 2c 6f 3d 53 69 74 65 4d 69 6e 64 65 72 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][0e-000a3f76-0335-1365-bee6-01030a4090cc][Send response attribute 151, data size is
39][Kerberos Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][30 65 2d 30 30 30 61 33 66 37 36 2d 30 33 33 5d 2d 31 33 36 35 2d 62 65 65 36 2d 30 31 30
33 30 61 34 30 39 30 63 63 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][CA Directory][Send response attribute 213, data size is 12][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][43 41 20 44 69 72 65 63 74 6f 72 79 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA
Directory][sso.demo.com:10389][Send response attribute 214, data size is 18][Kerberos
Auth][uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f][Login][73 73 6f 2e 64 65 6d 6f 2e 63 6f 6d 3a 31 30 33 38 39 ][
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:5262][CSm_Auth_Message::FormatAt
tribute][s83/r3][Apache_Win2012_agent][][smadmin@DEMO.COM][][docroot][Apache_Win2012_TestApp][CA

```



```
[Directory]0000000000[LDAP:][]Send response attribute 215, data size is 5000000[Kerberos
Auth]000000[uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f]0000000000>Login][4c 44 41 50 3a ]0000000000
[12/01/2016][19:54:39.258][19:54:39][52780][139952905795328][Sm_Auth_Message.cpp:4759][CSm_Auth_Message::SendRepl
y][s83/r3][Apache_win2012_agent][[][smadmin@DEMO.COM)][[][docroot][Apache_Win2012_TestApp][CA
Directory]0000000000[* Status: Authenticated. 00000000[Kerberos
Auth]000000[uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][][06-000bea37-69f5-1834-a275-
6283c0a8207f]00000000000000000000
[12/01/2016][19:54:39.260][19:54:39][52780][139952880617216][IsAuthorized.cpp:174][CSm_Az_Message::IsAuthorized][[]][s
madmin@DEMO.COM)][[]][CA Directory]0000000000[2][Validate session and session type for the
user.]0000000000[YzeREG6Anypa2keOstFXN7fpCKNiF4xRclgsBQuAsfHclpt4vX+qe8hpJ9y2uyZhbWj7NGX2I22yL3tNsSywYg9G
Fq1okLG5eaeYJgbxBn29esFuV8KhAmXUnxVcd/f1XQ3Ar1Jxfy6A3XeEvOpX+M8epWbj0Pab4DTvwWNvoNWYvmWBkHadROrXCaa
crZzsW4PTNCib/749AgnpbrCNP+aY7vWrKOPUpG/aOTPBzw4YjaMMnp940inv153TZqBoKwjMK8pMQ6S1RyjHVovU5GD8afVKiQN0z
lSPMTvcgEhiuAU5p+WHzKPgxARHT7BX9XabyH+wXSdqD2In4Jy1ktCr/JHHWX4BeOtOHNTTKvUSQVkaiVy+r8pitPIrkSLx52lbxcse
lwJHF73Mcjk8jzRUmYcbkkUNSDwkOZnunvtOhDs87tw4il3xglav8GsRDJB/x8RJ7aziKF+=][nc8BMAUEadUlIn6o/Zu70+dJYA5=[][[u
id=smadmin,ou=Admins,ou=policystore,o=SiteMinder]00000000000000000000
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][SMdsUser.cpp:95][CMdsUser::CMdsUser]0000000000
000000[Aabout to initialize User 'uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder' in dir '/CA Directories'][][Start of call
InitUser.]00000000000000000000000000000000
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][IsAuthorized.cpp:682][CSm_Az_Message::IsAuthorized][0000
0000000000000000000000000000-1768-5840c64a-14b4-
02127477][Apache_Win2012_agent][[][smadmin@DEMO.COM)][[][docroot][Apache_Win2012_TestApp]000000000000[Auth
orizing
user...]0000000000[HWRITFM/RP9b6SA905KMKGKUJGd6wir9agOAG3NatoVuzwmKJPdnRib34ZZ1GvVNb69ii5wlXeFoBrPZ5XZ
+/uMmCj3LO2WSFFLshqA3UXXNVdzQEPTXXUlrjwfP9SBvjZYHiHild6KgEQzGmjT6xmRKafZIvJI1SmDSyHW/8ZJa/pplsVz/q/RU+gPT
o+t+D7ZW36SxxOWdPRG4IRF8TXRU1rEnUVduY/WNmMXltYEQDiJDZXQodDMQCec6wKeMt2oQLve4/yJVmWm8KDCizvOcZjut/90ah
t81MKVCQR0gwWeZxbCdNgCNsrvtFTzp+OU3F9mxHX58dTkB0AD2HHQM3zqKSdvXwSHH/Ohwbh3TrguiYW6rqmpCAh7trlNWse3ju
yqr+3eALBJKHhHO+o5xCzc7OuPMfcZithvtOR5yONSSwZRt6+njlSXc4BIcyO7yXJC8NB0BWUBBg==][[]][uid=smadmin,ou=Admins
,ou=policystore,o=SiteMinder]00000000000000000000
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][SmAuthorization.cpp:1453][CSmAzm::IsOk][[]][smadmin@DE
MO.COM)][[][docroot][Apache_Win2012_TestApp]000000000000[Start of user policy analysis for
realm.]000000000000[uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][[][06-000bea37-69f5-1834-a275-
6283c0a8207f]00000000000000000000
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][IsAuthorized.cpp:811][CSm_Az_Message::IsAuthorized][s83/r
4][Apache_Win2012_agent][[][smadmin@DEMO.COM)][[][docroot][Apache_Win2012_TestApp]000000000000[Evaluating
OnAccessAccept policy in the realm
]000000000000[HWRITFM/RP9b6SA905KMKGKUJGd6wir9agOAG3NatoVuzwmKJPdnRib34ZZ1GvVNb69ii5wlXeFoBrPZ5XZ+/uM
mCj3LO2WSFFLshqA3UXXNVdzQEPTXXUlrjwfP9SBvjZYHiHild6KgEQzGmjT6xmRKafZIvJI1SmDSyHW/8ZJa/pplsVz/q/RU+gPTo+t+D
7ZW36SxxOWdPRG4IRF8TXRU1rEnUVduY/WNmMXltYEQDiJDZXQodDMQCec6wKeMt2oQLve4/yJVmWm8KDCizvOcZjut/90ah
t81MKVCQR0gwWeZxbCdNgCNsrvtFTzp+OU3F9mxHX58dTkB0AD2HHQM3zqKSdvXwSHH/Ohwbh3TrguiYW6rqmpCAh7trlNWse3ju
yqr+3eALBJKHhHO+o5xCzc7OuPMfcZithvtOR5yONSSwZRt6+njlSXc4BIcyO7yXJC8NB0BWUBBg==][[]][uid=smadmin,ou=pol
icystore,o=SiteMinder]000000000000[OnAccessAccept]0000000000
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][SmAuthorization.cpp:1453][CSmAzm::IsOk][[]][smadmin@DE
MO.COM)][[][docroot][Apache_Win2012_TestApp]000000000000[Start of user policy analysis for
realm.]000000000000[uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][[][06-000bea37-69f5-1834-a275-
6283c0a8207f]00000000000000000000
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][SmAuthorization.cpp:2325][CSmAzm::IsOkGlobal][[]][smadmin
@DEMO.COM)][[][docroot][Apache_Win2012_TestApp]000000000000[Evaluating OnAccessAccept global policies in the
realm.]000000000000[uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][OnAccessAccept]000000000000
][[]][
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][SmAuthorization.cpp:1453][CSmAzm::IsOk][[]][smadmin@DE
MO.COM)][[][docroot][Apache_Win2012_TestApp]000000000000[Start of user policy analysis for
realm.]000000000000[uid=smadmin,ou=Admins,ou=policystore,o=SiteMinder][[][06-000bea37-69f5-1834-a275-
6283c0a8207f]00000000000000000000
[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][Sm_Az_Message.cpp:828][CSm_Az_Message::FormatAttribut
e][s83/r4][Apache_Win2012_agent][[][smadmin@DEMO.COM)][[][docroot][Apache_Win2012_TestApp]0000000000[X@.O....
]][][Send response attribute 153, data size is 8)0000000000[HWRITFM/RP9b6SA905KMKGKUJGd6wir9agOAG3NatoVuzwmKJPdnRib34ZZ1GvVNb69ii5wlXeFoBrPZ5XZ+/uM
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[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][Sm_Az_Message.cpp:828][CSm_Az_Message::FormatAttribut
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```

```

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[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][Sm_Az_Message.cpp:828][CSm_Az_Message::FormatAttribut
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[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][Sm_Az_Message.cpp:828][CSm_Az_Message::FormatAttribut
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[12/01/2016][19:54:39.261][19:54:39][52780][139952880617216][Sm_Az_Message.cpp:598][CSm_Az_Message::SendReply][s83
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```

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icystore,o=SiteMinder]]

10 TIP#1 – AUTHENTICATION FAILURE

[illegible]

Solution - Run `klist` to verify there is no typo in the keytab file. In this example keytab is stored in `/home/smuser`.

```
[smuser@sso ~]$ klist -k ./krbsvc-smpps.keytab
Keytab name: FILE:./krbsvc-smpps.keytab
KVNO Principal
-----
5 smpps/sso.demo.com@DEMO.COM
```

11 TIP#2 – WEB SERVER / AGENT 500 SERVER ERROR

Agent Trace log

```
[Apache_Win2012_agent][/]][SM_WAF_HTTP_PLUGIN->ProcessAdvancedAuthCredentials
returned SmFailure.]
```

Agent

log

[CSmHighLevelAgent.cpp:1134][ERROR][sm-AgentFramework-00420] reported fatal error: 'Credential Manager'.	HLA:	Component
---	------	-----------

Solution – downloaded Windows Sysinternals and ran procman.exe (Process Monitor) and found krb5.ini could not be found by LLAWP.exe process. The filename was krb5.ini.txt due to windows explorer hiding the file extensions!

12 AD USEFUL COMMANDS

[https://technet.microsoft.com/library/cc731241\(WS.10\).aspx](https://technet.microsoft.com/library/cc731241(WS.10).aspx)