Oberthur CS/PIV Cards (FIPS-201) in SunRay Environment
Unofficial guide – Comments to Ramesh.Nagappan@sun.com

Pre-requisites:
1. SunRay Session Server (SRSS) 4.0
2. Solaris 10 version 11/06 or up.
3. Oberthur CS PIV End Point v1.08 FIPS201 Certified Cards (Oberthur CS 1.08v)
4. Oberthur CS Card Profile for SunRay (OberthurCS.cfg)

Optional – For PKI Authentication only:
1. Sun Access Manager – Configured with Cert Module (For SSO with Web applications)
2. OpenSC 0.11.x (For PAM for Solaris/Linux and PKCS#11 plugin for Firefox)

SRSS environment – Configuration details:
1. SunRay Session Server w/ Non-Kiosk Mode
2. SunRay Data Store using LDAP
3. SRSS 4.0 Firmware updated on all DTUs
4. SRSS Server Policy to Card User w/ Self registration (assigned to
5. existing Solaris accounts)

Enabling Oberthur CS/PIV
1. Copy the attached config file (OberthurCS.cfg) to /etc/opt/SUNWut/smartcard directory.
2. Restart SRSS with utrestart –c
3. Login to Admin console: set the Probe Order – from "OberthurCS"
4. Verify Oberthur.cfg exists in /etc/opt/SUNWut/smartcard/probe_order.conf
5. Restart SRSS with utrestart –c
6. Verify card support, by executing the following command:
        # /opt/SUNWut/sbin/utcard –l

   (The output may look different...but make sure Oberthur listed on the top)

```
Card Name               Ver. Probe Order
---------------------------- ---- -----------
OberthurCS                1.08 1
Belgian-eID               1.0  2
Schlumberger-MicroPayflex   1.1  3
Schlumberger-CyberflexAccess 1.0  4
CyberflexAccessDeveloper32K  1.0  5
Axalto-Cryptoflex           1.3  6
Schlumberger-Payflex-All    1.3  7
Schlumberger-Payflex        1.1  8
ActivCard-Gold            1.0  9
ActivCardGoldJavaCard       1.0  10
JavaBadge-Citibank          1.0  11
JavaBadgeCAC              1.0  12
OpenPlatform             1.0  13
Finnesse ID              1.0  14
```

Test-drive SRSS for Session Mobility

1. Insert card – The SunRay DTU Card Reader should light up
2. The desktop should prompt you for self-registration
3. Assign the Solaris a/c username and confirm with password
4. Login into the desktop session.
5. Run the following command to verify SunRay session w/ Oberthur card   /opt/SUNWut/sbin/utdesktop -lc
6. Open desktop applications.
7. Pull-out the card
8. Insert into another SunRay DTU and verify for session mobility.

Solaris PAM Authentication using PIV Card

To test drive PAM and SSO authentication with PIV card on SunRay.

1. Install OpenSC 0.11.x and corresponding OpenCT 0.6.x (both obtained from OpenSC.org)...follow the docs. Make a note the binary versions of PKCS#11 plugins are signed using a self-signed cert (not sure it is expired).
2. To verify installation, try 'cryptoadm -list' from command prompt that shows OpenSC pkcs#11.

   User-level providers:

Provider: /usr/lib/security/$ISA/pkcs11_kernel.so
Provider: /usr/lib/security/$ISA/pkcs11_softtoken.so
Provider: /usr/lib/security/$ISA/opensc-pkcs11.so

...

3. Install the SunRay bypass (acquired from SunRay download site)....follow the provided SunRay docs for guidance.

4. Try 'pktool tokens' it should prompt you for the PIN.

Token Label	Manuf ID	Serial No	PIN State
Sun Software PKCS#11 softtoken	Sun Microsystem		user set
eGate Token (User PIN)	OpenSC Project	00006C08FFFF020	user set

5. Install OpenSC PAM, if you want SunRay desktop authentication. Follow the PAM configuration guideline how you want to match the certificate against LDAP or Flatfile or OCSP with a Federal Bridge CA (Not Tested).

6. You may use SunRay as a card reader for accessing Web applications protected with Sun Java System Access Manager configured with Cert Module that allows to login and SSO with PIV card certificate credentials matching against OCSP of US Federal bridge CA. We tested it with Entrust SSP and Exostar SSP... It works great.