PC/SC-lite 1.2 Release Notes

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This distribution is an update release (the previous version was PC/SC-lite 1.1) an implementation of the PC/SC-lite API, derived from the Open Source M.U.S.C.L.E. project.

PC/SC (Personal Computer/Smart Card) is the standard framework for smart card device access on Windows, Linux, and UNIX platforms.

The distribution contains a base package that installs the PC/SC-lite infrastructure for the Solaris platform, and an optional package that enables interoperability with the integrated Sun Ray smart card readers on Sun Ray thin clients (Solaris platform only). Support for external USB readers is supplied by the CCID handler, as a separate download.

Released with this distribution is pcsctools 1.2 as a seperate download bundle. pcsctools provides diagnostic tools and workarounds for some limitations. pcsctools contains documentation for each tool in the bundle, including a document in that describes to enable debug logging of all sorts for PC/SC-lite.

New in PC/SC-lite 1.2:

- Various scalability enhancements (to support larger installations)
- Performance improvements
- Added `SCardIsValidContext()` API called
- Added support for `SCARD_AUTOALLOCATE`
- Increased context maximum from 16 per-client to 100 per-client
- Increased maximum number of simultaneous clients from 16 to 20
- Bugfixes

Supported Platforms

PC/SC-lite 1.2 is designed to run on the following operating systems:

- Solaris 10 5/08 or later on SPARC and x86
- Solaris 10 5/08 or later on SPARC and x86 with Trusted Extensions

Important Notes

1. Sun PC/SC-lite 1.2 is not currently available for the Linux platform.

2. At least one of the available optional packages must be installed along with the PC/SC-lite base package to enable it to work with a respective set of readers. The two optional packages currently available are a package that provides PC/SC-lite access to readers on Sun Ray thin clients, and a package that provides PC/SC-lite access to external USB readers.

   If both the Sun Ray support package and the USB support package are installed, then USB readers connected to Sun Ray units can be utilized, which goes beyond the access to system console USB readers afforded by the USB support package alone.

3. The optional Sun Ray support package `SUNWpcscdtu` requires Sun Ray Server Software (SRSS) 4.1 or later.

Installation

> ℹ️ Note
> To install PC/SC-lite 1.2 in a Solaris Trusted Extensions environment, perform the following steps as root from ADMIN_LOW (global zone).

1. Remove only the following packages from the Sun Ray Server:

- `SUNWsrcbp`
- `SUNWocfd`
- `SUNWocfh`
- `SUNWocfr`
- `SUNWpcsclite`
- `SUNWpcsclite-devel`
- `SUNWjcom`

Please disregard the dependency warnings that appear during the `pkgrm` operations to remove these packages.

2. If you are in a Solaris Trusted Extensions environment, follow steps 3 and 4; otherwise, skip to step 6.
3. Add shared multilevel port 5999 to global zone to allow local zone access.
   a. Start the SMC GUI.

```
# smc &
```

   b. Under Management Tools-Select

```
hostname: Scope=Files, Policy=TSOL
```

   c. Select System Configuration->Computers and Networks->Trusted Network Zones->global
   d. From the menu bar, select Action->Properties.
   e. Perform one of the following steps: Click Add under Multilevel Ports for Shared IP Addresses to enable port for shared IP addresses or Click Add under Multilevel Ports for Zone's IP Addresses to enable ports for zone-specific IP addresses.
   f. Add 5999 as Port Number, Select TCP as Protocol, and click OK.
4. Restart `tnctl` service using the following command:

```
# svcadm restart svc:/network/tnctl:default
```

5. Verify that these ports are listed as shared ports by running the following command:

```
# /usr/sbin/tninfo -m global
```

6. Install the PC/SC-lite 1.2 base package `SUNWpcsc`, and optional Sun Ray package `SUNWpcscdtu`.

```
# pkgadd -d . SUNWpcsc
```

To enable PC/SC-lite 1.2 Sun Ray support. install optional `SUNWpcscdtu` package:

```
# pkgadd -d . SUNWpcscdtu
```

To enable PC/SC-lite 1.2 external USB reader support, download and install the package from the optional CCID distribution using the instructions provided with that separate download.

Known Problems and Limitations

Sun Ray Connector May Hang (Bug ID 6587725)

Removing the Smart Card while the light (LED) near the Sun Ray card slot is blinking is not recommended. Hotdesking while the Smart Card reader light is blinking can cause applications to freeze for up to two minutes before recovering. The workaround is to not remove the Smart Card while it is being accessed. If the application freezes, wait a few minutes: the application(s) should recover without user intervention.

Resetting or Power-cycling DTU Can Freeze Applications

Power-cycling or resetting Sun Ray DTU during Smart Card related activities, or doing so while applications that use Smart Cards are running, can cause those applications to freeze for up to two minutes, or make smart cards otherwise inaccessible for two minutes.

The workaround is to avoid resetting the DTU while smart card-related applications are running. If an application freezes after a reset or power-cycle event, wait a few minutes: the application(s) should recover without user intervention. PIN Prompt to Windows May Fail Occasionally

When hotdesking with a Sun Ray Connector-based Windows session running, the PIN dialog may (occasionally) fail to appear. The user will get a password prompt.

The workaround is to:

1. Log out of the Windows Session.
2. Re-start the Sun Ray Connector for Windows session.
3. Log into Windows again.