

# Intel® Identity Protection Technology with Public Key Infrastructure (Intel® IPT with PKI)

Release Notes

Version 4.3

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# 1 Introduction

This document describes new features and changes made in version 4.2 of Intel® Identity Protection Technology with Public Key Infrastructure (Intel® IPT with PKI).

## 2 Changes and New Features

This section describes the main new features and changes included in Intel IPT with PKI 4.3.

### 2.1 New Graphics Test added to Validation Tool

A new test (Test #10) was added to the pre-check tool (located in the `Tools\Pre-Check_Tool` folder).

This test checks that the Intel Graphics Driver is installed and that the version is supported.

```
D:\Tools\Pre-Check_Tool>IPTPKI_PreCheck.exe

#### Intel(R) IPT with PKI Prerequisites Test #####

1. PASS - CPU: Intel(R) Core(TM) i5-6300U CPU @ 2.40GHz
2. PASS - Intel ME Software version: 11.7.0.1010
3. PASS - Intel ME Firmware version: 11.0.0.1202
4. PASS - Intel ME Firmware type: Corporate
5. PASS - OS version: Windows 10 (10.0.14393)
6. PASS - Intel DAL service: Installed and running
7. PASS - Intel DAL version: 11.7.0.1010
8. PASS - Intel DAL virtual machine type: Intel
9. PASS - Protected Transaction Display: Enabled
10. PASS - Intel Graphics Driver version: 21.20.16.4550

Status: This platform includes all prerequisites for Intel IPT with PKI

#### Prerequisites Test Passed #####
```

### 2.2 Intel ME Software Minimum Version

The minimum supported version of Intel ME Software is now 11.6.0.1019.

## 3 What was New in Version 4.2

Version 4.2 of Intel IPT with PKI did not include new features.

This version of Intel IPT with PKI was released to support integration with version 2.1 of Intel Authenticate.

## 4 What was New in Version 4.1

This section describes the main new features and changes that were made in version 4.1 and are included in version 4.3. (This section is included here just in case you did not see the release notes of version 4.1.)

### 4.1 New Key Storage Provider

Previous versions of Intel IPT with PKI only supported Cryptographic Service Providers (CSPs) based on the Microsoft Cryptography API (CryptoAPI). Version 4.1 now includes a Key Storage Provider (KSP) based on the Microsoft Cryptography API: Next Generation (CNG).

#### New KSP

Name	Description of Change
Intel IPT Non-Exportable Key Storage Provider	<p>This is a new KSP added to version 4.1.</p> <p>This KSP implements the RSA algorithm functionality of the Microsoft KSP software layer. The RSA private keys created using this KSP can only be used on the computer on which they were generated and cannot be exported.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• This KSP only supports the RSA algorithm. All other algorithms available when using the Microsoft KSP software layer are NOT supported by this KSP.</li> <li>• This KSP only supports key lengths of 1024 bit and 2048 bits. All other key lengths available when using the Microsoft KSP software layer are NOT supported.</li> </ul>

### 4.2 Secure Import / Export Supported from Intel ME 10

The "Intel IPT CSP – Exportable Keys" CSP is now supported on Intel vPro systems with Intel ME Firmware version **10.0.45.1020** and higher. If the platform has a version lower than 10.0.45.1020 you will need to perform a Firmware Upgrade if you want to install and use this CSP. You can check the Intel ME Firmware version using the new pre-check tool (test #3).

## 4.3 Upgrade Supported (from Version 4.0)

From version 4.1 and higher, the Intel IPT with PKI installer supports upgrade. If the installer detects that an earlier version is installed, it will automatically upgrade the installation to the version of the installer.

### Note:

- Upgrade from versions earlier than version 4.0 is not supported. Any version earlier than version 4.0 must be uninstalled before installing the new version.
- During upgrade from version 4.0, the new KSP will be added automatically on platforms where the “Intel IPT CSP – Non-Exportable Keys” CSP is installed.

## 4.4 Changes to the Silent Install Commands

With the addition of the new KSP, the silent install commands were simplified and changed. These are the new commands and properties:

- To install only the “Non-Exportable Keys” providers (CSP and KSP):

```
msiexec /i [installer_filename].msi /qn ADDLOCAL=NonExportable
```

- To install only the “Exportable Keys” provider (CSP only):

```
msiexec /i [installer_filename].msi /qn ADDLOCAL=Exportable
```

- To install all available providers (CSPs and KSPs):

```
msiexec /i [installer_filename].msi /qn ADDLOCAL=All
```

### Note:

The “Intel IPT CSP – Exportable Keys” CSP will only be installed if the system is an Intel® vPro™ system and has the supported version of Intel ME.

## 4.5 Support for Intel ME 9.1 and 9.5

The default “Non-Exportable Keys” providers (both CSP and KSP) are now supported on platforms with the latest versions of Intel ME Firmware 9.1 and 9.5:

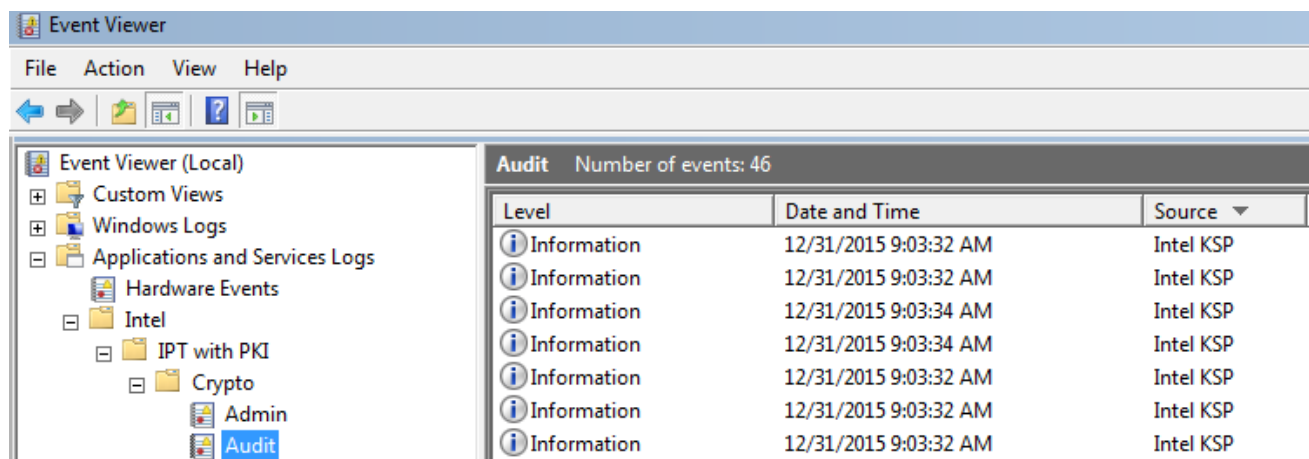
- Intel ME 9.1: Version **9.1.35** and higher
- Intel ME 9.5: Version **9.5.55** and higher

If the platform has a version lower than these, you will need to perform a Firmware Upgrade if you want to install and use Intel IPT with PKI. You can check the Intel ME Firmware version using the new pre-check tool (test #3).

## 4.6 Changes to the Logs

Changes were made to the Event Channels of the logs generated by Intel IPT with PKI. You can now view the logs in the Event Viewer at this location:

Applications and Services Logs > Intel > Intel IPT with PKI > Crypto



The logs are located in these Event Channels:

- **Admin** – This is a legacy log. This log does not include logs from the KSP. By default, only critical errors are logged. To enable logging of all CSP calls, you need to add a registry key DWORD named `iptpkilog` (with a value of 1) to: `HKLM > > SOFTWARE > Policies > Intel > Intel IPT with PKI`.
- **Audit** – This is a new log that has been added from version 4.1. This log is enabled by default and contains logs from both the CSP and the KSP providers. This is the recommended log to use when troubleshooting.

## 5 Limitations

This table describes the limitations of version 4.1 of Intel IPT with PKI .

Description	Workaround
On some platforms with a very high screen resolution, the content of windows displayed using Intel IPT with PTD appears very small or not proportional. This is because of incorrect scaling of the display.	<p>On platforms where this issue occurs:</p> <ol style="list-style-type: none"><li>1. From the desktop, right-click and select <b>Personalize</b>.</li><li>2. Click <b>Display</b>.</li><li>3. Select the <b>Let me choose one scaling level for all my displays</b> check box.</li><li>4. Make sure that the display scale is set to less than 150%.</li></ol> <p><b>Note:</b> Improvements were made in the scaling capabilities of Intel IPT with PTD on high resolutions that make this workaround unnecessary. These improvements are available from version 11.0.0.1172 of the Intel Management Engine SW Installer. (This is a backward compatible software only update and does not require a Firmware Upgrade.)</p>



## 6 Known Issues

This table describes the current known issues with Intel IPT with PKI.

ID	Description	Impact / Solution
DE10216	During uninstall, this registry key is not removed: HKLM > SOFTWARE > Policies > Intel IPT with PKI > CardDeleteTime	Delete the registry key manually.
DE10180	In certain conditions, the "Test Protected PIN functionality" test in the validation tool fails the first time it is run.	Try the test again.
DE8684	Sometimes, when uninstalling Intel IPT with PKI from the Control Panel, a message displays with a list of applications that need to be closed.	The message is displayed by the Windows installation mechanism and is incorrect. You do not need to close the applications in the list. Select <b>Do not close applications</b> and click <b>OK</b> to continue.
DE8558	In certain conditions, loading the files used by Intel IPT with PKI might fail because the digital signature of a file cannot be verified. Files used by Intel IPT with PKI are digitally signed and time-stamped. Some versions of Windows (for example, Windows 8) do not include all the trusted root certificates necessary to validate time-stamped digital signatures. If these systems also do not have Internet access, the automatic certificate update mechanism of Windows will fail.	Make sure that the platform is connected to the Internet. This is the easiest solution because the certificate will be downloaded automatically. If you cannot connect the platform to the Internet, manually download and install a root certificate update package from the Microsoft update catalog.
DE8001	The installers allow installation to continue even when no providers are selected for installation.	If no providers are selected, nothing is installed. Run the installer again and make sure that at least one provider is selected before you continue the installation.