

# Intel® Software Guard Extensions (Intel® SGX) Platform Software for Linux\* OS Release Notes

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Revision: 2.3 Open Source (version: 2.3.101.46683)

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## 1 Introduction

This document provides system requirements, installation instructions, limitations, and legal information for the Intel® Software Guard Extensions (Intel® SGX) Platform Software (PSW).

### Product Contents

The Intel® Software Guard Extensions PSW package includes:

- Intel® SGX Application Enclaves
- Intel® SGX Runtime System Library
- Intel® SGX Application Enclave Service Manager (AESM)

## 2 What's New

Intel® Software Guard Extensions PSW includes the following changes in this release:

- Fixed bugs

### Changes in Previous Releases

Intel® Software Guard Extensions PSW includes the following changes in 2.3.100.46354:

- Added support for Ubuntu\* 18.04 LTS 64-bit Desktop and Server version

- Updated the Intel® SGX PSW installer for Ubuntu\*. The following changes are introduced:
  - Using .deb installer
  - Using name `libsgx-enclave-common_{version string}-1_amd64.deb`.
  - Installing the Intel® SGX Enclave Common loader library.
- Fixed SGX Quoting enclave bug, which caused the invalid signature error when a user upgraded the SGX PSW 1.6 version to a higher version and did remote attestation
- Updated the SGX Provisioning Cert Enclave to fix error code bug
- Fixed bugs.

Intel® Software Guard Extensions PSW includes the following changes in 2.2.100.45311:

- Added support for Switchless Calls, a new mode of operation to perform calls from/to SGX enclaves
- Fixed bugs.

Intel® Software Guard Extensions PSW includes the following changes in 2.1.103.44322 release:

- Update the cryptography lib to the Intel® Integrated Performance Primitives Cryptography 2018 Update 2.1. Mitigated security vulnerability CVE-2018-3617(<https://cve.mitre.org/cgi-bin/cvename.cgi?name=2018-3617>). For more details, refer to Intel Security Advisory INTEL-SA-00106(<https://security-center.intel.com/advisory.aspx?intelid=INTEL-SA-00106&languageid=en-fr>) and INTEL-SA-00135(<https://security-center.intel.com/advisory.aspx?intelid=INTEL-SA-00135&languageid=en-fr>).
- Update the Intel® SGX platform service Dal applet
- Fixed bugs.

Intel® Software Guard Extensions PSW includes the following changes in 2.1.102.43402 release:

- Mitigated security vulnerability CVE-2018-3689 (<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2018-3689>). For more details, refer to Security Advisory INTEL-OSS-10004 (<https://01.org/security/advisories/intel-oss-10004>)

- Mitigated security vulnerability CVE-2018-3626 (<https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2018-3626>). For more details, refer to Security Advisory INTEL-SA-00117 (<https://security-center.intel.com/advisory.aspx?intelid=INTEL-SA-00117&languageid=en-fr>).

Intel® Software Guard Extensions PSW includes the following changes in 2.1.101.42529 release:

- Updated security to the Intel® SGX PSW.

Intel® Software Guard Extensions PSW includes the following changes in version 2.1.100.42002:

- Added support for CentOS\* 7.4
- Added support for SUSE\* Linux Enterprise Server 12
- Fixed bugs.

Intel® Software Guard Extensions PSW includes the following changes in version 2.0.100.40905:

- Added support for 3072 bit Intel® SGX provisioning server public key
- Added support for the Intel® SGX Enclave Dynamic Memory Management (EDMM)
- Added support for Red Hat\* Enterprise Linux\* Server 7.4.

Intel® Software Guard Extensions PSW includes the following changes in version 1.9.100.39124:

- Fixed bugs.

Intel® Software Guard Extensions PSW includes the following changes in version 1.8.100.37689:

- Added support for the Trusted Platform Service
- Added support for RedHat\* and CentOS\*.

### 3 System Requirements

#### Hardware Requirements

- 6th Generation Intel® Core™ Processor or newer.

## Software Requirements

- Supported Linux\* OS distributions:
  - Ubuntu\* 16.04 LTS 64-bit Desktop and Server version
  - Ubuntu\* 18.04 LTS 64-bit Desktop and Server version
  - Red Hat\* Enterprise Linux\* Server 7.4 (for x86\_64)
  - CentOS\* 7.5 (for x86\_64)
  - SUSE\* Enterprise Server 12 (for x86\_64)
  - Fedora\* 27 Server version

### Note:

1. Intel® SGX PSW supports the Intel® Xeon® Processor E3 Server V5 and onwards platforms if the platform processor and BIOS supports the Intel® SGX. Please check with OEM/ODM regarding BIOS support for enabling the Intel® SGX.
2. If you need to use the Intel® SGX platform service, install the Intel® Management Engine (Intel® ME) software components. This is optional, you can skip this if you do not need to use the Intel® SGX platform service.
3. Intel® SGX platform service is not supported on the Intel® Xeon® Processor E3 Server platforms.

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