

**Oracle® Enterprise Manager System Monitoring
Plug-In for Oracle Key Manager**

Security Guide

E55301-02

December 2018

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Preface

This document describes the security feature of the Oracle Enterprise Manager System Monitoring Plug-in for Oracle Key Manager. This guide is intended for anyone involved with using security features and secure installation and configuration of Oracle Enterprise Manager System Monitoring Plug-in for Oracle Key Manager.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documentation

The *Oracle Key Manager Administration Guide* and other Oracle Key Manager product documentation appear on the Oracle documentation website:

<http://www.oracle.com/technetwork/documentation/tape-storage-curr-187744.html#crypto>

Oracle Key Manager GUI installers, upgrade files, SNMP MIBs, and the OKM JCE Provider are available on the My Oracle Support site:

<https://support.oracle.com>

After logging into this site, click the **Patches & Updates** tab, search the “Oracle Key Manager (OKM)” product family, and select the desired OKM version. Download the desired Oracle Key Manager file.

Additional product information can be found on the Oracle Key Manager wiki site:

<http://wikis.oracle.com/display/OKM/Home>

General information about Oracle Enterprise Manager plug-in modules can be found on the Oracle Technology Network:

<http://www.oracle.com/technetwork/oem/extensions/index-100685.html>

About Security for the Oracle Enterprise Manager

This guide provides an overview of the Oracle Enterprise Manager System Monitoring Plug-in for Oracle Key Manager and explains the general principles of application security.

Product Overview

The Oracle Enterprise Manager System Monitoring Plug-in for Oracle Key Manager extends Oracle Enterprise Manager Cloud Control to add support for monitoring Oracle Key Manager appliances. This plug-in provides the following primary features:

- Gathers and presents configuration and performance information for Oracle Key Manager appliances
- Raises alerts for pre-selected configuration and monitoring data
- Ties together Oracle ZFS storage appliances and Oracle databases integrated with Oracle Key Manager appliances
- Supports monitoring by remote agents in the Cloud Control environment

Basic Security Principles

The Plug-in follows these security principles:

Connections to Oracle Key Manager appliances are through SSL.

The Plug-in authenticates itself with an Oracle Key Manager (OKM) cluster and then establishes a Secure Sockets Layer (SSL) channel using Transfer Layer Sockets (TLS) v1.0 for further communication with the OKM cluster.

Certificates are encrypted.

The Plug-in uses X.509 certificates to authenticate itself with the OKM cluster. These certificates are stored in PKCS#12 files, and thus are encrypted.

Secure Installation and Configuration

This chapter outlines how the software is securely installed and configured.

- [Installation Overview](#)
- [Resource Accounts](#)
- [Password Protection](#)
- [Certificate Protection](#)

Installation Overview

The latest version of Oracle Enterprise Manager System Monitoring Plug-in for Oracle Key Manager is available for download from the Oracle Technology Network. The Plug-in distribution consists of a single package file for Oracle Enterprise Manager Cloud Control 12c. The package does not contain any utilities that allow it to be installed by itself. It must be imported and deployed into Oracle Enterprise Manager Cloud Control 12c by the administrator of Oracle Enterprise Manager Cloud Control 12c.

Resource Accounts

The Plug-in requires that the administrator of Oracle Enterprise Manager Cloud Control 12c obtain credentials for the Oracle Key Manager cluster from an Oracle Key Manager administrator to perform all required operations of the Plug-in. It is recommended that an Oracle Key Manager administrator follow the instructions in the *Oracle Enterprise Manager System Monitoring Plug-in for Oracle Key Manager Installation Guide* to generate the credentials and pass this information to the administrator of Oracle Enterprise Manager Cloud Control 12c.

Password Protection

The Plug-in does not store the credentials from Oracle Key Manager clusters. Credential management is handled by Oracle Enterprise Manager Cloud Control 12c, and the Plug-in simply consumes the credentials as provided by Oracle Enterprise Manager Cloud Control 12c.

Certificate Protection

The X.509 certificates that the Plug-in uses to authenticate itself with the OKM cluster are encrypted and are stored as PKCS#12 files. To further protect these certificates, the administrator of Oracle Enterprise Manager Cloud Control 12c should ensure that the

permissions on these files are sufficiently restricted to prohibit access by unauthorized users.

Security Features

This chapter provides a high-level overview of the security features of the Plug-in.

The critical security features that provide protection are:

- **Authentication** – The Plug-in runs in Oracle Enterprise Manager Cloud Control 12c. The users must log in to Oracle Enterprise Manager before they can view any information from the Plug-in. Additionally, to access an Oracle Key Manager cluster, the Plug-in requires the credentials from the credentials stored in Oracle Enterprise Manager Cloud Control 12c.
- **Authorization** – The Plug-in requires that the users specified in the resource accounts have the appropriate privileges to gather configuration and performance information from the Oracle Key Manager cluster.
- **Confidentiality** – Credentials for the Oracle Key Manager cluster are stored in Oracle Enterprise Manager Cloud Control 12c in a secure database. Additionally, all interactions between the Plug-in and the Oracle Key Manager cluster are through secure communication channels.

