IDOL

Software Version 12.13

Linux

FIPS Enablement Technical Note

Micro Focus®

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Introduction

This technical note describes how to set up and run Micro Focus IDOL in a Federal Information Processing Standard (FIPS) compliant system.

IDOL uses a cryptographic module which complies with Federal Information Processing Standard 140-2 (FIPS 140-2). This standard defines the technical requirements that Federal Agencies must use for cryptographic-based security systems that protect sensitive or valuable data.

To comply with FIPS 140-2, Micro Focus IDOL:

- integrates validated and NIST-certified third party cryptographic modules, and uses the modules as the only providers of cryptographic services.

- uses FIPS-approved cryptographic functions.

- uses FIPS-approved and NIST-validated technologies

- uses security controls defined in NIST 800-53 (or applicable security controls such as DoD 8500.2), prescribed for cryptographic modules by FIPS 140-2 and applicable for Micro Focus IDOL design, implementation, and operation.

Micro Focus IDOL FIPS mode is available only on FIPS-enabled Red Hat Enterprise Linux (RHEL) 7 and RHEL 8 platforms.

When using SSL in FIPS mode, all encrypted ACI communication between all IDOL components and HTTPS traffic between IDOL and third parties (where SSL is supported by the third party) is secured using the FIPS validated OpenSSL Module.

The following sections describe how to install IDOL and enable FIPS mode in your system.

Prerequisites

This section describes the prerequisites for installing IDOL in a FIPS-compliant system.

RHEL 7

You must install the FIPS version of IDOL on a Red Hat Enterprise Linux 7 platform that has FIPS mode enabled. For information about how to enable FIPS in RHEL7, see the following section of the Red Hat documentation:

https://access.redhat.com/documentation/en-US/Red_Hat_Enterprise_Linux/7/html/Security_Guide/chap-Federal_Standards_and_Regulations.html

RHEL 8

You must install the FIPS version of IDOL on a Red Hat Enterprise Linux 8 platform that has FIPS mode enabled. For information about how to enable FIPS mode, refer to the Red Hat documentation.

You must also install the package `compat-openssl10`. You can do this by running the following command:

```
yum install compat-openssl10
```

Install IDOL

To install and use IDOL in FIPS mode, you must download the FIPS-enabled version of the installer or component ZIP package. The packages have a file name of the form:

Product_Version`_LINUX_X86_64_RHEL7FIPS.[exe|zip]`

Where *Product* is the product name, and *Version* is the version number.

For details of how to install your IDOL components, refer to the *IDOL Getting Started Guide*, or the documentation for the component that you want to install.

Configure IDOL

After you install the FIPS-enabled IDOL components, you must configure each component to use FIPS mode, and configure SSL communications for IDOL.

> **NOTE:** Even after you install the FIPS-enabled version of the component, you must explicitly configure FIPS mode to enable the functionality.

You can use the following procedure for any IDOL component for which a FIPS-enabled package is available.

To configure IDOL in FIPS mode

1. Open the component configuration file in a text editor.

2. Find the `[Service]` section, and add the `FIPSMode` parameter, set to `True`. For example:

   ```
   [Service]
   FIPSMode=True
   ```

3. Configure SSL for your IDOL platform. You must configure SSL for incoming connections, and for connections between your IDOL components. All connections between your servers must be SSL encrypted (that is, you must configure SSL for both incoming and outgoing communications, where applicable).

   For details of how to configure SSL, refer to *IDOL Expert*, or the Administration Guide for your product. For example:

   ```
   [Server]
   SSLConfig=SSLOptions

   [SSLOptions]
   SSLMethod=TLSV1.2
   SSLPrivateKey=/path/to/privatekey
   SSLCertificate=/path/to/certificate
   SSLCheckCommonName=True
   SSLCACertificate=/path/to/certificate.authority.certificate
   ```

4. Save and close your configuration file.

5. Restart the component for your changes to take effect.

Verify FIPS Mode

After you install and configure your IDOL components, you can start the servers.

After the servers have started, you can verify that the component is running in FIPS mode by checking the application log. By default, this file is in the logs subdirectory of your component directory, with the file name `application.log`.

For example:

`/opt/IDOL/IDOLServer-12.0.0/content/logs/application.log`

When the component is successfully running in FIPS mode, this log has the following information line:

`Running with FIPS mode active`

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