HPE Lean Functional Testing

Software Version: 12.54

Security Reference

Hewlett Packard Enterprise

Document Release Date: September 2016 | Software Release Date: September 2016

Legal Notices

Warranty

The only warranties for Hewlett Packard Enterprise Development LP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HPE shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HPE required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notice

Trademark Notices

Adobe™ is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

Oracle and Java are registered trademarks of Oracle and/or its affiliates.

Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to: https://softwaresupport.hpe.com.

This site requires that you register for an HPE Passport and sign in. To register for an HPE Passport ID, go to https://softwaresupport.hpe.com and click **Register**.

Support

Visit the HPE Software Support Online web site at: https://softwaresupport.hpe.com

This web site provides contact information and details about the products, services, and support that HPE Software offers.

HPE Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests

- Download software patches
- Manage support contracts
- Look up HPE support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HPE Passport user and sign in. Many also require a support contract. To register for an HPE Passport ID, go to: https://softwaresupport.hpe.com and click **Register**.

To find more information about access levels, go to: https://softwaresupport.hpe.com/web/softwaresupport/access-levels.

HPE Software Solutions & Integrations and Best Practices

Visit **HPE Software Solutions Now** at https://softwaresupport.hpe.com/group/softwaresupport/search-result/-/facetsearch/document/KM01702710 to explore how the products in the HPE Software catalog work together, exchange information, and solve business needs.

Visit **Hewlett Packard Enterprise Self-Solve Knowledge Search** at https://softwaresupport.hpe.com/group/softwaresupport to access a wide variety of best practice documents and materials.

Welcome to the Lean Functional Testing Security Reference

Welcome to the Lean Functional Testing (LeanFT) Security Reference.

This guide is designed to help you deploy and manage Lean Functional Testing instances in a secure manner in the modern enterprise. Our objective is to help you make well-informed decisions about the various capabilities and features that LeanFT provides to meet modern enterprise security needs.

Security requirements for the enterprise are constantly evolving. This guide should be viewed as HPE's best effort to meet those stringent requirements. If there are additional security requirements that are not covered by this guide, please open a support case with the HPE support team to document them, and we will include them in future editions of this guide.

Installing and Using LeanFT in a Secure Manner

LeanFT is an automation framework that comprises the following components:

1. Automation API (SDK)
2. Runtime engine
3. IDE plugins and tools

These components can be run on the same computer or on multiple computers within a business network. Being an automation framework, LeanFT-related security issues are similar to those of other automation frameworks.

LeanFT can potentially be used to record network communications. Therefore, it is strongly recommended that you run LeanFT on dedicated test machines that do NOT contain or provide access to sensitive information. In addition, you should thoroughly review your lab network topology and access permissions before using LeanFT.

You must have specific permissions when installing and running LeanFT. For a list of these permissions, see the *Lean Functional Testing Readme*.

When installed, LeanFT provides the following security settings:

- You can install and run LeanFT with the computer's User Account Control (UAC) enabled.
- During installation, the runtime engine is configured to accept connections only from the local computer. To change this, you need to adjust the settings in the runtime engine connection configuration file, **config.json**, located in ***<LeanFT installation folder>*\lwe\lightweight\config**. For details, see the help topic about running tests remotely in the *LeanFT Help Center*.
- You can securely store important and sensitive information about the applications you are testing.

The sections in this reference discuss potential security issues when using LeanFT.

Installation and Deployment Security

LeanFT can be installed with the UAC enabled. This includes the installation of all prerequisite software, as well as installation configurations.

For details on secure installation and deployment, see **Installation > Enterprise Deployment** in the *Lean Functional Testing Readme*.

Configuring Remote Connection Settings for Working with LeanFT

To enable remote computers to run tests on the LeanFT computer, you can configure the LeanFT runtime engine connection configuration file, **config.json**, located in ***<LeanFT installation folder>*\lwe\lightweight\config**.

You can configure the LeanFT runtime engine connection settings using one of the following strategies:

1. **Local Only:** The LeanFT runtime engine accepts connections from the local computer only.
2. **Allow All Remote Connections:** The LeanFT runtime engine accepts connections from any computer.

   > **Note:** Enabling this configuration can present a security risk, as it allows the remote computer full access to the LeanFT computer.

3. **Allow Secure Remote Connections:** The LeanFT runtime engine accepts connections from a remote computer, using the WSS protocol to protect the data that is transferred between the Automation SDK/IDE tool and the LeanFT runtime engine.

   > **Note:** You need to configure additional settings to enable this mode. For details, see the topic about running tests remotely in the *LeanFT Help Center*.

For details, see the topic about running tests remotely in the *LeanFT Help Center*.

Securing Test Information When Working with LeanFT

When a test must contain sensitive information, such as user names or passwords, to access the application being tested, you can use the LeanFT SDK to make this sensitive data harder to access.

1. Use the **Password Encoder tool** to generate an encoded string resembling a mix of jumbled characters. This prevents the password from appearing in cleartext.

   > **Note:** The Password Encoder tool does not use a global standard for encryption. It is not considered nor is it intended to be secure. Its only purpose is to ensure that passwords will not appear in cleartext while editing or running a test. The actual passwords and/or data are stored with your test's source code. If you are using real customer data or other sensitive information, you should take additional steps to ensure the security of that data.

   The Password Encoder tool is available from the LeanFT Start menu. It is also available in your IDE after installing the LeanFT plugin: **LeanFT > Tools** menu.
2. When entering a password into a password field, use the generated string as the argument for a ***<TestObject>*.SetSecure** step (instead of the normal **Set** method). This hides the password, preventing it from being displayed in cleartext, but does not fully secure the password.

   For usage details, see the relevant SDK Reference.

Configuring the remote host for ALM test runs

To run LeanFT tests from ALM on a remote computer, you must set the required **DCOM** permissions and open the DCOM port (port 153).

To configure these settings, on a UAC-enabled machine open the command line 'As Administrator' and run:

```
<LeanFT installation>\Tools\Remote Agent\LFTDcomPermissions.exe -set
```

> **Note:** You can revert these DCOM settings at any time by running:
>
> `<LeanFT installation>\Tools\Remote Agent\LFTDcomPermissions.exe -reset`
>
> For additional information on the command line options for this utility, use the `-help` command.

Additionally, you must you must set **allowRun="true"** in the `<remoteAgent>` section of the Remote Agent configuration file, **LFTRemoteAgent.exe.config**.

For more details on the Remote Agent configuration file, see the topic about configuring the remote host for ALM test runs in the *LeanFT Help Center*.

Configuring your Computer for Running Tests using Mobile Center

To run LeanFT tests from your computer on devices that are managed using Mobile Center, you must set the details of the mobile server account that will be used for the test runs.

To configure these settings, open the Engine tab of the LeanFT Settings dialog box and click **Show Settings** under the Mobile add-in.

> **Note:** We recommend installing Mobile Center on a secure server. For details, see the SSL and certificates page in the *Mobile Center Help*.

For more details on configuring LeanFT to work with Mobile Center, see the LeanFT section of the *Mobile Center Help*.

Send Us Feedback

Let us know how we can improve your experience with the Security Reference.

Send your email to: docteam@hpe.com


Hewlett Packard
Enterprise
Java™
COMPATIBLE