

TIBCO LogLogic[®] Log Management Intelligence

TIBCO LogLogic[®] Enterprise Virtual Appliance

TIBCO LogLogic[®] Enterprise Virtual Appliance - Container Edition

Security Guidelines

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Introduction

This document describes guidelines to ensure security within various components of TIBCO LogLogic® Log Management Intelligence (LogLogic LMI) and the channels of communication between them. It also provides additional security-related guidance and recommendations for other aspects of external communication. In particular, this document provides details of product connectivity and configuration of security options.

i **Note:** LogLogic LMI has been used to represent LogLogic LMI, LogLogic EVA, and LogLogic EVA - Container Edition. All processes and procedures applicable to LogLogic LMI are also applicable to LogLogic EVA and LogLogic EVA - Container Edition, unless explicitly stated otherwise.

Secure Communication Channels

LogLogic® LMI is a self-contained appliance and is available as physical hardware or as a virtual appliance. Access is limited to a few areas. Most communication with LogLogic LMI is limited to data center services.

Data Ingest and Ingress

Ingest and ingress of data into the LogLogic LMI application is limited to the following modes:

- Web GUI
- REST API
- SSH
- Collectors
- (For hardware appliances only) Integrated Dell Remote Access Controller (iDRAC): The physical hardware of the LogLogic LMI appliance provides easy and secure hardware-based administrative access through iDRAC. iDRAC is secured over HTTPS and enables you to perform administrative tasks easily from a browser. Through iDRAC, you can perform all hardware operations and locally access the LogLogic LMI operating system. For more information, see [Dell iDRAC](#).

Data Egress

Data can be sent out from LogLogic LMI in the following ways:

- Forwarder: LLTCP (used to send data to other LogLogic LMI appliances), Syslog TCP/UDP
- Alerts: SMTP, SNMP traps, Syslog

Communication Channels and Their Security Configurations

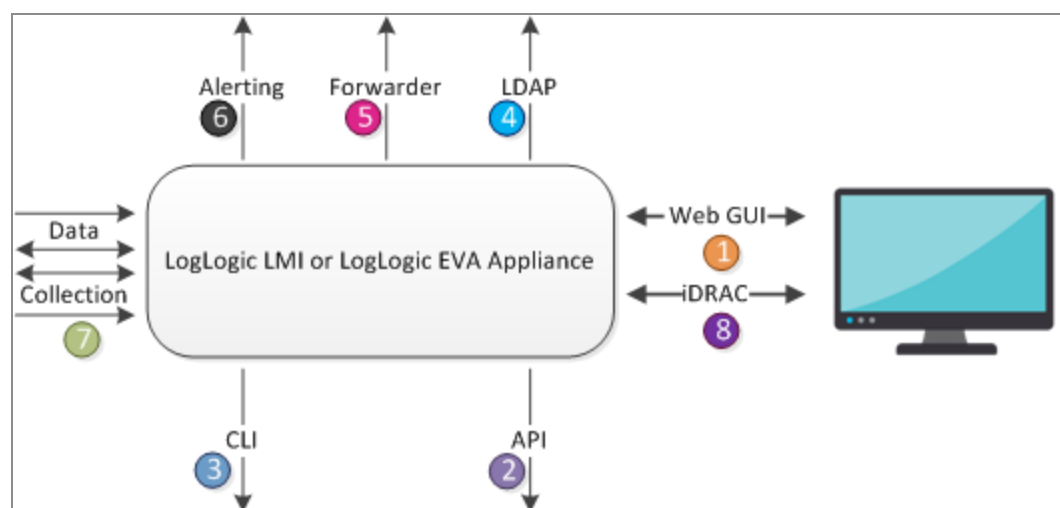
By default, some communication channels are not secure, but they can be secured by configuring the channels to use the Secure Sockets Layer (SSL) or Transfer Layer Security

(TLS) protocol. For information about how to configure a component for secure communication, see [TIBCO LogLogic® Log Management Intelligence Administration](#).

For configuration information about specific collectors, see the following TIBCO LogLogic® Log Source Packages documentation, which is available on the [TIBCO eDelivery website](#) or [TIBCO Support website](#) after logging in:

- *TIBCO LogLogic® Log Source Packages Log Configuration Guides*
- *TIBCO LogLogic® Log Source Packages Log Collector Guides*

The following diagram illustrates the components and communication protocols in a typical LogLogic LMI setup.



The following table describes the communication channels that can be configured, along with the references to more information, if applicable.

Key	Communication Channels	Connection	Description and References
1	Web GUI	HTTPS	User Interface
2	RESTful API	HTTPS	OpenAPI
3	CLI	SSH	Administration console
4	LDAP authentication	LDAP/S	User authentication

Key	Communication Channels	Connection	Description and References
5	Forwarders <ul style="list-style-type: none"> • Syslog • LLTCP 	<ul style="list-style-type: none"> • Syslog: UDP or TCP • LLTCP: TCP-TLS 	Data forwarding
6	Alerting <ul style="list-style-type: none"> • SNMP • SMTP • Syslog 	<ul style="list-style-type: none"> • SNMP: UDP or TCP • SMTP: TCP • Syslog: UDP or TCP alerting 	<ul style="list-style-type: none"> • SNMP versions: v1, v2, and v3 are supported • Authentication and Encryption support for SNMP v3 <p>TCP offers TLS/SSL support. For more information, see TIBCO LogLogic® Log Management Intelligence Administration.</p>
7	Data collection <ul style="list-style-type: none"> • JDBC • File • API • LogLogic proprietary • Syslog • Others 	<ul style="list-style-type: none"> • JDBC: <ul style="list-style-type: none"> ◦ (! ¥) MySQL ◦ (! ¥) Microsoft SQL ◦ (! ¥) Oracle ◦ Sybase • File <ul style="list-style-type: none"> ◦ SCP, SFTP ◦ FTP, FTPS ◦ HTTP, HTTPS ◦ CIFS • API <ul style="list-style-type: none"> ◦ (! ¥) VMware vCenter 	<p>Log and event collection</p> <p>(!) Offers TLS/SSL support</p> <p>(¥) For more information, see the TIBCO LogLogic® Log Source Packages Log Configuration Guides for that log source, which is available on the TIBCO eDelivery website or TIBCO Support website after logging in.</p>

Key	Communication Channels	Connection	Description and References
8	Dell iDRAC	HTTPS	Administrative access through iDRAC is available only on hardware appliance models.

Other Recommendations

This section provides some recommendations to secure other aspects of communication when using the LogLogic LMI application.

General Security Environment

LogLogic LMI users are considered trusted users. The operating system and browsers used for accessing the Web GUI must be properly maintained and secured according to security best practices. SSH access on the appliance is enabled by default to enable configuration and maintenance of the appliance. However, the shell and CLI user accounts are separate to enable a clean separation of duties. Thus, the shell account must be treated as a super-user account whose password is heavily guarded and seldom used. A proper X509 certificate, signed by a CA that is recognized by the browsers used, must be installed in place of the default certificate from the initial setup.

Selection of passwords

Specify a strong password for the LogLogic LMI administrator accounts (super user and root user), as these users perform all the critical operations. If the administrator account password is hacked, it can lead to damage or destabilization of the enterprise. The password should ideally consist of a minimum of eight characters, with a mix of uppercase and lowercase characters, numbers, and special characters.

Data Center Placement

Security and data protection recommendations when deploying your data center on-premises or on the cloud are as follows:

On-premises

While following security best practices, when deploying your LogLogic LMI to the data center, it is recommended that you place LogLogic LMI behind a firewall and other security devices. This adds extra layers of security in protecting your data, the appliance is protected by a layer of network security, and each port in use has access control lists (ACLs) that restrict access to the least range of IPs.

On the Cloud

Just as with an on-premises deployment, when deploying your LogLogic LMI to the virtual data center, it is recommended that you place LogLogic LMI behind a firewall and other security services. Running your LogLogic LMI in the same vPC as your core services provides not only additional protection but also better performance for data collection. The appliance is protected by a layer of network security, and each port in use has ACLs that restrict access to the least range of IPs.

Backups

Backups must be exported to a secure location or put off-line and rotated to ensure quick recovery in case of failure. This also maintains a history on items such as data file checksums, which ensures that the files have not been tampered with in case of any suspicion.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the [TIBCO Product Documentation](#) website, mainly in HTML and PDF formats.

The [TIBCO Product Documentation](#) website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

The following documentation for this product is available on the [TIBCO LogLogic® Log Management Intelligence Product Documentation](#) page.

- *TIBCO LogLogic® Log Management Intelligence Release Notes*
- *TIBCO LogLogic® Log Management Intelligence Administration*
- *TIBCO LogLogic® Log Management Intelligence Configuration and Upgrade*
- *TIBCO LogLogic® Log Management Intelligence Hardware Installation Guide*
- *TIBCO LogLogic® Log Management Intelligence Log Source Report Mapping*
- *TIBCO LogLogic® Log Management Intelligence Security Guidelines*
- *TIBCO LogLogic® Log Management Intelligence SSD Hardware Field Installation*
- *TIBCO LogLogic® Log Management Intelligence Syslog Alert Message Format Quick Reference*
- *TIBCO LogLogic® Log Management Intelligence User Guide*
- *TIBCO LogLogic® Log Management Intelligence XML Import/Export Entities Reference*
- *TIBCO LogLogic® Enterprise Virtual Appliance Quick Start*

Other TIBCO Product Documentation

The following documents for TIBCO LogLogic® Log Source Packages are available on the [TIBCO eDelivery website](#) or [TIBCO Support website](#) after logging in.

- *TIBCO LogLogic® Log Source Packages Release Notes*
- *TIBCO LogLogic® Log Source Packages Installation and Upgrade*
- *TIBCO LogLogic® Log Source Packages Log Configuration Guides*
- *TIBCO LogLogic® Log Source Packages Log Collector Guides*

How to Contact TIBCO Support

Get an overview of [TIBCO Support](#). You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the [TIBCO Support](#) website.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to [TIBCO Support](#) website. If you do not have a user name, you can request one by clicking **Register** on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the [TIBCO Ideas Portal](#). For a free registration, go to [TIBCO Community](#).

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