

Wind River® Intelligent Device Platform XT EMS Profile

RELEASE NOTES

1.0

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Overview

The Edge Management System is a component of Wind River Intelligent Device Platform XT 2.0.3 or later.

Product Introduction

The Edge Management System (EMS) is a cloud-based IoT platform that enables IoT devices to securely connect to a centralized console, providing device management and solution extensibility. The Edge Management System Profile builds on the connectivity and security capabilities of the Wind River Intelligent Device Platform XT, and combines cloud connectivity to provide a complete end-to-end solution for IoT devices to facilitate capabilities such as data capture, rules engine, and configuration.

The *Wind River Intelligent Device Platform XT EMS Profile Release Notes* introduce you to the key features of the latest release of this product. You should also refer to the *Wind River Intelligent Device Platform XT Release Notes* and the *Wind River Linux Release Notes*. The EMS Profile documentation does not describe IDP XT or Linux features, unless they are used specifically to support EMS.

Feature Summary

The main benefits of EMS are to reduce service costs by enabling remote maintenance and management of distributed assets. EMS builds on the hardware and software features of Wind River Linux and IDP XT. The following key features are available in this release:

- EMS-specific enhancements to the IDP XT and Linux configuration and build capabilities to build and configure the EMS agent in the rootfs
- remote data capture through the EMS agent, which is configured during device onboarding
- cloud-based rules engine to process and act on data
- over-the-air software updates of the EMS agent and its configuration, and updates to software packages on the device using the secure package management capabilities of IDP XT
- Mashery REST APIs to build custom applications for device management and data capture
- sample configurations and scripts

Some features use cloud and agent capabilities provided by Axeda. The documentation does not describe Axeda features, except through work flows and examples. Axeda documentation is available with your product installation and on the Wind River Knowledge Library. For more information, see [Documentation](#) on page 6

Installation and Licensing

For information on configuring product licenses, see the Wind River product installation and licensing guides at the following website:

<http://www.windriver.com/licensing/documents>

For information on activating your products, go to the Licensing Portal at the following website:

<http://www.windriver.com/licensing>

Documentation

Documents are available in HTML and PDF format in your product installation. For a complete list of available documents, see the *Wind River Intelligent Device Platform XT EMS Profile User's Guide: Where to Find Information*.

All documents are also available in HTML and PDF format on the Wind River Knowledge Library at the following website:

<http://knowledge.windriver.com>.

For access to the EMS and Axeda documents, log in and select **Internet of Things > Intelligent Device Platform XT 2.0 > EMS Profile 1.0**.



NOTE: This documentation will be updated as necessary after release. Confirm that you are using the latest version of the documents.

Certificates and Credentials

The email you received with the details of your purchase order of the EMS Profile includes the following:

- your EMS Server URL
- certificates and credentials for the EMS Server
- credentials for the Wind River Mashery Web site
- an API key for the Mashery APIs

To install your certificates, in a web browser, navigate to your EMS Server and log in with the user name and password you received. For instructions about installing your certificates, see *Using SSL/TLS with Axeda Platform, 6.8*, which is available with the documents in your installation and on the Knowledge Library .

To access the Mashery I/O Docs Web site, use the Mashery API use name and password you received and log in to the following Web site:

<http://windriver.mashery.com>

The Mashery API key controls which endpoints the application can access. You must provide the API key in each Mashery API call.

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Requirements

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Host Requirements

Learn about supported hosts for EMS 1.0.

Linux Hosts

The EMS Profile for the Intelligent Device Platform XT supports the same Linux hosts as IDP XT 2.0.3. For more information, see the *Wind River Intelligent Device Platform XT Release Notes, 2.0*.

Windows Hosts

To run the Axeda Builder to configure the EMS agent, you need a Windows host computer or virtual machine. EMS 1.0 supports Windows 7 SP1 32/64-bit operating systems.

Target Requirements

Learn about supported targets for EMS 1.0.

The EMS Profile for the Intelligent Device Platform XT supports the same targets as IDP XT 2.0.3. For more information, see the *Wind River Intelligent Device Platform XT Release Notes, 2.0*.

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Usage Caveats

Learn about usage caveats for this release of the Edge Management System.

Scripts Run with Root Privileges

The EMS agent has root privileges, and therefore, scripts delivered to the agent from the EMS Server run with root privileges. To avoid possible security issues, you have the following options:

- Restrict user access to the EMS Server.
- Implement a custom handler to validate file uploads and downloads (see *Extending Axeda Agents: A Reference for Customizing the Agents, 6.8.0: Developing a Custom Handler*).

Remote Access Disabled by Default

For security reasons, SSH access is disabled in the rootfs. If you need to enable SSH to ensure remote access to deployed devices (for example, to recover a device if it loses contact with the server), ensure that you implement public-private key authentication for proper security. Additionally, ensure that you change the default root password when you configure your platform project (see *Wind River Intelligent Device XT EMS Profile User's Guide: Building and Deploying Your Platform Project*).

RPM Upgrades Fail Silently

If you upgrade to a newer version of an RPM and use the **upgrade** operation, ensure that you set the **priority** option above zero in your JSON script file. You can also remove the priority

option. To verify that the upgrade failed, in the Uploaded Files section of the asset dashboard, click the link `/tmp/wra_sw_mgr_dbg.log` and check for the following message:

```
No interesting upgrades available  
warning: 'packageName' matches no installed packages
```

Deployment Channels Not Removed

The current package upgrade script does not support removal of channels. Channels appended to an existing list may create conflicts with other package deployments, depending on the priority settings. To clean up stale channels, create a sequence file with the following instruction:

```
smart channel --remove channelName
```

Deploy the sequence file with the instruction to run the **register_scripts** script. You can then run the script to clean up the specified channel. For more information about creating sequence files, see the *Axeda Platform Script Developer's Guide*, 6.6.

Known Problems and Latest Information

Learn about how to obtain the latest information for the Intelligent Device Platform XT EMS Profile.

The most current information and known problems for the EMS Profile are available from the Wind River Knowledge Library at the following website:

<http://knowledge.windriver.com>

You should also refer to the information for IDP XT 2.0.3, Wind River Linux 5.0.1, and Workbench 3.3.

The following lists some known problems with EMS. Defect numbers, where applicable, are given in parentheses after the description of the issue.

Occasional Firmware Update Failures on Cross Hill Board (EMS1-110)

Capsule updates from Linux fail periodically. To recover, reboot the board and run the capsule update procedure again.

SSL 3.0 Warnings (EMS1-111)

Security tools may report the following message:

```
POODLE SSLv3 Protocol CBC ciphers Information Disclosure Vulnerability 4.3
```

This is a known issue with the SSL 3.0 protocol, and is not specific to the Edge Management System. When a fix is available, it will be included in the next RCPL. For more information about this issue, see the following Wind River security alert:

[Wind River Security Alert for Wind River Linux SSLv3 POODLE vulnerability](#)