GE VERNOVA

EDGE SOFTWARE & SERVICES

EDGE OS

User Guide

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doc@ge.com

Contents

OPC-UA Protocol Adapter Release Notes 24.07.0

Enhancements

This release contains the following enhancements.

OPC-UA Data Quality Status

When OPC-UA data quality status is processed, bad or uncertain data will be forwarded as a null value with the quality flag set to "0" to Time Series.

Polling Mode

Polling mode may now limit the number of nodeID objects per message request. Add this number to "max_operations_per_service_call" in the options block. (The default is "0", which means no limit and the total count of nodeID objects will be put into a single read polling request.)

NodeID Specification

NodeID specification in opaque or binary mode is now supported. For example:

- ns=2; g=<UUID>; or
- nss=2; g=<Base64 string>

Alpine Base Image

Updated the Alpine base to v3.20 from 3.14 to fix security and stability issues through component upgrades.

General Improvements

Various internal stability and performance fixes.

Bug Fixes

The following bug fixes were implemented in this release.

Subscription Mode Halting

Fixed a condition where subscription mode could halt when repeated nodeID subscription requests failed.

Edge Agent on Ubuntu Release Notes 24.04

Host OS Compatibility

- Ubuntu 22.04-LTS (Jammy Jellyfish)

Enhancements

The following Enhancements were implemented in Edge Agent Ubuntu 24.04.

AWS-signed Edge Device Certificates

Support has been added for Edge device certificates signed by AWS root certificate authority. This change applies to both new device enrollment and renewal when using Edge Manager for Edge device fleet management. No end-user action is required as a result of this change.

General Improvements

Internal stability fixes and component library updates.

Known Issues

This release contains the following known issues.

Debian Package Download

Installation from an apt repository has been deprecated. Please download the Debian package from https://dig-grid-artifactory.apps.ge.com/ui/native/predix-edge-agent-deb/pool/ and follow the Install From Downloaded Package *(on page   )* instructions.

Debian Package Re-installation

When re-installing (not updating) the Edge Agent on Ubuntu debian package, remove the following users and groups: eauser, eagateway. For example:

- `sudo userdel -r eauser`
- `sudo groupdel eauser`

Edge Release Notes 2.10.0

Upgrade Path

Edge OS must be installed incrementally; you cannot skip a minor release (i.e., if you are running version 2.8.0, you must first install 2.9.0 and then 2.10.0). You do not have to install every patch release (indicated by a change to the third digit in the release number).

> ✎ **Note:**
> If your installation has multiple ethernet interfaces, you can upgrade directly from 2.8.x to 2.10.0.

New Features and Enhacements

This release contains the following enhancements:

New Root Certificate Authority (CA) Support

Edge now supports a new root CA for GE Vernova Cloud Edge Manager and other cloud-based applications, such as APM.

> ❗ **Important:**
> For continued operation with Edge Manager, you must upgrade to this version to support a new root CA (AWS). Devices that have not been upgraded will not be able to utilize GE Vernova Cloud services once a revised End of Support/End of Life is announced on earlier Edge OS versions.

Security Improvements

- Updated the kernel and underlying base libraries to Yocto 5.16 (Kirkstone).
- Added OpenSSL 3.0 support.
- Implemented a patch for the Terrapin SSH attack (CVE-2024-48795) and removed legacy cipher support.

General Improvements

A number of internal changes were made to improve stability and performance.

Root Password Removed (*development image only)

The root login password has been removed to simplify usage with test automation; login as root no longer responds with a password prompt.

OSI-PI Protocol Adapter Release Notes 21.11.0

Enhancements

This release contains the following enhancements:

Application Size

The size of the application has been reduced to 16MB (from 51MB).

Bug Fixes

This release contains the following bug fixes:

Digital Signal Support

The Digital Signal Support parameter `digital_output_type` can now be expressed as one of:

- bool
- string
- uint64 (default)

Webid/Pi Name

Both `webid` and `piPointName` are supported in the config json file.

Cloud Gateway Release Notes 21.07.0

Enhancements

This release contains the following enhancements:

Time Series Token File

There is a new **timeseries/proxy_url** option, which sets a separate proxy server for the UAA. This change allows for the accommodation of architectures where the time series destination is on a separate network from Edge Manager. For additional information and configuration details, see Time Series Publisher Block Config *(on page   ).*

General Improvements

Improvements have been made to the Cloud Gateway's performance and stability.

Deadband Application Release Notes 20.4.1

The 20.4.1 version of the Deadband application behaves and functions the same as the 20.4.0 version. The only change is the following bug fix:

App Signing

This release contains an app signing fix for Edge Manager deployment.

OPC-UA Protocol Adapter Release Notes 21.10.0

Enhancements

This release contains the following enhancements.

New Configuration Options

The following configuration options have been added for the OPC-UA blocks:

- session_timeout
- connect_timeout
- watchdog_interval
- watchdog_timeout
- publishing_interval (used only by blocks that support subscription)
- sampling_interval (valid only for OPC-UA adapters that subscribe to tags; otherwise the option is ignored)
- lifetime_count (used only by blocks that support subscription)
- max_batch_size (used only by blocks that support subscription)
- max_nodes_per_sub (valid only for OPC-UA adapters that subscribe to tags; otherwise the option is ignored)
- queue_size (valid only for OPC-UA adapters that subscribe to tags; otherwise the option is ignored)

For more information, see Configuration Properties for OPC-UA Protocol Adapter *(on page)*.

General Improvements

A number of other changes have been made to improve the adapter's synchronization and stability.

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EGD Dynamic Binding Protocol Adapter Release Notes 21.03.0

New Features

Support for Multiple Producers

The EGD dynamic binding protocol adapter has been extended to support multiple producers, each identified by their producer id and their associated configuration server. Users will need to update their configuration files, as the format has changed in a way that is not backwards compatible. See EGD Dynamic Binding Protocol Adapter *(on page   ).*