TMPropagator

Release 3.0.0

Release Note

20th September, 2019

Document Signature Table

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1   SCOPE

The document is the release note accompanying release 3.0.0 of the TMPropagator. This release is a major update to implement the changes requested to support the EPS-SG project, as part of Contract Change Notice No. 9 "TMPropagator adaptations for EPS-SG".

2   ISSUES FIXED BY THIS RELEASE

The following JIRA issues are considered fixed by this release;

TMPROP-2   [NCR/2025] Cannot create new entity when server configuration file is empty

TMPROP-4   [AR/161] TMProp gateway reconnection interval not consistent with settings

TMPROP-18   [AR/2803] TMPropagator gateway does not allow changing the server IPs

TMPROP-52   [AR/3275] TMPropagator operational server for MSG and EPS cannot start

TMPROP-47   Disabling a user has no effect

TMPROP-72   [AR/165] Problem ingesting database in TMPropagator

TMPROP-73   Parameter capture functionality is not usable

3   NON-CONFORMANCES STILL OPEN AFTER THIS RELEASE

TMPROP-41   [AR/249] Unable to display a Jason-CS parameter in the TMPropagator

4   IMPROVEMENTS AND NEW FEATURES UNRELATED TO NON-CONFORMANCES

4.1   New Features Implemented as a Result of CN09

- A new TC/Events Source Simulator has been implemented. This simulates the new XML messaging interface used to receive TC/Events data from the EPS-SG MCS.

- Two new stream handler types have been added to the Gateway to support TC History and On-board Events data streams respectively.

- The Server archive has been modified to support storage of both TC History and On-board Events. The standard 5 minute blocks are still used, but the archive file format is new.

- Old code which was only needed to support the EPOCH commercial interface for obtaining TM from the EPS MCS has been removed.

- The client/server interface has been expanded to allow the client to request and receive the TC/Events data.

- Two new display types have been added to the client to display TC History and On-board events respectively.

- The Visio-based mimics editor has been replaced with a standalone mimics editor which has no dependency on commercial software products.

4.2   Other New Features

- The Gateway architecture has been simplified, and now all stream handlers run in the main Gateway application. This avoids the need for inter-process communication and stopping and starting of multiple processes. This is possible because support of the old EPOCH interface, which required each stream handler to be in its own process, is no longer required. All communication between a single Gateway (all streams) and Server instance now takes place over a single TCP connection.

- Logging on the Gateway and Server has been updated to use the flexible Apache log4net library, which allows the location, file format and logging level to be modified without requiring software recompilation. Automatic sending of e-mails on severe errors is also supported.

- An archive file dump utility has been developed which allows the content of a binary archive file to be dumped to text. This is useful for debugging purposes.

5   INSTALLATION INSTRUCTIONS

Please see the document *Configuration Manual for Gateway, Server and Dev Machine* for full installation instructions

6   COMPATIBILITY TO PREVIOUS VERSIONS

The Gateway to Server interface has been modified in this release, so the new Server will <u>not</u> work with an older version of the Gateway, and vice-versa.

The Client/Server interface has also changed, so older client versions will not work with the new Server, and vice-versa.

The archive file format on the server has changed. Archive files written with a previous version can still be read with the latest server version, but not vice versa.

7   SYSTEM REQUIREMENTS

7.1.1   Operating System

The TMPropagator Gateway and Server require Windows Server 2008 R2 or higher as the operating system.

For the clients, Windows 7 or higher is required.

7.1.2   .NET Framework 4.6

All machines where any module of the TMPropagator software is installed requires the .NET Framework 4.6 (or higher) as a prerequisite.

Download and install the latest Microsoft .NET Framework version (4.8 at time of writing) for the machines operating system from the Microsoft web site. It is <u>not</u> necessary, or desirable, to uninstall the previous .Net versions first. This step might not be necessary if .NET 4.6 or higher is already installed. This can be verified by following the procedure given here;

https://docs.microsoft.com/en-us/dotnet/framework/migration-guide/how-to-determine-which-versions-are-installed

7.1.3   Hardware

A minimum of 8 GB memory is recommended for the Gateway and Server machines. This should be increased if many projects are to share the same hardware.

The disk usage depends almost entirely on the telemetry data rate and the desired length of archive. It is suggested to compare the anticipated data rates and archive duration of new projects to older projects when estimating disk space requirements.

For the clients, any modern PC hardware should be sufficient. A minimum 4 GB memory is recommended.