OMICRON Test Universe

What's New in version 4.30

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Contents

1   Introduction

Test Universe 4.30 is a major software release.

Test Universe 4.30 can work with test files created with previous *Test Universe* versions, whereas files created/edited with *Test Universe* 4.30 cannot be opened with previous versions.

The main new features are listed in chapter **2. New Features**. Further changes, improvements, and bug fixes are listed in chapter **3. Changes, Improvements, and Bug Fixes**.

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2 New Features

2.1 New Test Universe Start Screen

The *Test Universe* start screen has been redesigned to simplify access to OMICRON *Control Center* (OCC) test documents, the *Protection Test Library* (PTL), and often used test modules.

The new *Test Universe* start screen comprises of four main buttons:

*   **New Test Document**

    Creates new *Control Center* test documents (OCC documents).

*   **Open Test Document**

    Opens existing *Control Center* test documents (OCC documents).

*   **Test Modules & Tools**

    Grants access to test modules and tools. Arranged in a similar structure as the previous start screen.

*   **Setup & Support**

    Grants access to the setup & support section.

Other new features:

*   User-definable **Favorites** for quick access to commonly used test modules and tools.

*   Direct access to recently used test documents.

2.2 Automatic Assessment Improved

The automatic assessment in *Control Center* provides a quick overview of the test results. In certain cases, however, test of modules were assessed as **passed** although the result was due to be verified by the test engineer one more time.

*   Test state **"Executed, assessment pending"**
    The module has fully executed all of the test steps, but no automatic assessment could be done because there was no assessment criterion defined.

    This new assessment is available for *Advanced Transplay*, *Ramping*, *Pulse Ramping*, *State Sequencer*, *PQ Signal Generator* and *IEC 61850 Client/Server*.

- Test state **"Passed, partially executed"**
  The module has fully executed all test steps that could be executed and assessed them as **passed**. However, at least one of the defined test steps or points could not be executed. Typically, this happens when a test step or point is out of range.

  This new assessment is available for *Distance* and *Advanced Distance*, *Power* and *Advanced Power* and *Overcurrent*

- Test execution blocked when no valid test points are defined.

  You cannot start a test, when no valid test points were defined. For such a case, **Start/Continue** on the **Home** tab has always been disabled. New in this context:

  - Tests that are to be executed from *Control Center* now remain in test state **idle**.

  - The *Control Center* Status History will show a status message **Test could not be performed: No valid test points defined**.

  This applies to the test modules *Advanced Distance*, *Overcurrent*, *Power* and *Advanced Power*, and *Distance*.

2.3   New Configuration of Sampled Values

Support of new additions and features of IEC 61869-9 and IEC 61850-9-2 Ed2.1:

- Configurable datasets: The content of the Sampled Values (SV) dataset is configurable; it can contain up to 32 values.

- Frequently used optional fields can be configured.

- The SV output is independent from the output of analog values.

- With the *Test Universe* software, a CMC can generate up to 3 SV streams, regardless whether the LLO-2 option is present or not.

- The configuration revision (ConfRev) and the sign of residual/zero sequence values can be adjusted.

Note: A NET-2 interface is needed to make use of these new features. Alternatively, the previous (TU 4.20 and earlier) way of generating SVs can still be used.

2.4   New Options for Testing with the IEC 61850 Client Server Module

- Added support of virtual binary outputs.

- Support control services as defined in IEC 61850.

2.5   Updated PQ Templates

- Correction of minor inaccuracies, for example, the timing for tests of flicker measurement during an occurrence of phase jumps has been optimized.

- The overall usability has been improved by, for example, reworked program dialogs and an adapted structure of some templates.

- The test procedure has generally been enhanced by optimizing the test times (pre-incident, incident, post-incident times).

- The user manual has been updated to reflect the recent changes in the test templates.

3 Changes, Improvements, and Bug Fixes

- *Advanced Distance*: Added support of virtual binary in- and outputs.

- **Hardware Configuration**: Analog outputs are organized in voltage and current systems now. Depending on the selected number of output systems, more detailed configurations are available within the Device Configuration dialog.

- *QuickCMC*: The "Start" button was greyed out if QuickCMC was embedded in OCC with protection level "Changes by Script Only" or "No Changes". This is fixed now, only for protection level "View/ Print Only" the "Start" button is deactivated.

- *Control Center*: When using Windows 10, the Phasor view graphic from the report was not exported to RTF. This is fixed now.

- *Control Center*: When a partially executed module was manually assessed to "Failed", the counter of manually assessed modules was not updated. This is fixed now.

- *Ramping*: (Customer-reported issue) New entries for assessment names were not updated in the Calculated Assessments view. This is fixed now.

- *Differential* test modules: "Add Sweep": Last point is sometimes not added to the test points table. This is fixed now.

- Automation Interface: OCC constants for the languages Czech, Indonesian, Korean, Slovak and Turkish are now documented in the help.

- *Overcurrent*: (Customer-reported issue) Characteristics exported from *O/C Characteristic Grabber* of an older *Test Universe* version can no longer be imported in *Overcurrent*. This is fixed now.

- *Overcurrent*: In reporting a shot's current magnitude had a gap between multiplier and unit which could cause layout issues for exported reports. This is fixed now.

- *Overcurrent*/*QuickCMC*: Test documents with too many trigger conditions (binary inputs) could not be executed sometimes. This is fixed now.

- *EnerLyzer*: Customer-reported issue "In *Test Universe* 4.20, selecting the save path in Trend Recording was no longer possible". This is fixed now.

- Installation: *ADMO* has been moved from *Test Universe* setup to Companion Software DVD.

- *Sampled Values Configuration*: The module will not start in offline-mode anymore if a Sampled Values stream, configured outside of *Test Universe*, is already active on the connected test set.

- *IEC 61850 Client/Server*: "Add" and "Delete" buttons for DataObjects in "Set IED" state sometimes stay disabled after clearing test results. This is fixed now.

- *IEC 61850 Client/Server*: A correct error message is shown in C/S monitor if verification of DO "Beh" fails.

- *Advanced TransPlay*: "Assessment No." field from Time Signal View is changed to "Test Run".

- Installation: "Foxit Reader" was removed from *Test Universe* setup.

- XRIO: A new import filter for SEL Grid Configurator settings (csv-file) is now available.

- XRIO: A new import filter for NR PCS-Studio settings (csv file) is now available.

- The version of *TransView* has been updated to version 4.61 SR1.

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