CA ecoMeter for eHealth - 5.0

Release Notes

Date: 03-Aug-2016

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Release Notes

The Release Notes include information about new and enhanced features, resolved and known issues, and other considerations you need to know about the release.

Revision History

Date	Description	State	Version
April 2016	**New Features:** - **BACnet Mapping Assistant** Create and update BACnet templates based on values from real devices found on the network. - Define mappings using data from scanned BACnet devices - Compare template mappings against different scanned devices - **Cosmetic enhancements** New colors and icons. - **Improved template creation flow** Template creation flow is now more intuitive, with the ability of selecting the device type at the beginning of the process. **Deprecated features:** - Modbus Serial RTU Connectivity is no longer supported.	GA	5.00
December 2015	**Features:** - **New Log for Click Targets That Update Device Variables** A new log file is added to capture events about updates to device variables using Click Targets in View Builder. All variable updates are logged in ECOMETER_HOME/apache-tomcat/logs/audit.log. Each log entry provides the event time, IP address of the user that triggered the event, user id, element name, variable name, previous variable value, new variable value, and OID in the ecoSoftware MIB. - **Modbus String Mappings** Modbus mappings can now be defined for device variables with string values. - **Internal Gateway Functions for Modbus and BACnet Devices** The following internal functions have been added for retrieving information from Modbus, BACnet, and WMI devices. These functions can be used to embed device attributes in device instance and element names. - getRegisterInt16Value() - getRegisterInt32Value() - getRegisterFloat32Value() - getRegisterBitValue() - getRegisterStringValue() - gateway.getBACnetValue() - gateway.getWMIValue() These functions are documented in the "Calculations and Functions" section of the Gateway Administration Guide.	GA	4.70

Date	Description	State	Version

- **Authentication to gatewaySummary**
  Authentication with an ecoMeter user account is now required to access gatewaySummary. Any ecoMeter user can be used for this purpose.
  When you attempt to access gatewaySummary in a browser, a dialog prompts you for the user name and password.
  If you deploy a Thrift or Web Services-based real-time server, you must add the credentials to each server entry in servers.xml. A script has been added for encrypting the password values. For instructions, see Generating Encrypted Passwords (https://docops.ca.com/display/CEM50 /Generating+Encrypted+Passwords).

- **Authentication Requirements for Real-Time Data Servers**
  You must add authentication credentials to Thrift or Web Services servers. The authentication should be in encrypted format.

- **Simplified and Improved Device Template Creation**
  It is now easier and more reliable to create device templates and template mappings:
  - Auto-indexing functions are available automatically in sequences.
  - Use table selection when you create new sequences.
  - Use the default names for sequence and variable.
  - During mapping creation, only variables that apply to the selected device type are shown.

- **Updated MIB: Device Certifications**
  New Tables:
  - ecoMeterChilledWaterPump
  - ecoMeterCondensateWaterPump
  - ecoMeterCoolingTower
  - ecoMeterExhaustFan
  - ecoMeterHeatExchangerSystem
  - ecoMeterMixedAirUnit
  - ecoMeterOutsideAirFan
  - ecoMeterParticleCount
  - ecoMeterReliefVent

  Updated Tables:
  - - ecoMeterAirHandlingUnit
    - ecoMeterChiller
    - ecoMeterWaterSystem

  Deprecated:
  - **EnergyWise No Longer Supported**
    Polling of devices using the EnergyWise protocol is no longer supported.
  - **IMFramework Data Import No Longer Supported**
    IMFramework data import is not supported in CA ecoMeter for eHealth version 5.0 or later.

Upgrades

The installation kit that is provided with this release can be used to perform a complete installation or to upgrade from CA ecoMeter for eHealth versions 4.6.00 or later. To upgrade from earlier versions, first upgrade to 4.6.00.

Before upgrading to CA ecoMeter for eHealth 5.00:

- Review Templates Handling in Upgrades (https://docops.ca.com/display/CEM/Upgrading#Upgrading-TemplatesHandlinginUpgrades) to understand how upgrades affect existing templates.

- Upgrade your CA eHealth version to 6.3.2.09. CA eHealth 6.3.2.09 requires an upgrade of the Oracle database to version 11.2.0.4.0.

- If you use PostgreSQL database on a standalone Gateway, upgrade the database to PostgreSQL 9.2.14.

Requirements

Hardware

The hardware requirements for this release are as follows:

- Minimum Server Hardware Configuration

  - Minimum Disk Space: 160 GB

  - Disk Configuration:

    - Disk 1: 60 GB

    - Disk 2: 100 GB

> ⚠ **Note:** Separate disks for database and CA CA eHealth directories are recommended.

  - Physical Memory: 8 GB (Physical Address Extension)

  - Virtual Memory: 1.5x RAM (minimum)

  - CPUs: 2 Intel(R) Xeon(R) CPU L5630 @ 2.13-GHz dual processor or faster

  - Swap partition: 8,192 MB

- Device Monitoring

  - Number of CA CA eHealth elements: 9,000

  - CA CA eHealth polling interval: 5 minutes

  - Gateway polling interval: 5 minutes

Operating Systems

The following operating systems are supported in this release:

- Windows 2008 and 2012 (64-bit)

- CentOS 6.5, 6.6 (64-Bit)

- Red Hat Enterprise Linux 5.8, 5.9, 6.x from 6.2 (64-bit)

Software

The software requirements for this release are as follows:

Server components

- CA CA eHealth 6.3.2.09

- Database:

  - Oracle 11g Database server and OOB kit 11.2.04 (included with CA CA eHealth 6.3.2.09)

  - PostgreSQL 9.2.14

- Java Runtime:

  - Version 1.8.0_71 (included with CA CA eHealth)

  - Version 1.8.0_71 (included with CA ecoMeter for eHealth)

- Application Server:

  - Apache Tomcat 7.0.55 (included with CA CA eHealth)

  - Apache Tomcat 7.0.59 (included with CA ecoMeter for eHealth

  - Web Server: Apache Web Server 2.4.10 (included with CA CA eHealth)

- Virtual Servers: VMware Workstation and ESX (any version since 2010)

Client applications

- Adobe® Reader® 7.0 (minimum)

- Adobe® Flash Player® 10.0 (minimum)

- Internet Explorer 10 (minimum)

- Firefox 30 (minimum)

- Google Chrome 41 (minimum)

⚠️ **Note:** For large deployments, Firefox and Google Chrome are the preferred browsers.

- Mobile Devices (for CA ecoMeter for eHealth Mobile UI)

  - Tablet iPad 2,3,4, iOS 7

  - Tablet iPad Mini, iOS 7

> ⚠ **Note:** Certification was performed on iPad 2 iOS 7.

Known Issues

Current Known Issues and Possible Workarounds

Tomcat Does Not Start After Standalone Gateway Upgrade

Installing a standalone Gateway as 'root' may, after a subsequent upgrade, prevent Tomcat from starting normally. To correct this, open the $ECOMETER_HOME/bin/ecoMeter file in an editor and ensure that the NH_USER parameter is set to 'root'.

Example:

Change

NH_USER=**dcim01**; export NH_USER

to:

NH_USER=**root**; export NH_USER

Run ecoMeter start.

Installer failure

After pressing the Enter key to exit the Installer ("Exit Install"), the installer hangs. Use Ctrl+C to exit the installer.

De-registration of Gateways

If a Gateway is uninstalled, it continues to display in the Gateway Manager. The workaround solution for this issue is to delete the Gateway from the Gateway Manager list.

To remove a Gateway from the list after it is uninstalled:

1. Open the Gateway Manager UI in a browser.

2. Select Gateway Manager in the explorer pane to display the list of Gateways in the right pane.

3. Select the Settings tab in the lower right-pane.

4. Select the uninstalled Gateway and click Delete Gateway.

Connecting Gateways to HTTPS Versions of ecoMeter

After installing a Standalone Gateway with Remote Authentication, some manual configuration is required to connect to an HTTPS version of the main ecoMeter server.

Follow these steps:

1. Install a Standalone Gateway with Remote Authentication.

2. Stop the Gateway Tomcat service.

3. Open ECOMETER_HOME/apache-tomcat/conf/jaas.config in an editor and specify the URL to the CA eHealth server. Then save the file.
   Example:

   ```
   EcoMeter {
       com.ca (http://com.ca).ecometer.secure.jaas.
   EhealthLoginModule required debug="false" ehealth="
   https://<eHealth server_name>:<eHealth https port>/";
   };
   ```

4. Open apache-tomcat/conf/ecometer/OpEnProperties in an editor and make the following changes:

   - **ehealthProtocol**
     Change the value from HTTP to HTTPS.

   - **ehealthPort**
     Change the port to the CA eHealth HTTPS port number. The HTTPS port number is usually 443.

   - **ehealthHost**
     Specify the CA eHealth host name or IP address.

   - **ecometerPort**
     Specify the HTTPS port number on the main ecoMeter server. The HTTPS port number is usually 8443.

   - **ecometerProtocol**
     Change the value to **HTTPS**.

   - **ecoMeterBaseUrl**
     Specify the URL for the full installation of CA ecoMeter for eHealth.
     Example: https://<ecoMeter server name>:<ecoMeter https port>

   - **ehealthPassword**
     Specify the encrypted password to CA eHealth. The default value is **3803E62CB0B21E88DF79EB8EBBB29693**.

   - **localhostBaseUrl**
     To use HTTPS on the Gateway, change the value to the new Gateway URL as configured for HTTPS.
     Example: https://<gateway name>:<gateway https port>

5. Save the OpEnProperties file.

6. To use HTTPS on the Gateway, copy the ecoMeter_cert and ecoMeter_keystore files from the main CA ecoMeter for eHealth server. Then import the certificate into the Gateway and configure Tomcat to use the keystore file.
   For step-by-step instructions, see **Enabling SSL** in the *CA eHealth Administration Guide*.

7. Start the Gateway Tomcat service.

Non-UNIX EOL Characters on Red Hat

Non-UNIX end-of-line characters *\r* and *\n* are found in Gateway files after installation on Red Hat. To remove these characters, use the dos2unix command.

Example

dos2unix *.mtf - removes EOL characters from all MTF files in the current directory.

Classloader Error Message in Catalina.out

After installation, a classloader error message displays in catalina.out. This error message can be ignored.

In part, the error message contains the following:

```
log4j:ERROR "org.apache.log4j.xml.DOMConfigurator" was loaded by [WebappClassLoader

  context: /ecoMeter
  delegate: false
  repositories:
    /WEB-INF/classes/
----------> Parent Classloader:
org.apache.catalina.loader.StandardClassLoader@26f2f761
```

Mapping Failures

If a template mapping refers to a device variable that does not exist on the actual device, an exception is thrown when you start polling the device. In most cases, this problem is resolved by correcting the mapping. As an alternative, you can add the **failedMappingDefaultValue** parameter to gateway.xml. **This applies to SNMP devices only.**

The **failedMappingDefaultValue** parameter allows you to set up a default value that is returned if there a mapping failure. Instead of throwing an exception when polling is started, ecoMeter returns the value that you specify.

Follow these steps:

1. Open ECOMETER_HOME/apache-tomcat/conf/gateway/gateway.xml in an editor.

2. Add the **failedMappingDefaultValue** parameter and default value anywhere in the gateway element. Enclose the value in quotation marks. The following example, the default value is 6666:

```
<gateway xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" name="
<gateway name>" uuid="71e32e60-0c82-495a-9f7f-85bcd399b575" snmpPort="
161" snmpCommString="<value>" writeXmlSummary="true" failedPollDefaultValue="
-999" failedPollUseDefaultString="poll failed" failedMappingDefaultValue="6666"
webHost="10.0.0.4" webPort="< port>" webUrl="http://<hostname>:< port>
/ecometer" authenticationType="" xsi:noNamespaceSchemaLocation="Gateway.xsd"/>
```

3. Save the file and restart the gateway.

Notes:

- The **failedMappingDefaultValue** parameter is not a substitute for **failedPollDefaultValue.** **failedPollDefaultValue** applies to problems communicating with a device.

- To ensure consistency, the **failedMappingDefaultValue** should be added to all Gateways.

Irrelevant Log Subdirectory

If the *$ECOMETER_HOME/apache-tomcat/logs/logs* directory is created, you can delete it. This subdirectory is not used.

Apparent Power Variables Removed from DCIM MIB

The following variables have been removed from the RackPduTable.

- ApprntPwrA

- ApprntPwrB

- ApprntPwrA

After upgrades to 4.6.00, any mappings referencing these variables must be removed from the template before devices can be successfully polled.

Missing Variables in Live Reporting

In some cases, missing variables in CA eHealth Live Reporting result in reporting failures. Follow these steps to correct this problem:

1. Execute **ecoUpdateDb** in the $ECOMETER_HOME/bin directory.
   This script sets the following CA eHealth parameters:

   ```
   reportCenter.forceUpdateElementTypes Yes
   reportCenter.statsInstalled Yes
   ```

2. You can verify these parameters by executing **nhParameter -list** in the $NH_HOME/bin directory.

Non-ASCII Characters in Device Names

Devices are saved in CA eHealth using element names that are created by concatenating various device instance properties, such as device name, location, device type, and vendor. The exact values that are concatenated depend on the naming configuration defined in the template. Therefore, you must ensure that the values used to create element names in CA eHealth are restricted to the following characters:

- A-Z, a-z

- 0-9

- Dash (-)

- Underscore (_)

- Period (.)

For parameters values that are not used in creating element names, you can use an ISO-8859-1 (Latin1) encoded characters.

For more information about element names, see "Device Element Names" in the *CA ecoMeter Gateway Administration Guide*.

SocketTimeoutExceptions in catalina.out

When timeouts occur while polling Modbus devices, stack traces from java.net. SocketTimeoutExceptions are being generated to the catalina.out log. This is a general networking exception and requires no remediation.

Element Count When Adding Devices to Groups

If you select multiple device folders when adding devices to groups, the New Device Group dialog may not show the correct number of components. When the group is saved, the correct component count displays the device groups list.

Exports of Polling Data

Note the following limitations when you choose the file type for exporting polling data from the user interface:

- **CSV**
  Only supports Latin-1 characters. The export succeeds, but non-Latin 1 characters are replaced with question marks.

- **XLS (Excel 97)**
  Supports Unicode characters, but is limited to 65,536 rows. The export fails if the maximum number of rows is exceeded.

- **XLSX (Excel 2007)**
  Supports Unicode characters, but requires a large amount of memory. For example, an export of more than 500K rows uses more than 3 GB of memory.

HTTP 500 Server Error After Upgrades

The first time you launch the user interface after an upgrade, the browser may display the following error message:

500 Call Failed on the Server

To resolve this issue, clear the browser cache.

Special Characters in Filters

Intermittent errors have been experienced when using special characters as filter values on the Select Devices dialog. To resolve this issue, clear the filter value and enter a new value without special characters.

Word Wrapping in View Builder Labels

All View Builder labels employ word wrapping by default. If you want to disable word wrapping for a label, use an inline CSS.

Example:

```
<div style="white-space:nowrap">
-- label text here --
</div>
```

Upgrades to CA CA eHealth 6.3.2.07

Upgrading to CA eHealth 6.3.2.07 fails if the CA eHealth database was previously created under the Oracle_Home directory. To avoid this problem, move the database to a location outside Oracle_Home before performing the upgrade. Contact CA Support is you need assistance moving the database.

To verify the location of the CA eHealth database, use the nhDbStatus utility or the database status page on OCE.

Remote Gateway Does Not Register With Gateway Manager After Upgrade to CA ecoMeter for eHealth Version 4.7

After you upgrade CA ecoMeter for eHealth from Version 4.6 to Version 4.7, remote Gateways referencing to Version 4.6 fail to register with the upgraded Gateway Manager and do not appear in the Gateway Manager UI.

To resolve this issue, we recommend that you also upgrade the remote Gateway to Version 4.7. This upgrade restarts Tomcat and re-registers the Gateway with the Gateway Manager.

Alternatively, restart the Tomcat service of the remote Gateway to re-register it with the Gateway Manager. Use this option as a workaround only, because you are running Gateway Manager and remote Gateway with different versions.

Known Issues Resolved

This section describes known issues that were resolved in this release.

Test Devices Causes Polling Errors

In a previous release, the Test Devices button on the Instances tab caused polling errors. This problem was corrected.

Third-Party Licenses

This list details all third-party software license agreements for applications that are included in this CA ecoMeter for eHealth release. To see each license, click here.

- ActiveMQ_5.13.0

- Apache_Commons_BeanUtils_1.9.2

- Apache_Commons_Collections_3.2.2

- Apache_Commons_Daemon_1.0.15

- Apache_Commons_FileUpload_1.3.1

- Apache_Commons_Lang_3.3.2

- Apache_Commons_Logging_1.2

- Apache_FOP_2.0

- Apache_Math3_3.2

- Apache_Tomcat_7.0.59

- asm-all-repackaged_2.1.88

- ASM_5.0.4

- Avalon_Framework_4.2.0

- Batik_1.8

- Bean_validation_JSR-303_1.0.0_GA

- Bouncy_Castle_1.45

- cglib_2.1.88

- Commons_Cli_1.2

- Commons_Codec_1.10

- Commons_Collections_VFS_2.0

- Commons_Configuration_1.10

- Commons_httpclient_3.1

- Commons_IO_2.4

- Commons_Jelly_1.0

- Commons_Jexl_1.1

- Commons_net-3.3

- CPAN_Perl_5.14.2

- dom4j_1.6.1

- EclipseLink_2.5.2

- ezmorph_1.0.6

- fastutil_6.6.2

- geronimo-jms_1.1_spec-1.1.1_jar_1.1.1

- geronimo_j2ee-management_1.1_spec_1.0.1

- google-gson_2.3.1

- Google_Web_Toolkit_2.6.1

- Guava_18.0

- guice_3.0

- Hawtbuf_1.11

- hibernate-jpa-2.0-api_1.0.1

- hk2_2.1.88

- httpclient_4.4.1

- httpcore_4.4.1

- httpmime_4.4.1

- J-INTEROP_2.08

- jackson-afterburner_2.6.1

- jackson-annotations_2.6.3

- jackson-core_2.6.3

- jackson-databind_2.6.3

- jackson_2.6.1

- jamod_1.2

- javax.inject_2.1.88

- javax.ws.rs-api_2.0.1

- Java_CIFS_Client_Library_(JCIFS)_1.3.17

- Java_Deep-Cloning_Library_1.9.0

- Java_Mail_1.5.3

- JAXB_2.2.11

- jcl-over-slf4j_1.7.12

- Jersey_2.0

- Jettison_1.3.3

- Joda-time_2.3

- js-engine.jar_20111108

- js.jar_1.7R2

- JSch_0.1.53

- json-lib_2.4

- json-simple_1.1

- JSON_20090211

- JSON_Path_0.8.1

- JSON_Smart_1.1.1

- launch4j_3.0.2

- Log4j_1.2.17

- Log4j_2.2

- mapdb_1.0.7

- neethi_3.0.3

- Objenesis_1.2

- OpenCSV_2.3

- Openforecast_v.0.5.0

- Oracle_Database_11g_Release_2_11.2.0.4)_JDBC_Driver_11.2.0.4

- Oracle_Java_Runtime_Environment_(JRE)_1.8.0_71

- osgi-resource-locator_1.0.1

- POI_3.11

- PostgreSQL_9.2.14

- PostgreSQL_JDBC_Driver_9.3-1103

- PostgreSQL_JDBC_Driver_9.3

- Quartz_2.2.1

- RXTX_2.1.7

- Simple_Logging_Facade_for_Java_(SLF4J)_1.7.0

- SNMP4J-Agent_2.2.2

- SNMP4J_2.3.1

- Stax2-api_3.1.4

- StAX_1.0.2

- super_csv_2.0.1

- tomahawk_1.1.5

- utgard_0.9.0

- Woodstox_4.4.1

- WSDL4J_1.6.3

- xercesImpl_2.9.1

- xml-apis_1.3.04

- xml-resolver_1.2

- XMLBeans_2.6.0

- Xml_Schema_Core_2.2.1

- xom_1.1

- XPP3_1.1.4c

- XStream_1.4.7

- zip4j_1.3.2