Certified Capability List

This Capability List is based on a certification session performed by the *TALQ Certification Tool (v2.4.0) on 2022-03-21 10:51:56.733 +0100.*

The Capability List is a consolidated list of TALQ features which are implemented in a product.

The tool has succesfully performed *54 tests*.

Product details

Product Name	Datek Light Control CMS
Company	Datek Light Control AS
Type	CMS
URL	https://localhost
Notes	
Generated on	2022-03-21 10:51:56.733 +0100
Supported profiles	• Lighting
API version certified:	2.4.0
Certification performed by app version:	2.4.0

Capability list

Security

Enabled ✔

Functions

Basic

The Basic function describes the properties related to the physical asset to which the logical device is associated, such as identification (assetId) and location information.

Attributes

#	Attribute	Description
✔	displayName	Display name of the asset.
✔	assetId	Customer identifier of the asset. If multiple devices have the same assetId it means they belong to the same asset.
✔	serial	Serial number of the device.
✔	hwType	Hardware type of the device.
✔	hwVersion	Hardware revision of the device.
✔	swType	Software type of device. This attribute may be useful if the same hardware supports multiple firmware versions with different functions.
✔	swVersion	Software version installed on the device.
✔	installationDate	The installation date of Physical Device.
✔	location	Latitude, Longitude and Altitude. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new LocationSensorFunction.location instead.]
✔	deviceReset	The physical device containing the logical device was reset.
✔	softwareUpdating	Indicates software updating is in progress.
✔	hardwareUpdated	Indicates that hardware associated with this logical device has been updated.
✔	batteryMode	Device operating in battery mode.
✔	installationMode	Device is being installed.
✔	maintenanceMode	Device is undergoing maintenance, where maintenance may include hardware or software related maintenance actions.
✔	batteryShutdown	Indicates the device has shut down due to battery discharge.

✔	timeZone	Time zone of the device. Time zone may be expressed in two formats. <timezone> where <timezone> is a time zone as defined in the zone.tab of the IANA timezone database [IANA]; and stdoffset[dst[offset][,start[/time],en d[/time]]] as defined by the Open Group for posix systems [POSIX]. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new TimeFunction.timeZone instead.]
✔	currentTime	Current time of the device defined as local time with time zone designator. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new TimeFunction.currentTime instead.]
✔	commandConfirmation	Allows the CMS to reboot, factory reset or configuration reset of the device. Before rebooting or resetting the device this attribute has to be true. Default value = false
✔	reboot	Reboot the device. This operational attribute requires the commandConfirmation attribute value to be set to true.
✔	factoryReset	Reset the device to factory settings. This operational attribute requires the commandConfirmation attribute value to be set to true.
✔	configurationReset	Reset the device configuration settings. This operational attribute requires the commandConfirmation attribute value to be set to true.
✔	operatingHours	Number of operating hours of the device.

Events

#	Event type	Description
✔	deviceReset	The physical device containing the logical device was reset
✔	softwareUpdating	Indicates software updating is in progress
✔	hardwareUpdated	Indicates that hardware associated with this logical device has been updated
✔	batteryMode	Device operating in battery mode
✔	installationMode	Device is being installed
✔	maintenanceMode	Device is undergoing maintenance
✔	cabinetDoorOpen	Cabinet door is open. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new SegmentMonitor.cabinetDoorOpen instead.]
✔	batteryShutdown	Indicates the device has shut down due to battery discharge
✔	locationUpdated	Indicates the location of a device has changed.

Communication

The Communication Function contains attributes related to the communication within the ODN, and between ODN devices and Gateways. Although communication within the ODN is outside the scope of the TALQ Smart City Protocol, this Function enables access to a minimum set of configuration and state information of the ODN communication interface in order to facilitate system management from the CMS.

Attributes

#	Attribute	Description
✔	communicationType	Type of communication technology implemented by the ODN (e.g. power line, wireless).
✔	logicalAddress	Logical address for communication within the ODN scope (IP address, Short Address, ...).
✔	altLogicalAddress	Additional logical address used for communication within the ODN, for instance, group communication address (not a TALQ group address).
✔	physicalAddress	Physical address of the device. For example, IEEE MAC address. This attribute can be used to map between logical and physical devices. The format is specific to the ODN implementation.
✔	parentAddress	TALQ Address of the parent device, e.g. gateway. It shall point to a specific communication function.
✔	timeToLive	Number of times a packet can be forwarded within the ODN.
✔	repeatingEnabled	Describes whether repeating functionality is enabled at the device.
✔	transmitPower	Transmit power used by the device within the ODN.
✔	numberOfHops	Number of hops between the gateway and the ODN device represented by the device including this function.
✔	communicationQuality	Indicator of the quality of the communication with the device. 100% means good quality.
✔	communicationFailure	This attribute is updated by the ODN when the communication function is not operating as expected.
✔	applicationType	Application Type of the communication function depending on the use case. E.g.: PL Communication Monitor

Events

#	Event type	Description
✔	communicationFailure	This event is generated by the ODN when the communication function is not operating as expected

Gateway

The Gateway function includes the necessary attributes to enable the communication between the CMS and the Gateway according to the TALQ Specification.

Attributes

#	Attribute	Description
✔	cmsUri	Base URI for TALQ communication that allows the Gateway to access the CMS. Must be an absolute URI. Other URI's for accessing CMS can be relative to this base.
✔	cmsAddress	CMS UUID address
✔	gatewayUri	Base URI for TALQ communication that allows the CMS to access the Gateway. Must be an absolute URI. Other URI's for accessing Gateway can be relative to this base.
✔	gatewayAddress	Gateway UUID address
✔	retryPeriod	Time duration before the Gateway retransmits a message for which expected response has not been received.
✔	crlUrn	URI where the Gateway can obtain the Certification Revocation List (CRL).
✔	vendor	Vendor identification.
✔	pkgUrl	URL pointing at location packages can be downloaded. This is used in the data package service.
✔	currentReleaseId	Release ID of currently deployed release. This is used in the data package service.

Lamp Actuator

The Lamp Actuator function includes attributes related to lighting control and it represents the smallest unit for control purposes. In practice, however, a Lamp Actuator function can control combinations of several lamps and control gear but all in the same way, as if they are all one individual unit.

Attributes

#	Attribute	Description
✔	lampTypeId	TALQ Address of an existing lampType.
✔	outputPort	Identifier of the output port that is controlled by the lamp actuator.

✔ cloEnabled	Determines whether a Constant Light Output (CLO) correction factor is used. CLO is used to compensate for lumen output degradation over the life time of the lamp. If CLO is enabled, lamps are dimmed part of the lampType.
✔ defaultLightState	Sets the default light output for the lamp actuator. This shall be applicable if no other command is active. This attribute shall be set to 100% as default value.
✔ targetLightCommand	Latest command for the lamp actuator.
✔ feedbackLightCommand	This attribute reflects the command in effect and it might deviate from the actualLightState due to propagation time or due to internal ODN specific mechanisms to handle the priority of the requests.
✔ actualLightState	This attribute should reflect the physical state of the light source as much as possible, including factors such as CLO. It may be calculated or measured, depending on the specific ODN implementation, which is outside the scope of this specification.
✔ maintenanceFactorEnabled	Indicates whether maintenance compensation is enabled. A maintenance factor can be added in addition to the CLO correction factor to account effects of maintenance (e.g. cleaning) of the luminaire on the lumen output.
✔ maintenancePeriod	Period (Hours) after which maintenance factor is 100%. The assumption is that the maintenance correction factor vs. time curve is linear.
✔ maintenanceFactor	Initial correction factor applied when the luminaire is cleaned.
✔ lastMaintenanceDate	Date when the luminaire was last cleaned (used to reset the maintenance factor).
✔ calendarID	TALQ Address of the calendar controlling this lamp actuator. If this attribute is empty, the behavior shall be determined by the ODN. If the attribute is invalid, the ODN shall trigger a generic invalid address event and the behavior shall be determined by the ODN.
✔ invalidCalendar	The lamp actuator function has been allocated a calendar that it cannot implement.
✔ invalidProgram	The lamp actuator function has been allocated a control program that it cannot implement.
✔ lightStateChange	Light state has changed.

✔	targetLightCommandChange	The targetLightCommand operational attribute has changed.
✔	programChange	The control program applicable to the lamp actuator has changed (these are the points at which the calendar changes the program).
✔	calendarChange	The calendar applicable to the lamp actuator has changed.
✔	invalidLampType	Indicates that the lamp type referred cannot be applied.
✔	applicationType	Application Type of the lamp actuator depending on the use case. E.g.: Lamp actuator, Cabinet actuator

Events

#	Event type	Description
✔	lightStateChange	Light state has changed
✔	invalidCalendar	The lamp actuator function has been allocated a calendar that it cannot implement
✔	invalidProgram	The lamp actuator function has been allocated a control program that it cannot implement
✔	targetLightCommandChange	The targetLightCommand operational attribute has changed
✔	programChange	The control program applicable to the lamp actuator has changed
✔	calendarChange	The calendar applicable to the lamp actuator has changed
✔	invalidLampType	Indicates that the lamp type referred cannot be applied.

Lamp Monitor

The Lamp Monitor function enables monitoring of lamp parameters. A Lamp Monitor function should be associated with a specific lamp/control gear combination. Multiple lamp monitor functions may be implemented by a single device.

Attributes

#	Attribute	Description
✔	numberOfLamps	Number of lamps being monitored by the lamp monitor function.
✔	operatingHours	Number of hours the lamp is on. This is the value used in CLO and may be set by the CMS.

✔	temperature	Temperature of the device implementing this function. [DEPRECATED: This attribute has been deprecated and it will be removed in the next MAJOR release. Please use the new TemperatureSensorFunction.temperature instead.]
✔	supplyVoltage	RMS supply volts when supplyType is AC, supply voltage (V) when supplyType is DC.
✔	supplyCurrent	RMS supply current (A) when supplyType is AC, supply current (A) when supplyType is DC.
✔	activePower	Active power.
✔	powerFactor	Active power/Apparent power.
✔	powerFactorSense	Phase sense of power factor.
✔	activeEnergy	Cumulative active energy (since installation or counter reset).

Events

#	Event type	Description
✔	lampPowerTooHigh	Lamp power is greater than expected lamp power + lampPowerTolerance
✔	lampPowerTooLow	Lamp power is smaller than expected lamp power - lampPowerTolerance
✔	lampVoltageTooHigh	Level of lamp voltage (not supply voltage) is greater than highLampVoltageThreshold.
✔	lampVoltageTooLow	Level of lamp voltage (not supply voltage) is smaller than lowLampVoltageThreshold.
✔	currentTooHigh	Supply current is above the highCurrentThreshold defined in the lamp type
✔	currentTooLow	Supply current is below the lowCurrentThreshold defined in the lamp type
✔	powerFactorTooLow	The power factor is below powerFactorThreshold
✔	lampFailure	The lamp is not operating as it is supposed to
✔	highTemperature	Indicates temperature is above the high threshold
✔	relayFailure	Set in case of internal relay is failing
✔	absoluteLampPowerTooHigh	Indicates the power is above the lampPowerHighThreshold in the lamp type
✔	absoluteLampPowerTooLow	Indicates the power is below the lampPowerLowThreshold in the lamp type
✔	controlGearCommFailure	Indicates failure of the control gear

✔	cyclingFailure	Indicates the lamp is constantly switching ON and OFF in an unexpected manner
✔	supplyLoss	Indicates loss of mains power
✔	contactorError	Indicates error in contactor
✔	lampUnexpectedOn	Indicates lamp is unexpectedly on
✔	leakageDetected	Indicates that an earth leakage fault has been detected

Electrical Meter

The electrical meter function supports electrical metering capabilities including measurements of voltage, current, power, energy, and power factor. This function may be associated with Luminaire Controllers, Cabinet Controllers or electrical meters installed in switch boxes. ODNs may implement both single phase and three phase meters. Typically meters within a control device will be single phase and stand-alone meters. A street side cabinet may have single phase or three phase meters.

Attributes

#	Attribute	Description
✔	totalPower	Sum of the active power consumed on phase 1, 2 and 3, or just the power for a single phase meter.
✔	totalActiveEnergy	Total cumulative kWh measured by the meter since installation date (or counter reset).
✔	totalPowerFactor	Total active power divided by total apparent power.
✔	supplyVoltage	Average between Phase1 RMS Voltage, Phase2 RMS Voltage and Phase3 RMS Voltage, or in the case of a single phase meter just the RMS supply voltage.
✔	totalCurrent	Sum of the RMS currents on phase 1, 2 and 3.
✔	averageCurrent	Average RMS current on phase 1, 2 and 3.

Events

#	Event type	Description

Photocell

A Photocell function models the capabilities of a photocell that can be used for lighting control. This function shall be supported by the CMS and optionally by the ODNs (Gateway).

Attributes

#	Attribute	Description

✔	onLevel	Illuminance level at which the photocell switches to on state.
✔	offLevel	Illuminance level at which the photocell switches to off state.
✔	photocellOutput	Output state of the photocell. Possible values are ON (means the illuminance level has fallen below the onLevel) and OFF (means the illuminance level has risen above the offLevel).

Events

#	Event type	Description
✔	photocellOutputOn	The photocell output has changed to ON

Light Sensor

A Light Sensor function models the output of light sensor. This function is optional for both CMS and Gateway, but when supported the requirements in this section shall apply.

Attributes

#	Attribute	Description
✔	levelHighThreshold	Light level above which a levelTooHigh event is triggered.
✔	levelLowThreshold	Light level below which a levelTooLow event is triggered.
✔	lightLevel	Illuminance level.

Events

#	Event type	Description
✔	levelTooHigh	Indicates the light level is above the levelHighThreshold
✔	levelTooLow	Indicates the light level is below the levelLowThreshold

Binary Sensor

A Binary Sensor function can be used to model any sensor that provides a digital, binary output. This function is optional for both CMS and Gateway, but when supported the requirements in this section shall apply.

Attributes

#	Attribute	Description
✔	level	Sensor Output level.

Events

#	Event type	Description
✔	sensorOutputOn	Indicates the sensor output changed to ON

Generic Sensor

A Generic Sensor function can be used to model any sensor that provides an analog or multilevel output. This function is optional for both CMS and Gateway, but when supported the requirements in this section shall apply.

Attributes

#	Attribute	Description
✔	levelHighThreshold	Threshold above which a levelTooHigh event is triggered.
✔	levelLowThreshold	Threshold below which a levelTooLow event is triggered.
✔	level	Sensor Output level.

Events

#	Event type	Description
✔	levelTooHigh	Indicates the sensor output level is above the levelHighThreshold
✔	levelTooLow	Indicates the sensor output level is below the levelLowThreshold

Generic Actuator

The Generic Actuator function includes attributes related to generic control and it represents the smallest unit for control purposes.

Attributes

#	Attribute	Description
✔	defaultState	Sets the default state output for the generic actuator. This shall be applicable if no other command is active.
✔	actualState	This attribute should reflect the physical state of the source as much as possible. It may be calculated or measured, depending on the specific ODN implementation, which is outside the scope of this specification.
✔	targetCommand	Latest command for the generic actuator.
✔	feedbackCommand	This attribute reflects the command in effect and it might deviate from the actualState due to propagation time or due to internal ODN specific mechanisms to handle the priority of the requests.

✔	calendarID	TALQ Address of the calendar controlling this generic actuator. If this attribute is empty, the behavior shall be determined by the ODN. If the attribute is invalid, the ODN shall trigger a generic invalid address event and the behavior shall be determined by the ODN.

Events

#	Event type	Description
✔	stateChange	The state has changed.
✔	invalidCalendar	This event is generated when a calendar has been allocated and can not be implemented it.
✔	invalidProgram	This event is generated when a control program has been allocated and can not be implemented it.
✔	programChange	This event is generated when the control program applicable to the actuator has changed.
✔	calendarChange	This event is generated when the calendar applicable to the actuator has changed.
✔	targetCommandChange	This event is generated when the targetCommand has changed.

Presence Sensor

The Presence Sensor function allows a CMS to detect presence. This function may be used in Parking Place detectors as well as in dynamic outdoor lighting scenario.

Attributes

#	Attribute	Description
✔	presenceStatus	Presence status.

Events

#	Event type	Description
✔	presenceStatusChanged	Indicates the presence status changed.

Battery Level Sensor

The Battery Level Sensor function allows to measure the charge of the battery, monitor the battery and send events in case the value is above/below configurable thresholds.

Attributes

#	Attribute	Description
✔	powerSource	The power source of battery.
✔	batteryLevelLowThreshold	Threshold below which a batteryLevelTooLow event is triggered.
✔	batteryLevel	Battery level.

Events

#	Event type	Description
✔	batteryLevelTooLow	talq.feature.event.BatteryLevelSensorFunction.batteryLevelTooLow.desc

Traffic Counter*

The Traffic Counter Function is used to provide statistics on the number of vehicles passing on the road. It allows to have the number of pedestrians, bicycles, cars or trucks for a certain period of time that is configurable by the CMS. It also allows to count the number of vehicles using diesel or petrol.

Attributes

#	Attribute	Description
✔	roadUserNumber	Number of road users of the specified type detected over the sampling period.
✔	accumulatedRoadUserNumber	measurement Number of road users of the specified type detected since accumulatedSince.
✔	roadUser	Type of road user (pedestrian, bicycle, motorcycle, car, truck, diesel vehicle, petrol vehicle, electric vehicle, scooter, others).
✔	accumulatedSince	Indicates the date and time at which accumulatedRoadUserNumber is reset to zero. The Gateway may change this value with the actual one depending on implementation.
✔	heavyTrafficDetectedThreshold	Threshold above which heavyTrafficDetected is triggered.
✔	trafficSamplingPeriod	Used by heavyTrafficDetected and roadUserNumber. In seconds.
✔	averageSpeed	Average speed measured on the road users of the specified type during the last sampling period (km/h)
✔	averageDistance	Average distance between two road users of the specified type during the last sampling period (m)

✔	speedLimitThreshold	Speed limit threshold used to calculate the percentage of road users of the specified type above speed limit. (km/h)
✔	percentageAboveSpeedLimit	Percentage of road users of the specified type driving above speed limit detected over the sampling period.
✔	applicationType	Application Type of the traffic counter depending on the use case. E.g.: 'People counter; Vehicle counter'
✔	actualUserNumber	Number of road users currently identified by the device
✔	sensorType	Type of sensor (e.g: Bluetooth beacon, WIFI detector)
✔	dailyRoadUserNumber	Cumulated number of road users detected by the device since beginning of the day.
✔	minSpeed	Minimum cutoff speed under which traffic is not measured (km/h)
✔	maxSpeed	Maximum cutoff speed above which traffic is not measured (km/h)
✔	sensorSensitivity	Sensor sensitivity (%) to reduce sensor detection range. This value must be the same when multiple instances of the function are used for the same physical sensor.
✔	trafficDirection	Specifies whether the sensor measures only incoming traffic, outgoing traffic, or both. (Direction 1, Direction 2, Both)

Events

#	Event type	Description
✔	heavyTrafficDetected	Triggered if the traffic measured over the sampling period is above heavyTrafficDetectedThreshold.

Location Sensor*

The Location Sensor Function is used to indicate that an object has changed position attributes configurable by the CMS or based on internal setup of the vendor. For example, a specific location (latitude, longitude) of a device could be defined by the vendor. If the device is equipped with a GPS, it could send a specific event indicating that its position is different to the one defined by the CMS. We might also want to let the configuration to the vendor itself and simply define events notifying the CMS that the default configuration has changed. For example, a garbage bin could have its location defined based on a sensor placed on the floor. If the bin is not above this sensor, the vendor will trigger an event. In this last case, the CMS does not need to configure anything.

Attributes

#	Attribute	Description
✔	expectedLocation	Nominal location of the device
✔	locationChangedThreshold	Distance (meters)
✔	location	Location of the device
✔	uncertainty	This uncertainty indicates the radius of a circular area in meters, reported by the positioning system. The circular area is used to describe uncertainty about a point for coordinates in a two-dimensional coordinate reference systems (CRS). The center point of a circular area is specified by using the Latitude and the Longitude Resources.

Events

#	Event type	Description
✔	locationChanged	Triggered when the difference between location and expectedLocation is above locationChangedThreshold

Simple Actuator

The Simple Actuator function includes attributes related to generic control and it represents the smallest unit for control purposes.

Attributes

#	Attribute	Description
✔	defaultState	Sets the default state output for the simple actuator. This shall be applicable if the actuator is not under an override control (OverrideCommand).
✔	actualState	This attribute should reflect the physical state of the source as much as possible. It may be calculated or measured, depending on the specific ODN implementation, which is outside the scope of this specification.
✔	targetCommand	Latest command for the simple actuator.
✔	feedbackCommand	This attribute reflects the command in effect and it might deviate from the actualState due to propagation time or due to internal ODN specific mechanisms to handle the priority of the requests.

Events

#	Event type	Description
✔	stateChange	The state has changed.

✔	targetCommandChange	This event is generated when the targetCommand has changed.

Time*

The Time function includes attributes related to generic control and it represents the smallest unit for control purposes.

Attributes

#	Attribute	Description
✔	timeZone	Time zone of the device. Time zone may be expressed in two formats. where is a time zone as defined in the zone.tab of the IANA timezone database [IANA]; and stdoffset[dst[offset][,start[/time],en d[/time]]] as defined by the Open Group for posix systems [POSIX].
✔	currentTime	Current time of the device defined as local time with time zone designator.

Events

#	Event type	Description
✔	lastSyncError	This event is generated when the latest time synchronization operation failed.

Segment Monitor*

The Segment Monitor function enables monitoring of segment parameters. Multiple segment monitor functions may be implemented by a single device.

Attributes

#	Attribute	Description
✔	applicationType	Application Type of the segment monitor depending on the use case. E.g.: "Road Lighting, Architecture Lighting"
✔	segmentReference	Reference of the segment monitor depending on the use case. E.g.: "Segment A1"
✔	numberOfLoads	Number of loads being monitored by the segment monitor function.

Events

#	Event type	Description
✔	cabinetDoorOpen	Cabinet door is open.

✔	circuitBreakerTripped	Indicates that the circuit breaker has tripped
✔	leakageDetected	Indicates that an earth leakage fault has been detected.
✔	localOverride	Indicates that there is a local override (ON, OFF) or no override
✔	switchingErrorOff	Indicates error in switching circuit. For instance, if a contactor or relay is used, it may be stuck in OFF position.
✔	switchingErrorOn	Indicates error in switching circuit. For instance, if a contactor or relay is used, it may be stuck in ON position.

Gully Sensor*

The Gully Sensor measures properties associated with street drains or gullies.

Attributes

#	Attribute	Description
✔	siltLevel	Level of silt (%)
✔	applicationType	Application Type of the gully sensor depending on the use case. E.g.: 'Street Gully sensor'

Events

#	Event type	Description
✔	grillOpened	Indicates that the gully grill is opened
✔	levelWarning	Indicates that the water level is problematic.
✔	overfull	Indicates that the gully is overfull

Services

Configuration Service

The TALQ Configuration Service enables discovery and configuration of devices and services

Options

#	Option	Value	Description
✔	commissioningSupported*		This ODN can support commissioning from the CMS side.

Control Service

The Control service describes the mechanisms to operate the actuator functions in order to enable schedule based and override control

Options

#	Option	Value	Description
✔	supportedTypes	• AbsoluteActivePeriod • AstroClockActivePeriod* • AstroClockTimeControl* • SensorActivePeriod* • AstroAndSensorActivePeriod* • ExternalControlEffect*	Control Program and calendar options supported are defined by announcing support for the given modes

Events

#	Event Type	Description
✔	invalidCalendar	An invalid calendar has been provided by the CMS to the ODN
✔	invalidProgram	A control program has been provided by the CMS, which cannot be implemented by the ODN

Data Collection Service

The TALQ Data Collection Service is a provision to configure how ODN measurements, status information and events are logged, and when or under what conditions the logged data is transferred to the CMS

Options

#	Option	Value	Description
✔	supportedModes	• EventRecordingMode • PeriodicRecordingMode • VendorRecordingMode* • ImmediateReportingMode	Recording and Reporting modes supported

Events

#	Event Type	Description
✔	invalidLoggerConfig	The CMS has provided a data logger configuration that cannot be implemented by the ODN

On Demand Data Request Service

This service provides the mechanism to access attributes in the logical devices by requesting attribute values from the ODN

Group Management Service

This service provides the mechanisms to define and manage groups

Options

#	Option	Value	Description

Data Package Transfer Service*

This service provides a mechanism to transfer data packages containing ODN vendor specific information to the Gateway via the CMS

Events

#	Event Type	Description
✔	releaseMismatch	The release indicated as expected does not match the actual release of the Gateway.
✔	changeReleaseFailure	Change release failed. Operation is rolled back.
✔	packageChangeFailure	A Package change operation failed. Operation is rolled back.
✔	changingRelease	Indicates the Gateway is in the process of changing release.
✔	packageDownloaded	Indicate the Gateway has downloaded a package.

Test Service

This service provides a mechanism to reduce the human intervention during the certification tests, enabling the certification tests to maximise automation

Objects

Event log data

Properties

#	Property	Description
✔	eventType	Identifier of event reported
✔	srcAddress	Address of Logical device or function within a logical device which is the source of the event or to which this event applies
✔	startEndFlag	If the event denotes either the start or end of a ‘special’ period, this flag shall be included

Command

Properties

#	Property	Description
✔	state	Light state to be applied to the lamp actuator
✔	reason	Indicates the command was triggered by override, sensor or control program
✔	cmsRefId	CMS reference, which can be used for data logging
✔	refAddress	Reference to the source of the command, e.g. sensor or control program
✔	start	Time when the control action resulting from command shall start. This attribute is used only with override commands to set a time to start an override action. If not specified, the override command starts immediately.
✔	expiration	Time when the control action resulting from command shall be terminated. This attribute is used only with override commands to set a time to stop an override action. After the expiration of an override command, the system should go back to the state defined by the active control program. If not specified, there is no expiration for the override command.
✔	rampToLevelTime*	The time (in seconds) taken for the value to ramp to the specified level. The change will be finished rampToLevelTime seconds after: the scheduled time if the change comes from a control program; the reception of the request, or the command.start time attribute, if the change comes from an override command, or; the sensor event is raised if the control is sensor-based. If actions related to one command remain to be completed when a subsequent command is received, the subsequent command shall take precedence.

✔	rampFromLevelTime*	The time (in seconds) taken for the value to ramp to the specified level. The change will be finished rampFromLevelTime seconds after: the scheduled time if the change comes from a control program; the reception of the request if the change comes from an override command; expiry of the related command, or; the sensor event is lowered and the hold time subsequently expires if the control is sensor-based. If actions related to one command remain to be completed when a subsequent command is received, the subsequent command shall take precedence.

Group

Properties

#	Property	Description
✔	address	Group address
✔	members	TALQ Addresses of members of the group

*: The Certification Test Tool is designed to provide a high level of confidence that complementary systems can communicate successfully. As both the protocol and the test tool evolve, all mandatory and other core tests are confirmed by comparison with real-life scenarios (plug-fest or similar). Some tests of optional and more peripheral features may not yet have been confirmed in this way; such features are identified with an asterisk (*).

This Capability List is based on a certification session performed by the TALQ Certification Tool (v2.4.0) on 2022-03-21 10:51:56.733 +0100.