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# EthernetContainer

## EthernetContainerCapability

Qualified Name: MicrowaveModel::ObjectClasses::EthernetContainer::EthernetContainerCapability

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* support: MANDATORY

Table 1: Attributes for EthernetContainerCapability

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| bundlingIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | This attribute has to be set on 'true', if the device allows combining resources from several air interfaces for transporting this Ethernet container. |
| packetCompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | In case packet compression can be activated, but not configured to a certain type, packetCompressionAvail shall be set on 'true', but none of the compression level specific booleans. |
| layer2CompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 2 available at the device. |
| vlanCompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on VLAN layer available at the device. |
| qInQCompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer of a second VLAN available at the device. |
| mplsCompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on mpls layer available at the device. |
| ipv4CompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 3 for IPv4 available at the device. |
| ipv6CompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 3 for IPv6 available at the device. |
| layer4CompressionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 4 (TCP and UDP header) available at the device. |
| encryptionIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Shall be marked 'true', if Ethernet payload encryption is available. |
| supportedAlarmList | String  Supported alarms not yet defined. | 2..\* | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Available alarms to be listed. Mandatory:'framingIsFaulty' and 'containerIsDown'. Further alarms might be added by the vendor. |
| supportedAlarms | String  Supported alarms not yet defined. | 1 | R | Deprecated  OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Available alarms to be listed. Mandatory:'framingIsFaulty' and 'containerIsDown'. Further alarms might be added by the device. |

## EthernetContainerStatus

Qualified Name: MicrowaveModel::ObjectClasses::EthernetContainer::EthernetContainerStatus

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* support: MANDATORY

Table 2: Attributes for EthernetContainerStatus

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| lastStatusChange | DateTime  2010-11-20T14:00:00+01:00 | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Time the Container entered its current operational status. \_format:yyyyMMddhhmmss.s[Z|{+|-}HHMm]; yyyy='0000'..'9999' year; MM='01'..'12' month; dd='01'..'31' day; hh='00'..'23' hour; mm='00'..'59' minute; ss='00'..'59' second; s='.0'..'.9'tenth of second (set to '.0' if EMS or NE cannot support this granularity); Z='Z' indicates UTC (rather than local time); {+|-}='+' or '-' delta from UTC; HH='00'..'23' time zone difference in hours; Mm='00'..'59' time zone difference in minutes. |

## EthernetContainerConfiguration

Qualified Name: MicrowaveModel::ObjectClasses::EthernetContainer::EthernetContainerConfiguration

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* support: MANDATORY

Table 3: Attributes for EthernetContainerConfiguration

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| containerID | String  No Ethernet Flow associated yet. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | ContainterID in Netconf must be the same as EthernetPortID in OpenFlow so a connection can be made between the two items, which separately exist in the controller. |
| segmentsIDList | SegmentIDType  ./. | 1..\* | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Lists the segments used for transporting this Ethernet container. In case EthernetContainer::ContainerCapability::bundlingIsAvail==0, all TypeDefinitions::segmentIdType::structureId must be identical in the list. |
| packetCompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | In case packet compression is activated, but no type is activated, it is assumed that the device chooses the optimum. |
| layer2CompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 2 configured at the device. |
| vlanCompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on VLAN layer configured at the device. |
| qInQCompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer of a second VLAN configured at the device. |
| mplsCompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on MPLS layer configured at the device. |
| ipv4CompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 3 for IPv4 configured at the device. |
| ipv6CompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 3 for IPv6 configured at the device. |
| layer4CompressionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Packet compression on layer 4 (TCP and UDP header) configured at the device. |
| encryptionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Activates encryption of the Ethernet payload. |
| cryptographicKey | String  Cryptographic key not yet defined. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Key for transforming plaintext into cipher text data. |
| performanceMonitoringCollectionIsOn | Boolean  false | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Enables measurement, collection, storage and access to performance data. |
| problemKindSeverityList | ContainerProblemSeverityType  ./. | 2..\* | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Severity of the problem to be configured. |

## EthernetContainerCurrentPerformance

Qualified Name: MicrowaveModel::ObjectClasses::EthernetContainer::EthernetContainerCurrentPerformance

Aggregated performance information of the Ethernet container at a particular moment.

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* support: MANDATORY

Table 4: Attributes for EthernetContainerCurrentPerformance

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| currentPerformanceDataList | ContainerCurrentPerformanceType  ./. | 1..2 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |

## EthernetContainerHistoricalPerformances

Qualified Name: MicrowaveModel::ObjectClasses::EthernetContainer::EthernetContainerHistoricalPerformances

Aggregated performance information of the Ethernet container for a pre-defined measurement interval.

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* support: MANDATORY

Table 5: Attributes for EthernetContainerHistoricalPerformances

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| historicalPerformanceDataList | ContainerHistoricalPerformanceType  ./. | 0..\* | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |

## EthernetContainerCurrentProblems

Qualified Name: MicrowaveModel::ObjectClasses::EthernetContainer::EthernetContainerCurrentProblems

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* support: MANDATORY

Table 6: Attributes for EthernetContainerCurrentProblems

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| currentProblemList | ContainerCurrentProblemType  ./. | 0..\* | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |

## MW\_EthernetContainer\_Pac

Qualified Name: MicrowaveModel::ObjectClasses::EthernetContainer::MW\_EthernetContainer\_Pac

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: YES
* objectDeletionNotification: YES
* support: MANDATORY

Table 7: Attributes for MW\_EthernetContainer\_Pac

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| \_layerProtocol | LayerProtocol  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 1 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | CoreModel-CoreNetworkModule-ObjectClasses:NetworkElement/\_ltpRefList/\_lpList/uuid |
| \_ethernetContainerCapability | EthernetContainerCapability  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | See referenced class |
| \_ethernetContainerConfiguration | EthernetContainerConfiguration  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | See referenced class |
| \_ethernetContainerStatus | EthernetContainerStatus  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | See referenced class |
| \_ethernetContainerCurrentProblems | EthernetContainerCurrentProblems  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | See referenced class |
| \_ethernetContainerCurrentPerformance | EthernetContainerCurrentPerformance  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | See referenced class |
| \_ethernetContainerHistoricalPerformances | EthernetContainerHistoricalPerformances  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | See referenced class |

# Data Types

## ContainerType

Qualified Name: MicrowaveModel::TypeDefinitions::ContainerType

* Obsolete

Table 8: Attributes for ContainerType

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| containerName | String  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 1 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Names to be chosen from the following list: 'ethernet','e1','t1','j1','e3','ds3','stm1','cpri1','cpri2','cpri3','cpri4','cpri5','cpri6' or 'cpri7' |
| numberOfTimeSlotsRequired | Integer  -1 | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: LENGTH\_16\_BIT * unit: timeslots * support: MANDATORY | Number of time slots required for transporting this type of container. Value must be calculated by the vendor after defining the timeSlotCapacity. For containers of fixed size: numberOfTimeSlotsRequired = required bandwidth of the container divided by timeSlotCapacity. For containers of variable size the minimum (most probably 1) is to be stated. |
| tdmTimeSlotsIsRequired | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Shall be set to '1', if this container type requires bandwidth (times slots) reserved for TDM transport. |
| bundlingIsAvail | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | If it is possible to combine transport resources of several radio links to transport this container type, this attribute shall be set to '1'. |

## SegmentIDType

Qualified Name: MicrowaveModel::TypeDefinitions::SegmentIDType

Identifies the segments, which are used to transport the container.

Table 9: Attributes for SegmentIDType

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| structureIdRef | UniversalId  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 1 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |
| segmentIdRef | Integer  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 2 * AVC: YES * isInvariant: false * valueRange: no range constraint * bitLength: LENGTH\_16\_BIT * unit: no unit defined * support: MANDATORY | Combinations of structureId and segmentId must be unique inside the device to assure that every resource is used just once. |

## SegmentStatusType

Qualified Name: MicrowaveModel::TypeDefinitions::SegmentStatusType

Table 10: Attributes for SegmentStatusType

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| segmentStatusTypeId | Integer  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 1 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: LENGTH\_16\_BIT * unit: no unit defined * support: MANDATORY |  |
| segmentIsReservedForTdm | Boolean  false | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | The number of segments, which is configured by Structure::StructureConfiguration::tdmReservedNumberOfSegements, has to be reserved for TDM. Starting from the lowest index value, these segments have to be marked with a 'true' in segmentIsReservedForTdm. |
| operationalStatus | OperationalState  DISABLED | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Current operational status of each segment. |
| obsoletePriorityClass | Integer  -1 | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: LENGTH\_8\_BIT * unit: no unit defined * support: MANDATORY   Obsolete | PriorityClass as inherited from the associated Container::ContainerConfiguration::priorityClass. In case the device is capable of adapting the sequence, in which segments are being dropped in case of decreasing capacity of the air interface, priorityClass shall be considered, while calculating the dropOrderRank. |
| obsoleteDropOrderRank | Integer  -1 | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: false * valueRange: no range constraint * bitLength: LENGTH\_16\_BIT * unit: no unit defined * support: MANDATORY   Obsolete | In case the device is NOT capable of adapting the sequence, in which segments are being dropped in case of decreasing capacity of the air interface, dropOrderRank is number of segments minus sequence number of the segment. In case the device is capable of adapting the sequence, dropOrderRank has to be calculated by the device in dependency to the assigned priorityClass. \_unique: within Structure::StructureStatus::segmentStatusList |

# Enumeration Types

## GranularityPeriodType

Qualified Name: MicrowaveModel::TypeDefinitions::GranularityPeriodType

The enumeration with the options for granularity period of the performance data.

Contains Enumeration Literals:

* UNKNOWN:
* PERIOD-15-MIN:
* PERIOD-24-HOURS:

## LoopBackType

Qualified Name: MicrowaveModel::TypeDefinitions::LoopBackType

Contains Enumeration Literals:

* RF\_TO\_REMOTE:
  + Returning the header information of the remote site back to the remote site on the radio interface between both outdoor units.
* RF\_TO\_LOCAL:
  + Returning the header information of the local site back to the local site on the radio interface between both outdoor units.
* IF\_TO\_REMOTE:
  + Returning the header information of the remote site back to the remote site on the intermediate frequency interface between local indoor unit and outdoor unit.
* IF\_TO\_LOCAL:
  + Returning the header information of the local site back to the local site on the intermediate frequency interface between local indoor unit and outdoor unit.
* NONE:
* IF:
  + Intermediate Frequency on the interface between indoor and outdoor unit.
    - Deprecated
* RF:
  + Radio Frequency on the interface between outdoor unit and outdoor unit at the remote site.
    - Deprecated
* NON:
  + - Deprecated

## SeverityType

Qualified Name: MicrowaveModel::TypeDefinitions::SeverityType

According to ITU-T M.3160

Contains Enumeration Literals:

* NON\_ALARMED:
* WARNING:
* MINOR:
* MAJOR:
* CRITICAL:

# Super Classes

## MwCurrentProblem

Qualified Name: MicrowaveModel::ObjectClasses::SuperClasses::MwCurrentProblem

Applied stereotypes:

* OpenModelClass
* objectCreationNotification: NO
* objectDeletionNotification: NO
* support: MANDATORY

Table 11: Attributes for MwCurrentProblem

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| sequenceNumber | Integer  ./. | 1 | R | OpenModelAttribute   * partOfObjectKey: 1 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: LENGTH\_32\_BIT * unit: no unit defined * support: MANDATORY | Unique sequence number of the current problem object. |
| timeStamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Time and date of the problem. \_format:yyyyMMddhhmmss.s[Z|{+|-}HHMm]; yyyy='0000'..'9999' year; MM='01'..'12' month; dd='01'..'31' day; hh='00'..'23' hour; mm='00'..'59' minute; ss='00'..'59' second; s='.0'..'.9'tenth of second (set to '.0' if EMS or NE cannot support this granularity); Z='Z' indicates UTC (rather than local time); {+|-}='+' or '-' delta from UTC; HH='00'..'23' time zone difference in hours; Mm='00'..'59' time zone difference in minutes. |
| problemSeverity | SeverityType  WARNING | 1 | R | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Severity of the alarm. |

# Notifications

## AttributeValueChangedNotification

Qualified Name: MicrowaveModel::Notifications::AttributeValueChangedNotification

To be sent when an attribute has changed and one or more controllers have to update their data.

Applied stereotypes:

* OpenModelNotification
* triggerConditionList: invalid
* support: MANDATORY

Table 12: Attributes for AttributeValueChangedNotification

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| counter | Integer  -1 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: LENGTH\_32\_BIT * unit: no unit defined * support: MANDATORY | Counts attribute value changed notifications. |
| timeStamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |
| objectIdRef | UniversalId  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | ID of the affected MW\_AirInterface\_Pac, MW\_AirInterfaceDiversity\_Pac, MW\_Structure\_Pac, MW\_PureEthernetStructure\_Pac, MW\_HybridMwStructure\_Pac, MW\_Container\_Pac, MW\_EthernetContainer\_Pac or MW\_TdmContainer\_Pac. |
| attributeName | String  Attribute name not specified. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Name of the attribute that has been changed. |
| newValue | String  New value not specified. | 0..1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Attribute value converted to a string (xml, json, ...) |

## ObjectCreationNotification

Qualified Name: MicrowaveModel::Notifications::ObjectCreationNotification

To be sent when a new MW\_AirInterface\_Pac, MW\_AirInterfaceDiversity\_Pac, MW\_Structure\_Pac, MW\_PureEthernetStructure\_Pac, MW\_HybridMwStructure\_Pac, MW\_Container\_Pac, MW\_EthernetContainer\_Pac or MW\_TdmContainer\_Pac has to be instancieted in the controller.

Applied stereotypes:

* OpenModelNotification
* triggerConditionList: invalid
* support: MANDATORY

Table 13: Attributes for ObjectCreationNotification

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| counter | Integer  -1 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: LENGTH\_32\_BIT * unit: no unit defined * support: MANDATORY | Counts object creation notifications. |
| timeStamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |
| objectIdRef | UniversalId  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | ID of the affected MW\_AirInterface\_Pac, MW\_AirInterfaceDiversity\_Pac, MW\_Structure\_Pac, MW\_PureEthernetStructure\_Pac, MW\_HybridMwStructure\_Pac, MW\_Container\_Pac, MW\_EthernetContainer\_Pac or MW\_TdmContainer\_Pac. |
| objectType | String  Type of created object not specified. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Type of Object to be chosen from the following list of values: 'MW\_AirInterface\_Pac', 'MW\_AirInterfaceDiversity\_Pac', 'MW\_Structure\_Pac', 'MW\_PureEthernetStructure\_Pac', 'MW\_HybridMwStructure\_Pac', 'MW\_Container\_Pac', 'MW\_EthernetContainer\_Pac' or 'MW\_TdmContainer\_Pac'. |

## ObjectDeletionNotification

Qualified Name: MicrowaveModel::Notifications::ObjectDeletionNotification

To be sent when a new MW\_AirInterface\_Pac, MW\_AirInterfaceDiversity\_Pac, MW\_Structure\_Pac, MW\_PureEthernetStructure\_Pac, MW\_HybridMwStructure\_Pac, MW\_Container\_Pac, MW\_EthernetContainer\_Pac or MW\_TdmContainer\_Pac instance has to be deleted in the controller.

Applied stereotypes:

* OpenModelNotification
* triggerConditionList: invalid
* support: MANDATORY

Table 14: Attributes for ObjectDeletionNotification

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| counter | Integer  -1 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: LENGTH\_32\_BIT * unit: no unit defined * support: MANDATORY | Counts object deletion notifications. |
| timeStamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |
| objectIdRef | UniversalId  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | ID of the affected MW\_AirInterface\_Pac, MW\_AirInterfaceDiversity\_Pac, MW\_Structure\_Pac, MW\_PureEthernetStructure\_Pac, MW\_HybridMwStructure\_Pac, MW\_Container\_Pac, MW\_EthernetContainer\_Pac or MW\_TdmContainer\_Pac. |

## ProblemNotification

Qualified Name: MicrowaveModel::Notifications::ProblemNotification

To be sent when a problem occurs at a MW\_AirInterface\_Pac, MW\_AirInterfaceDiversity\_Pac, MW\_Structure\_Pac, MW\_PureEthernetStructure\_Pac, MW\_HybridMwStructure\_Pac, MW\_Container\_Pac, MW\_EthernetContainer\_Pac or MW\_TdmContainer\_Pac.

Applied stereotypes:

* OpenModelNotification
* triggerConditionList: invalid
* support: MANDATORY

Table 15: Attributes for ProblemNotification

| **Attribute Name** | **Type DefaultValue** | **Multiplicity** | **Access** | **Stereotypes** | **Description** |
| --- | --- | --- | --- | --- | --- |
| counter | Integer  -1 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: LENGTH\_32\_BIT * unit: no unit defined * support: MANDATORY | Counts problem notifications |
| timeStamp | DateTime  2010-11-20T14:00:00+01:00 | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY |  |
| objectIdRef | UniversalId  ./. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | ID of the affected MW\_AirInterface\_Pac, MW\_AirInterfaceDiversity\_Pac, MW\_Structure\_Pac, MW\_PureEthernetStructure\_Pac, MW\_HybridMwStructure\_Pac, MW\_Container\_Pac, MW\_EthernetContainer\_Pac or MW\_TdmContainer\_Pac. |
| problem | String  Problem name not specified. | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Name of the problem according to AirInterface::AirInterfaceCapability::supportedAlarms or AirInterfaceDiversity::AirInterfaceDiversityCapability::supportedAlarms or Structure::StructureCapability::supportedAlarms or PureEthernetStructure::PureEthernetStructureCapability::supportedAlarms or HybridMwStructure::HybridMwStructureCapability::supportedAlarms or Container::ContainerCapability::supportedAlarms or EthernetContainer::EthernetContainerCapability::supportedAlarms or TdmContainer::TdmContainerCapability::supportedAlarms. |
| severity | SeverityType  WARNING | 1 | RW | OpenModelAttribute   * partOfObjectKey: 0 * AVC: NO * isInvariant: true * valueRange: no range constraint * bitLength: NA * unit: no unit defined * support: MANDATORY | Severity of the problem according to AirInterface::AirInterfaceConfiguration::problemSeverityList, AirInterfaceDiversity::AirInterfaceDiversityConfiguration::problemSeverityList, Structure::StructureConfiguration::problemSeverityList, PureEthernetStructure::PureEthernetStructureConfiguration::problemSeverityList, HybridMwStructure::HybridMwStructureConfiguration::problemSeverityList, Container::ContainerConfiguration::problemSeverityList, EthernetContainer::EthernetContainerConfiguration::problemSeverityList or TdmContainer::TdmContainerConfiguration::problemSeverityList |