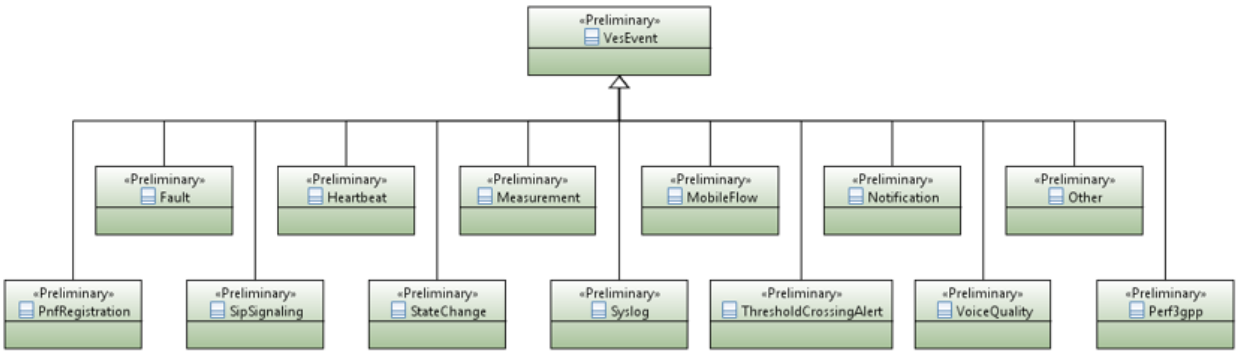
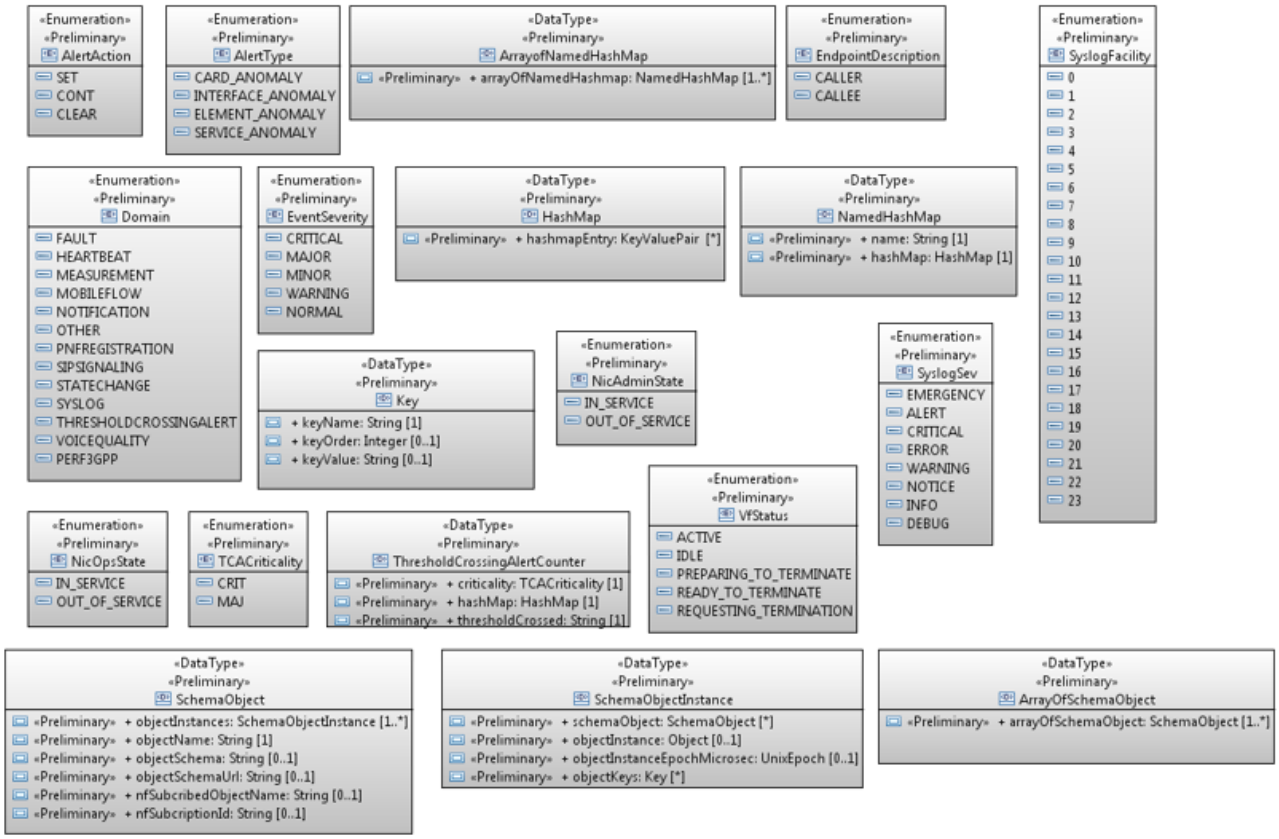
VES 7.1

Diagrams

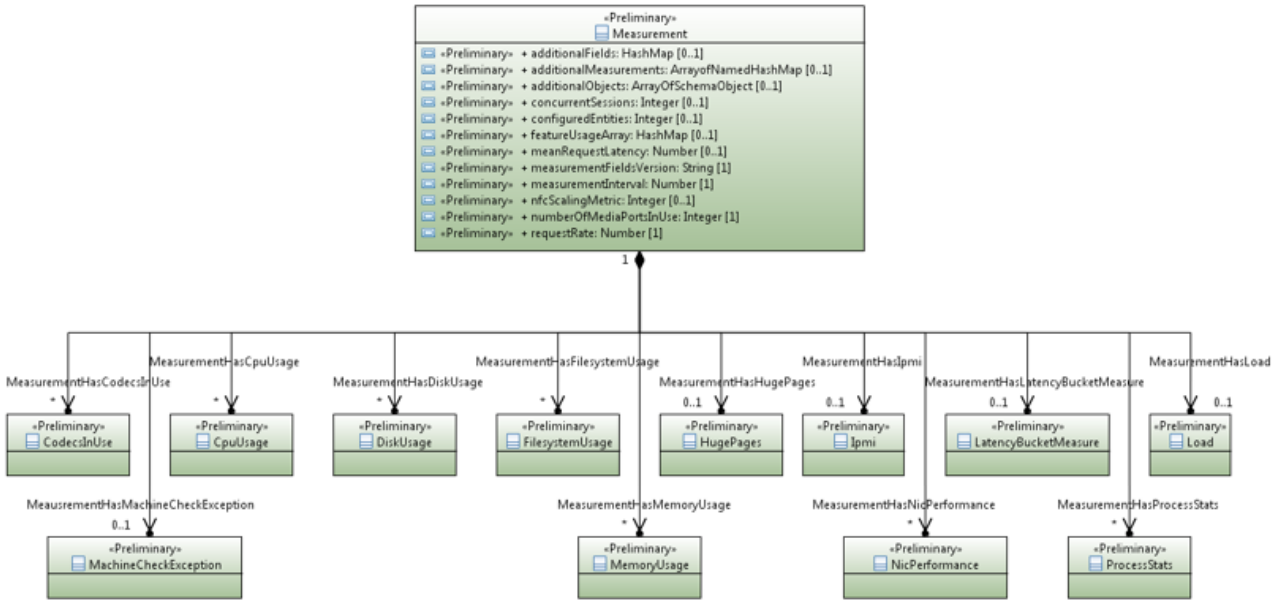
1.1.1 Event - High Level



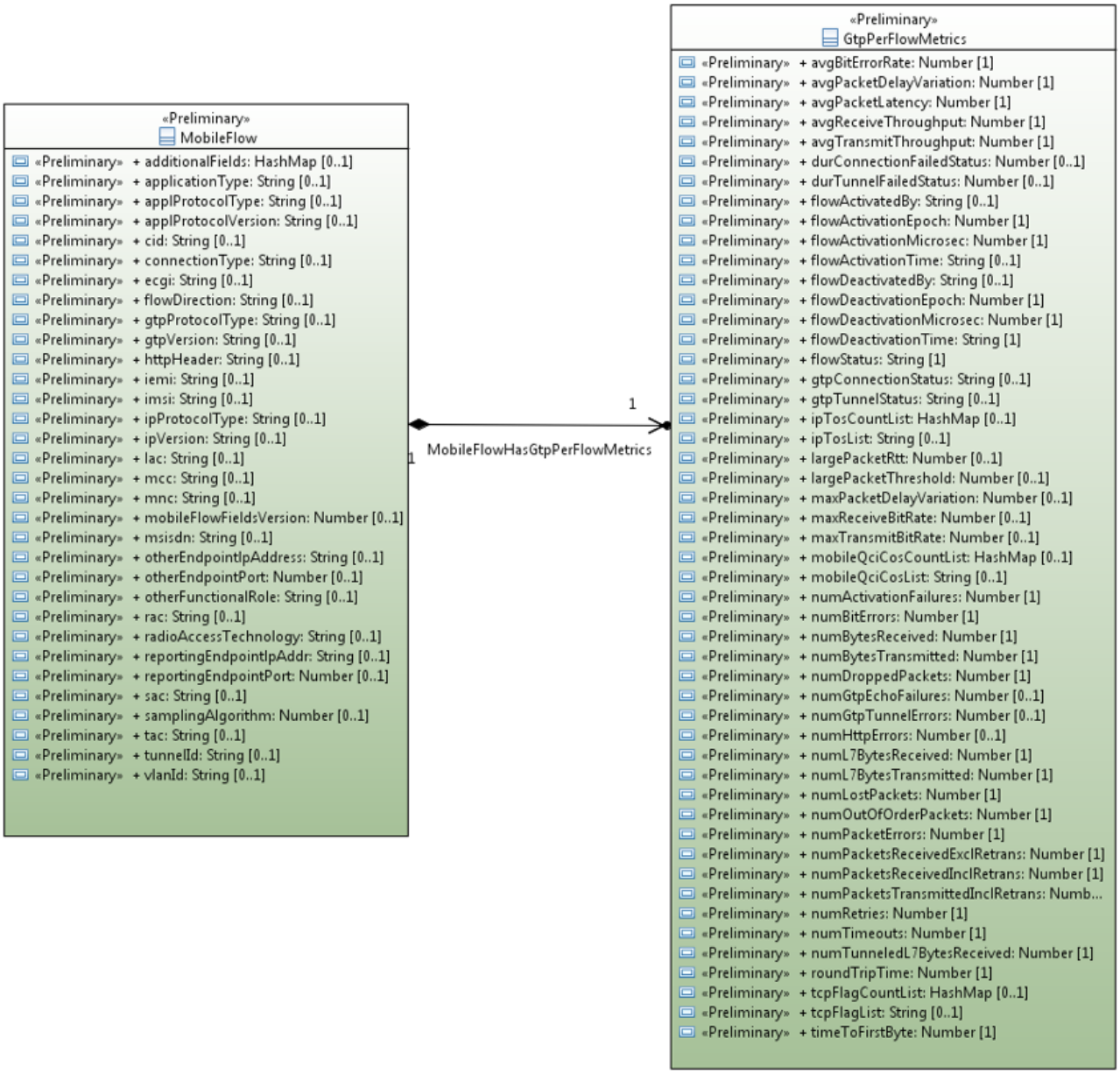
1.1.2 Event Datatypes



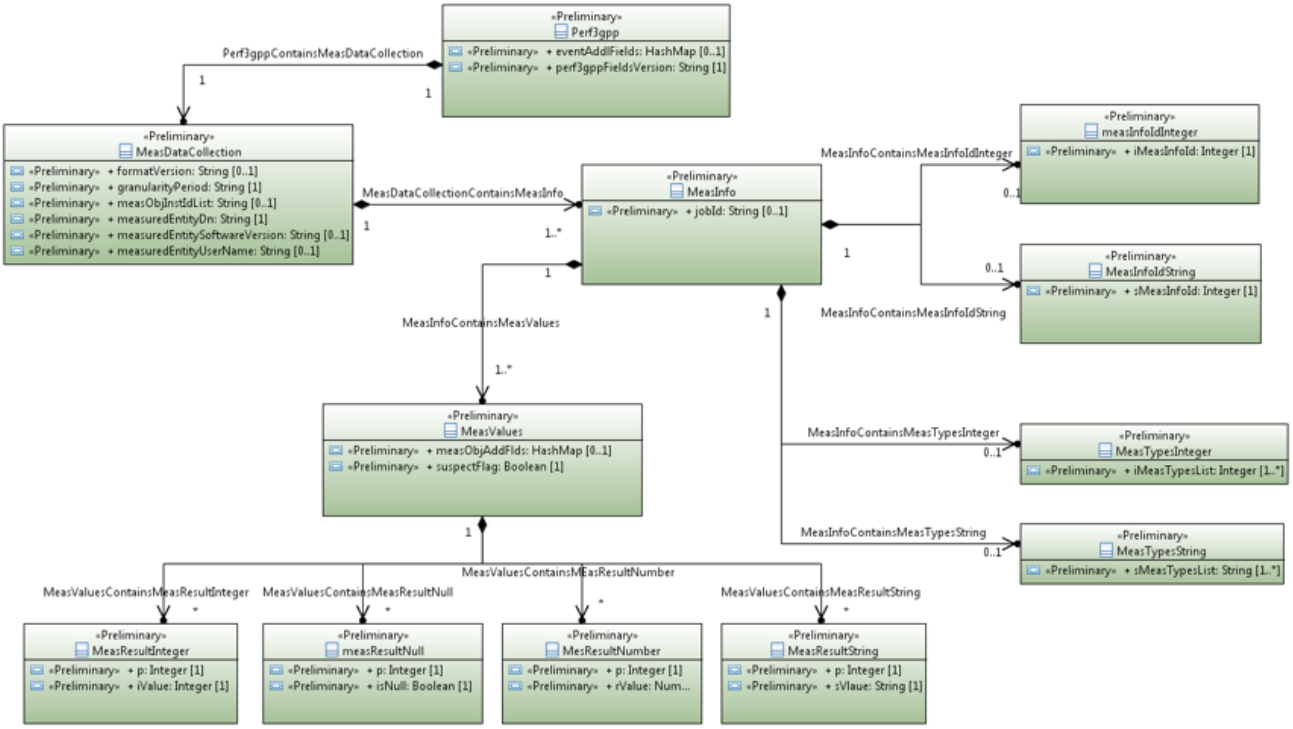
1.1.3 Measurement Domain Entities



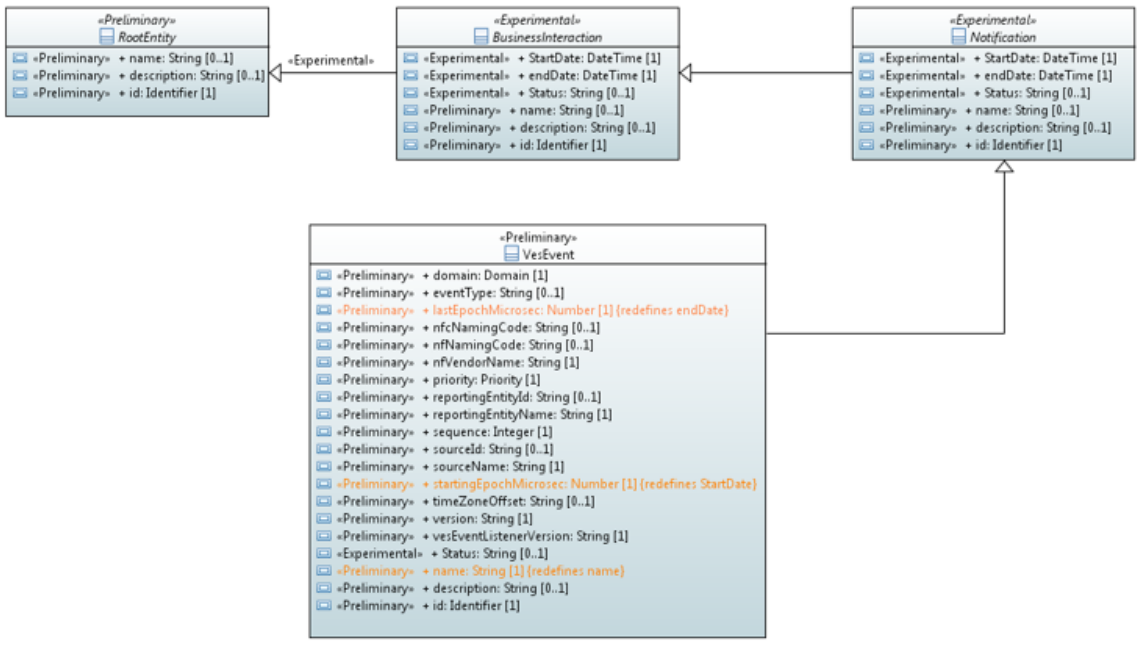
1.1.4 Mobile Flow Entities



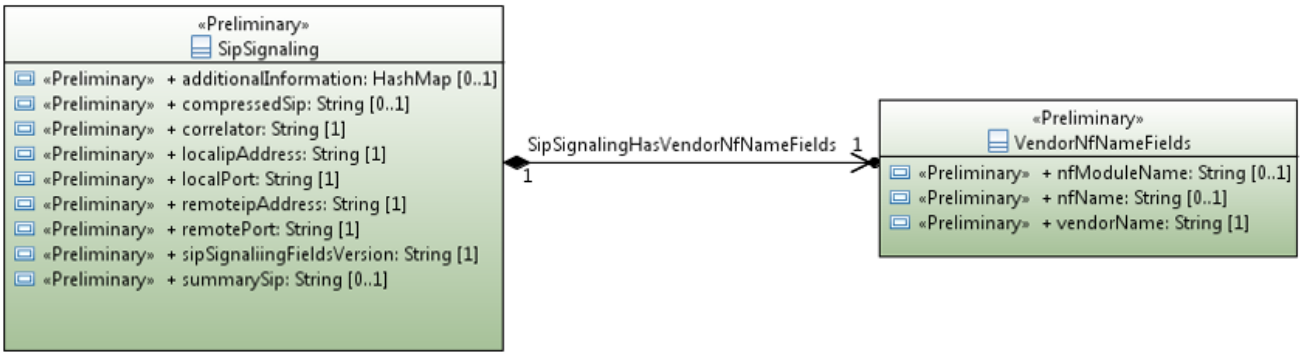
1.1.5 Perf3gpp Entities



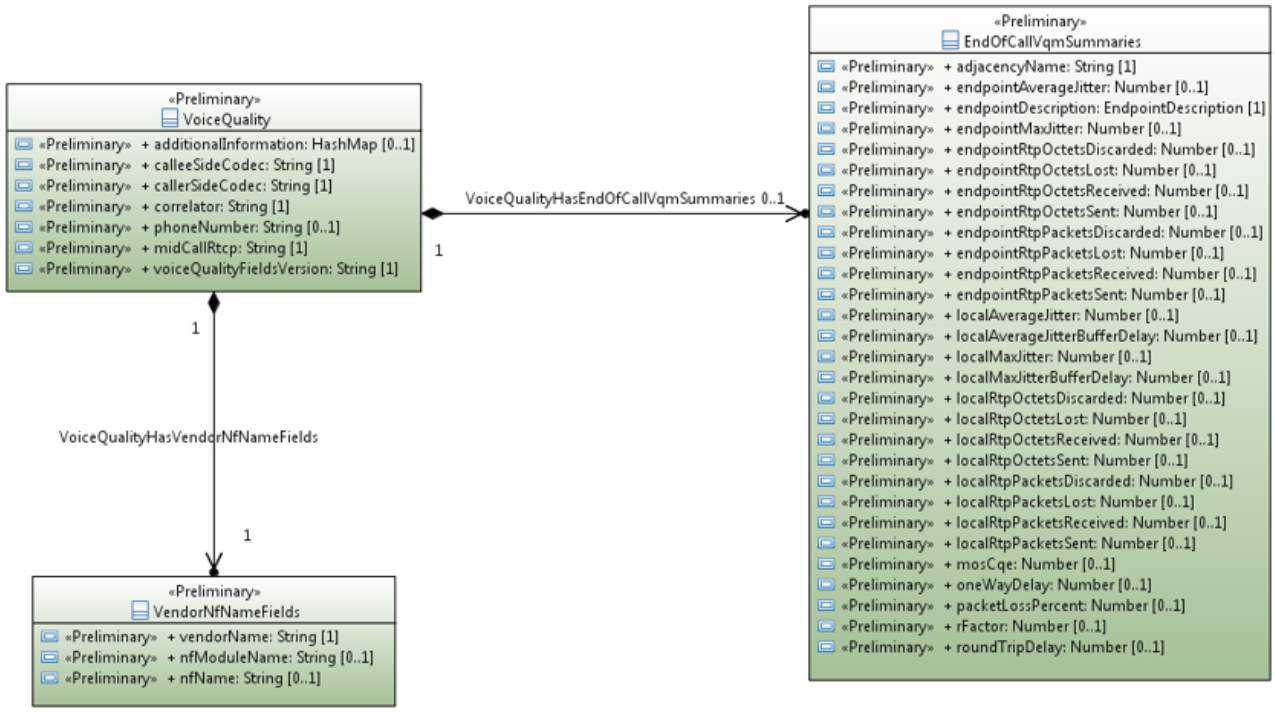
1.1.6 Rooting VES



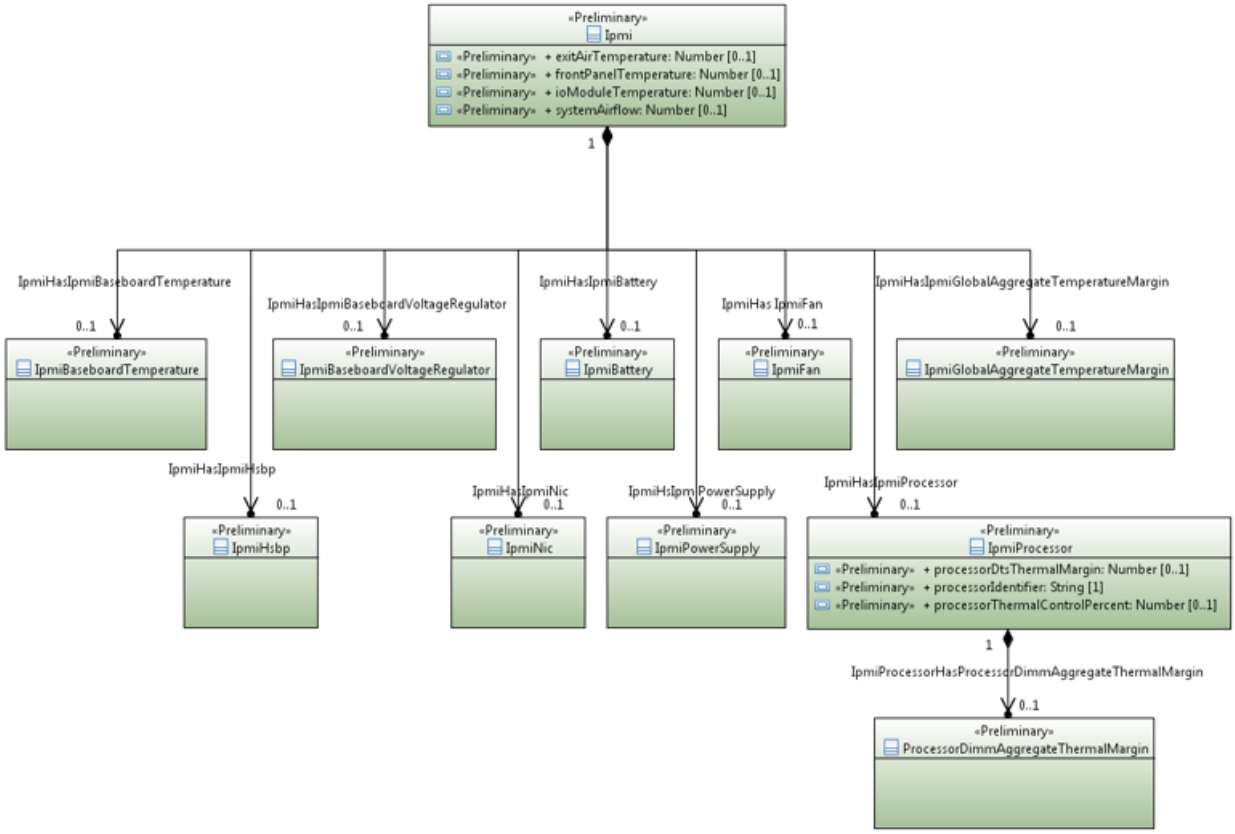
1.1.7 SipSignaling Entities



1.1.8 Voice Quality Entities



1.1.9 ipmi



1.2 Classes

1.2.1 CodecsInUse

The codecsInUse datatype consists of the following fields describing the number of times an identified codec was used over the measurementInterval

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
codecIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Description of the codec.

numberInUse	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of such codecs in use.

1.2.2 CpuUsage

The cpuUsage datatype defines the usage of an identifier CPU and consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
cpuCapacityContention	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The amount of time the CPU cannot run due to contention, in milliseconds over the measurementInterval
cpuDemandAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The total CPU time that the NF/NFC/VM could use if there was no contention, in milliseconds over the measurementInterval
cpuDemandMhz	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	CPU demand in MHz
cpuDemandPct	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	CPU demand as a percentage of the provisioned capacity
cpuIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	CPU Identifier

cpuIdle	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of CPU time spent in the idle task
cpuLatencyAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	cpuDemandAvg - The total CPU time that the VNF/VNFC/VM could use if there is no contention, in milliseconds.
cpuOverheadAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The overhead demand above available allocations and reservations, in milliseconds over the measurementInterval
cpuSwapWaitTime	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Swap wait time, in milliseconds over the measurementInterval
cpuUsageInterrupt	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of time spent servicing interrupts
cpuUsageNice	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of time spent running user space processes that have been niced
cpuUsageSoftIrq	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of time spent handling soft irq interrupts
cpuUsageSteal	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of time spent in involuntary wait which is neither user, system or idle time and is effectively time that went missing

cpuUsageSystem	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of time spent on system tasks running the kernel
cpuUsageUser	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of time spent running un-niced user space processes
cpuWait	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of CPU time spent waiting for I/O operations to complete
percentUsage	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Aggregate cpu usage of the virtual machine on which the xNFC reporting the event is running

1.2.3 DiskUsage

The diskUsage datatype defines the usage of a disk device.

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	**Type**	**Mult.**	**Stereotypes**	**Description**
diskBusResets	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of bus resets in the performance interval.

diskCommandsAborted	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of disk commands aborted over the measurementInterval.
diskCommandsAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average number of commands per second over the measurementInterval.
diskFlushRequests	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Total flush requests of the disk cache over the measurementInterval.
diskFlushTime	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds spent on disk cache flushing over the measurementInterval.
diskIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Disk Identifier.
diskIoTimeAvg	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds spent doing input/output operations over 1 sec; treat this metric as a device load percentage where 1000ms matches 100% load; provide the average over the measurement interval

diskIoTimeLast	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds spent doing input/output operations over 1 sec; treat this metric as a device load percentage where 1000ms matches 100% load; provide the last value measurement within the measurement interval.
diskIoTimeMax	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds spent doing input/output operations over 1 sec; treat this metric as a device load percentage where 1000ms matches 100% load; provide the maximum value measurement within the measurement interval
diskIoTimeMin	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds spent doing input/output operations over 1 sec; treat this metric as a device load percentage where 1000ms matches 100% load; provide the minimum value measurement within the measurement interval.
diskMergedReadAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical read operations that were merged into physical read operations, e.g., two logical reads were served by one physical disk access; provide the average measurement within the measurement interval.
diskMergedReadLast	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical read operations that were merged into physical read operations, e.g., two logical reads were served by one physical disk access; provide the last value measurement within the measurement interval.
diskMergedReadMax	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical read operations that were merged into physical read operations, e.g., two logical reads were served by one physical disk access; provide the maximum value measurement within the measurement interval.

diskMergedReadMin	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical read operations that were merged into physical read operations, e.g., two logical reads were served by one physical disk access; provide the minimum value measurement within the measurement interval.
diskMergedWriteAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical write operations that were merged into physical write operations, e.g., two logical writes were served by one physical disk access; provide the average measurement within the measurement interval
diskMergedWriteLast	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical write operations that were merged into physical write operations, e.g., two logical writes were served by one physical disk access; provide the last value measurement within the measurement interval.
diskMergedWriteMax	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical write operations that were merged into physical write operations, e.g., two logical writes were served by one physical disk access; provide the maximum value measurement within the measurement interval.
diskMergedWriteMin	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of logical write operations that were merged into physical write operations, e.g., two logical writes were served by one physical disk access; provide the minimum value measurement within the measurement interval.
diskOctetsReadAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second read from a disk or partition; provide the average measurement within the measurement interval.

diskOctetsReadLast	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second read from a disk or partition; provide the last measurement within the measurement interval
diskOctetsReadMax	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second read from a disk or partition; provide the maximum measurement within the measurement interval.
diskOctetsReadMin	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second read from a disk or partition; provide the minimum measurement within the measurement interval.
diskOctetsWriteAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second written to a disk or partition; provide the average measurement within the measurement interval.
diskOctetsWriteLast	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second written to a disk or partition; provide the last measurement within the measurement interval.
diskOctetsWriteMax	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second written to a disk or partition; provide the maximum measurement within the measurement interval.

diskOctetsWriteMin	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of octets per second written to a disk or partition; provide the minimum measurement within the measurement interval.
diskOpsReadAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of read operations per second issued to the disk; provide the average measurement within the measurement interval.
diskOpsReadLast	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of read operations per second issued to the disk; provide the last measurement within the measurement interval.
diskOpsReadMax	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of read operations per second issued to the disk; provide the maximum measurement within the measurement interval.
diskOpsReadMin	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of read operations per second issued to the disk; provide the minimum measurement within the measurement interval.
diskOpsWriteAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of write operations per second issued to the disk; provide the average measurement within the measurement interval.

diskOpsWriteLast	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of write operations per second issued to the disk; provide the last measurement within the measurement interval.
diskOpsWriteMax	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of write operations per second issued to the disk; provide the maximum measurement within the measurement interval.
diskOpsWriteMin	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of write operations per second issued to the disk; provide the minimum measurement within the measurement interval.
diskPendingOperationsAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Queue size of pending I/O operations per second; provide the average measurement within the measurement interval.
diskPendingOperationsLast	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Queue size of pending I/O operations per second; provide the last measurement within the measurement interval.
diskPendingOperationsMax	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Queue size of pending I/O operations per second; provide the maximum measurement within the measurement interval.

diskPendingOperationsMin	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	diskPendingOperationsMin - Queue size of pending I/O operations per second; provide the minimum measurement within the measurement interval.
diskReadCommandsAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average number of read commands issued per second to the disk over the measurementInterval.
diskTime	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Nanoseconds spent on disk cache reads/writes within the measurementInterval.
diskTimeReadAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a read operation took to complete; provide the average measurement within the measurement interval.
diskTimeReadLast	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a read operation took to complete; provide the last measurement within the measurement interval.
diskTimeReadMax	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a read operation took to complete; provide the maximum measurement within the measurement interval.

diskTimeReadMin	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a read operation took to complete; provide the minimum measurement within the measurement interval.
diskTimeWriteAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a write operation took to complete; provide the average measurement within the measurement interval.
diskTimeWriteLast	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a write operation took to complete; provide the last measurement within the measurement interval.
diskTimeWriteMax	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a write operation took to complete; provide the maximum measurement within the measurement interval.
diskTimeWriteMin	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Milliseconds a write operation took to complete; provide the minimum measurement within the measurement interval.
diskTotalReadLatencyAvg	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The average amount of time taken for a read from the perspective of a Guest OS. This is the sum of Kernel Read Latency and Physical Device Read Latency in milliseconds over the measurement interval.

diskTotalWriteLatencyAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The average amount of time taken for a write from the perspective of a Guest OS. This is the sum of Kernel Write Latency and Physical Device Write Latency in milliseconds over the measurement interval.
diskWeightedIoTimeAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Measure in ms over 1 sec of both I/O completion time and the backlog that may be accumulating. Value is the average within the collection interval.
diskWeightedIoTimeLast	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Measure in ms over 1 sec of both I/O completion time and the backlog that may be accumulating. Value is the last within the collection interval.
diskWeightedIoTimeMax	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Measure in ms over 1 sec of both I/O completion time and the backlog that may be accumulating. Value is the maximum within the collection interval.
diskWeightedIoTimeMin	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Measure in ms over 1 sec of both I/O completion time and the backlog that may be accumulating. Value is the minimum within the collection interval.
diskWriteCommandsAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average number of write commands issued per second to the disk over the measurementInterval

1.2.4 EndOfCallVqmSummaries

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
adjacencyName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Adjacency name
endpointAverageJitter	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint average jitter
endpointDescription	Endpoint Description	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Enumeration: 'Caller', 'Callee'
endpointMaxJitter	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint maximum jitter
endpointRtpOctetsDiscarded	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP octets discarded

endpointRtpOctetsLost	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP octets lost
endpointRtpOctetsReceived	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP octets received
endpointRtpOctetsSent	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP octets sent
endpointRtpPacketsDiscarded	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP packets discarded
endpointRtpPacketsLost	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP packets lost
endpointRtpPacketsReceived	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP packets received

endpointRtpPacketsSent	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint RTP packets sent
localAverageJitter	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local average jitter
localAverageJitterBufferDelay	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local average jitter buffer delay
localMaxJitter	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local maximum jitter
localMaxJitterBufferDelay	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local max jitter buffer delay
localRtpOctetsDiscarded	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP octets discarded

localRtpOctetsLost	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP octets lost
localRtpOctetsReceived	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP octets received
localRtpOctetsSent	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP octets sent
localRtpPacketsDiscarded	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP packets discarded
localRtpPacketsLost	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP packets lost
localRtpPacketsReceived	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP packets received

localRtpPacketsSent	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Local RTP packets sent
mosCqe	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Decimal range from 1 to 5 (1 decimal place)
oneWayDelay	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	one-way path delay in milliseconds
packetLossPercent	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Calculated percentage packet loss based on endpoint RTP packets lost (as reported in RTCP) and local RTP packets sent. Direction is based on endpoint description (Caller, Callee). Decimal (2 decimal places)
rFactor	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	rFactor from 0 to 100
roundTripDelay	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Round trip delay in milliseconds

1.2.5 Fault

Fields specific to fault events

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	Type	Mult.	Stereotypes	Description
alarmAdditionalInformation	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional alarm information. • Note1: for SNMP mapping to VES, for hash key use OID of varbind, for value use incoming data for that varbind). • Note2: Alarm ID for 3GPP should be included (if applicable) in alarmAdditonalInformation as 'alarmId':'alarmIdValue'. Could contain managed object instance as separate key:value; could add probable cause as separate key:value.
alarmCondition	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Short name of the alarm condition/problem, such as a trap name. Should not have white space (e.g., tpLgCgiNotInConfig, BfdSessionDown, linkDown, etc…)

alarmInterfaceA	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Card, port, channel or interface name of the device generating the alarm. This could reflect managed object.
eventCatagory	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event category, for example: 'license', 'link', 'routing', 'security', 'signaling'
eventSeverity	EventSeverity	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event severity enumeration: 'CRITICAL', 'MAJOR', 'MINOR', 'WARNING', 'NORMAL'. NORMAL is used to represent clear.

eventSourceType	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Examples: 'card', 'host', 'other', 'port', 'portThreshold', 'router', 'slotThreshold', 'switch', 'virtualMachine', 'virtualNetworkFunction'. This could be managed object class.
faultFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the faultFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
specificProblem	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Description of the alarm or problem (e.g., 'eNodeB 155197 in PLMN 310-410 with eNodeB name KYL05197 is lost'). 3GPP probable cause would be included in this field.

vfStatus	VfStatus	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Virtual function status enumeration: 'Active', 'Idle', 'Preparing to terminate', 'Ready to terminate', 'Requesting Termination'
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'

lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)

nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.

reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.

sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples

version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	

Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.6 FilesystemUsage

The filesystemUsage datatype consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
blockConfigured	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Configured block storage capacity in GB.
blockops	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Block storage input-output operations per second.
blockUsed	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Used block storage capacity in GB.
ephemeralConfigured	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Configured ephemeral storage capacity in GB.
ephemerallops	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ephemeral storage input-output operations per second.
ephemeralUsed	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Used ephemeral storage capacity in GB.
filesysytemName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	File system name.

1.2.7 GtpPerFlowMetrics

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
avgBitErrorRate	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average bit error rate
avgPacketDelayVariation	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average packet delay variation or jitter in milliseconds for received packets: Average difference between the packet timestamp and time received for all pairs of consecutive packets
avgPacketLatency	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average delivery latency
avgReceiveThroughput	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average receive throughput
avgTransmitThroughput	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Average transmit throughput
durConnectionFailedStatus	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Duration of failed state in milliseconds, computed as the cumulative time between a failed echo request and the next following successful error request, over this reporting interval

durTunnelFailedStatus	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Duration of errored state, computed as the cumulative time between a tunnel error indicator and the next following non-errored indicator, over this reporting interval
flowActivatedBy	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint activating the flow
flowActivationEpoch	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Time the connection is activated in the flow (connection) being reported on, or transmission time of the first packet if activation time is not available
flowActivationMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer microseconds for the start of the flow connection
flowActivationTime	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Time the connection is activated in the flow being reported on, or transmission time of the first packet if activation time is not available; with RFC 2822 compliant format: 'Sat, 13 Mar 2010 11:29:05 -0800'
flowDeactivatedBy	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Endpoint deactivating the flow
flowDeactivationEpoch	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Time for the start of the flow connection, in integer UTC epoch time aka UNIX time

flowDeactivationMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer microseconds for the start of the flow connection
flowDeactivationTime	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Transmission time of the first packet in the flow connection being reported on; with RFC 2822 compliant format: 'Sat, 13 Mar 2010 11:29:05 -0800'
flowStatus	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Connection status at reporting time as a working / inactive / failed indicator value
gtpConnectionStatus	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Current connection state at reporting time
gtpTunnelStatus	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Current tunnel state at reporting time
ipTosCountList	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of key: value pairs where the keys are drawn from the IP Type-of-Service identifiers which range from '0' to '255', and the values are the count of packets that had those ToS identifiers in the flow
ipTosList	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of unique IP Type-of-Service values observed in the flow where values range from '0' to '255'

largePacketRtt	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	large packet round trip time
largePacketThreshold	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	large packet threshold being applied
maxPacketDelayVariation	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Maximum packet delay variation or jitter in milliseconds for received packets: Maximum of the difference between the packet timestamp and time received for all pairs of consecutive packets
maxReceiveBitRate	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	maximum receive bit rate"
maxTransmitBitRate	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	maximum transmit bit rate
mobileQciCosCountList	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	array of key: value pairs where the keys are drawn from LTE QCI or UMTS class of service strings, and the values are the count of packets that had those strings in the flow
mobileQciCosList	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of unique LTE QCI or UMTS class-of-service values observed in the flow

numActivationFailures	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of failed activation requests, as observed by the reporting node
numBitErrors	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of errored bits number of errored bits
numBytesReceived	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of bytes received, including retransmissions
numBytesTransmitted	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of bytes transmitted, including retransmissions
numDroppedPackets	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of received packets dropped due to errors per virtual interface
numGtpEchoFailures	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of Echo request path failures where failed paths are defined in 3GPP TS 29.281 sec 7.2.1 and 3GPP TS 29.060 sec. 11.2
numGtpTunnelErrors	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of tunnel error indications where errors are defined in 3GPP TS 29.281 sec 7.3.1 and 3GPP TS 29.060 sec. 11.1

numHttpErrors	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Http error count
numL7BytesReceived	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of tunneled layer 7 bytes received, including retransmissions
numL7BytesTransmitted	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of tunneled layer 7 bytes received, including retransmissions
numLostPackets	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of tunneled layer 7 bytes received, including retransmissions
numOutOfOrderPackets	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of out-of-order packets
numPacketErrors	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of errored packets
numPacketsReceivedExclRetrans	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of packets received, excluding retransmission

numPacketsReceivedInclRetrans	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of packets received, including retransmission
numPacketsTransmittedInclRetrans	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of packets transmitted, including retransmissions
numRetries	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of packet retrie
numTimeouts	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of packet timeouts
numTunneledL7BytesReceived	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of tunneled layer 7 bytes received, excluding retransmissions
roundTripTime	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Round Trip time
tcpFlagCountList	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of key: value pairs where the keys are drawn from TCP Flags and the values are the count of packets that had that TCP Flag in the flow

tcpFlagList	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of unique TCP Flags observed in the flow
timeToFirstByte	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Time in milliseconds between the connection activation and first byte received

1.2.8 Heartbeat

The heartbeatFields datatype is an optional field block for fields specific to heartbeat events.

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	**Type**	**Mult.**	**Stereotypes**	**Description**
additionalFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional expansion fields if needed.

heartbeatFieldVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the heartbeatFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
heartbeatInterval	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Current heartbeatInterval in seconds.
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'

eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)

nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'

reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)

sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)

timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).

name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.

id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support : MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.9 HugePages

The hugePages datatype provides metrics on system hugePages

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
bytesFree	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of free hugePages in bytes.
bytesUsed	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of used hugePages in bytes.
hugePagesIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	HugePages identifier
percentFree	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of free hugePages in percent.

percentused	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of used hugePages in percent.
vmPageNumberFree	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of free hugePages in numbers.
vmPageNumberUsed	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of used hugePages in numbers.

1.2.10 Ipmi

The ipmi (Intelligent Platform Management Interface) datatype provides intelligent platform management interface metrics; it consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
exitAirTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	System fan exit air flow temperature in Celsius
frontPanelTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Front panel temp in Celsius
ioModuleTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Io module temp in Celsius

systemAirflow	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Airflow in cubic feet per minute (cfm)
_ipmibaseboardtemperature	IpmiBaseboardTemperature	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiBaseboard Temperature objects
_ipmibaseboardvoltageregulator	IpmiBaseboardVoltageRegulator	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiBaseboard VoltageRegulator objects
_ipmibattery	IpmiBattery	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiBattery objects
_ipmifan	IpmiFan	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiFan objects
_ipmiglobalaggregatetemperaturemargin	IpmiGlobalAggregateTemperatureMargin	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	ipmi global aggregate temperature margin
_ipmihsbp	IpmiHsbp	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiHsbp objects
_ipminic	IpmiNic	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiNic objects

_ipmipowersupply	IpmiPowerSupply	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiPowerSupply objects
_ipmiprocessor	IpmiProcessor	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of ipmiProcessor objects

1.2.11 IpmiBaseboardTemperature

The ipmiBaseboardTemperature datatype consists of the following fields which describe ipmi baseboard temperature metrics: Field Type Required? Description

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
baseboardTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Baseboard temperature in celsius
baseboardTemperature Identifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the location where the temperature is taken

1.2.12 IpmiBaseboardVoltageRegulator

The ipmiBaseboardVoltageRegulator datatype consists of the following fields which describe ipmi baseboard voltage regulator metrics:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description

baseboaredVoltageRegulatorIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the baseboard voltage regulator
voltageRegulatorTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Voltage regulator temperature in celsius

1.2.13 IpmiBattery

The ipmiBattery datatype consists of the following fields which describe ipmi battery metrics:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
batteryIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the battery
batteryType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Type of battery
batteryVoltageLevel	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Battery voltage level

1.2.14 IpmiFan

The ipmiFan datatype consists of the following fields which describe ipmi fan metrics:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description

fanIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the fan
fanSpeed	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Fan speed in revolutions per minute (rpm)

1.2.15 IpmiGlobalAggregateTemperatureMargin

The ipmiGlobalAggregateTemperatureMargin datatype consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
globalAggregateTemperatureMargin	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Temperature margin in Celsius relative to a throttling thermal trip point
globalAggregateTemperatureMarginIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the ipmi global aggregate temperature margin metrics

1.2.16 IpmiHsbp

The ipmiHsbp datatype provides ipmi hot swap backplane power metrics; it consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description

hsbpIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the hot swap backplane power unit
hsbpTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Hot swap backplane power temperature in celsius

1.2.17 IpmiNic

The ipmiNic datatype provides network interface control care metrics; it consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
nicIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the network interface control card
nicTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	nic temperature in Celsius

1.2.18 IpmiPowerSupply

The ipmiPowerSupply datatype provides ipmi power supply metrics; it consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
powerSupplyCurrentOutputPercent	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Current output voltage as a percentage of the design specified level

powerSupplyIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the power supply
powerSupplyInputPower	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Input power in watts
powerSupplyTemperature	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Power supply temperature in Celsius

1.2.19 IpmiProcessor

The ipmiProcessor datatype provides ipmi processor metrics

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
processorThermalControlPercent	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Io module temperatue in celsius
processorDtsThermalMargin	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Front panel temperature in celsius
_processordimmaggregatethermalmargin	ProcessorDimmAggregateThermalMargin	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of processorDimmAggregate ThermalMargin objects

processorIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for the power supply

1.2.20 LatencyBucketMeasure

The latencyBucketMeasure datatype consists of the following fields which describe the number of counts falling within a defined latency bucket

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
countsInTheBucket	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of counts falling within a defined latency bucket
highEndOfLatencyBucket	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	High end of bucket range (typically in ms)
lowEndOfLatencyBucket	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Low end of bucket range (typically in ms)

1.2.21 Load

The load datatype provides metrics on system cpu and io utilization obtained using /proc/loadavg

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description

longTerm	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of jobs in the run queue (state R, cpu utilization) or waiting for disk I/O (state D, io utilization) averaged over 15 minutes using /proc/loadavg
midTerm	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of jobs in the run queue (state R, cpu utilization) or waiting for disk I/O (state D, io utilization) averaged over 5 minutes using /proc/loadavg
shortTerm	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	number of jobs in the run queue (state R, cpu utilization) or waiting for disk I/O (state D, io utilization) averaged over 1 minute using /proc/loadavg

1.2.22 MachineCheckException

The machineCheckException datatype describes machine check exceptions

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
correctedMemoryErrors	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Total hardware errors that were corrected by the hardware (e.g. data corruption corrected via ECC) over the measurementInterval. These errors do not require immediate software actions, but are still reported for accounting and predictive failure analysis
correctedMemoryErrorsIn1Hr	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Total hardware errors that were corrected by the hardware over the last one hour

vmlIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	processIdentifier
uncorrectedMemoryErrors	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Total uncorrected hardware errors that were detected by the hardware (e.g., causing data corruption) over the measurementInterval. These errors require a software response.
uncorrectedMemoryErrorsIn1Hr	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Total uncorrected hardware errors that were detected by the hardware over the last one hour

1.2.23 MeasDataCollection

The measDataCollection datatype defines a 3GPP measurement collection structure aligned with the 3GPP PM format

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
formatVersion	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	3GPP PM reporting file format version from pre-standard TS 28.550 v2.0.0
granularityPeriod	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Granularity period for the PM report in seconds

measObjInstIdList	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of monitored object local distinguished name ids per 3GPP TS 32.300
measuredEntityDn	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Distinguished name per 3GPP TS 28.550
measuredEntitySoftwareVersion	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Software version for the NF providing the PM data as specified in 3GPP TS 28.550
measuredEntityUserName	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	User Definable name for the measured object per 3GPP TS 28.550
_measinfo	MeasInfo	1..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of monitored object local distinguished name ids per 3GPP TS 32.300

1.2.24 MeasInfo

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
jobId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the measurement job

_measinfoidinteger	measInfoIdInteger	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Measurement group Identifier
_measinfoidstring	MeasInfoIdString	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Measurement group Identifier
_measTypesinteger	MeasTypesInteger	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of measurement identifiers associated with the measurement results expressed as integers for efficiency rather than strings
_measTypesstring	MeasTypesString	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of measurement identifiers associated with the measurement results expressed as integers for efficiency rather than strings
_measvalues	MeasValues	1..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of measValues

1.2.25 MeasInfoIdString

The measInfoIdString datatype provides a string measurement group identifier;

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
sMeasInfoId	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	String measurement group Identifier

1.2.26 MeasResultInteger

The measResultInteger datatype provides an integer 3GPP PM measurement result;

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
p	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer reference to the counter
iValue	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer counter value

1.2.27 MeasResultString

The measResultString datatype provides a string 3GPP PM measurement result;

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
p	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer reference to the counter
sVlaue	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	String counter value

1.2.28 MeasTypesInteger

The measTypesInteger datatype provides an array of integer measurement identifiers associated with the measurement results

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
iMeasTypesList	Integer	1..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of integer measurement identifiers associated with the measurement results

1.2.29 MeasTypesString

The measTypesString datatype provides an array of string measurement identifiers associated with the measurement results

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
sMeasTypesList	String	1..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of string measurement identifiers associated with the measurement results

1.2.30 MeasValues

The measValues datatype provides 3GPP measurement values

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
measObjAddFlds	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional key-value pairs if needed
suspectFlag	Boolean	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	VES 7.1 Spec has this attribute as a string. Enumeration: 'true', 'false'. Indicates if the values are suspect

_measresultinteger	MeasResultInteger	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of results
_measresultnull	measResultNull	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of results
_mesresultnumber	MesResultNumber	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of results
_measresultstring	MeasResultString	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of results

1.2.31 Measurement

Fields specific to measurement events

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description

additionalFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional measurement fields if needed.
additionalMeasurements	ArrayofNamedHashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of named hashMap if needed.
additionalObjects	ArrayOfSchemaObject	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of Schema objects described by name, schema and other meta-information, if needed.

concurrentSessions	Integer	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Peak concurrent sessions for the VM or VNF (depending on the context) over the measurementInterval.
configuredEntities	Integer	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Depending on the context over the measurementInterval: peak total number of users, subscribers, devices, adjacencies, etc., for the VM, or peak total number of subscribers, devices, etc., for the VNF
featureUsageArray	HashMap	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The hashMap key should identify the feature, while the value defines the number of times the identified feature was used.

meanRequestLatency	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Mean seconds required to respond to each request for the VM on which the VNFC reporting the event is running.
measurementFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the measurementFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
measurementInterval	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Interval over which measurements are being reported in seconds

nfcScalingMetric	Integer	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Represents busy-ness of the network function from 0 to 100 as reported by the nfc.
numberOfMediaPortsInUse	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number of media ports in use.
requestRate	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Peak request rate per second, for the VM over the measurementInterval

_Hugepages	HugePages	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of metrics on hugePages
_codecsinuse	CodecsInUse	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of codecs in use
_cpuUsage	CpuUsage	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Usage of an array of CPUs

_diskUsage	DiskUsage	0.*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Usage of an array of disks
_filesystemusage	FilesystemUsage	0.*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Filesystem usage of the VM on which the xNFC reporting the event is running
_ipmi	Ipmi	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of intelligent platform management interface metrics

_latencybucketmeasure	LatencyBucketMeasure	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of integers representing counts of requests whose latency in milliseconds falls within per-xNF configured ranges; where latency is the duration between a service request and its fulfillment.
_load	Load	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of system load metrics
_machinecheckexception	MachineCheckException	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of machine check exceptions

_memoryusage	MemoryUsage	0.*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Memory usage of an array of VMs
_nicperformance	NicPerformance	0.*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Performance metrics of an array of network interface cards
_processstats	ProcessStats	0.*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of metrics on system processes

domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds

nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name

priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.

sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.

startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.

vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth

description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.32 MemoryUsage

The memoryUsage datatype defines the memory usage of a virtual machine and consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
memoryBuffered	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Kibibytes of temporary storage for raw disk blocks

memoryCached	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Kibibytes of memory used for cache
memoryConfigured	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Kibibytes of memory configured in the virtual machine on which the xNFC reporting the event is running
memoryDemand	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Host demand in kibibytes
memoryFree	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Kibibytes of physical RAM left unused by the system
memoryLatencyAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of time the VM is waiting to access swapped or compressed memory
memorySharedAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Shared memory in kilobytes
memorySlabRecl	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The part of the slab that can be reclaimed such as caches measured in kibibytes
memorySlabUnrecl	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The part of the slab that cannot be reclaimed even when lacking memory measure in kibibytes

memorySwapInAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Amount of memory swapped-in from host cache in kibibytes
memorySwapInRateAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Rate at which memory is swapped from disk into active memory during the interval in kilobytes per second
memorySwapOutAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Amount of memory swapped-out to host cache in kibibytes
memorySwapOutRateAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Rate at which memory is being swapped from active memory to disk during the current interval in kilobytes per second
memorySwapUsedAvg	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Space used for caching swapped pages in the host cache in kibibytes
memoryUsed	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Total memory minus the sum of free, buffered, cached and slab memory measured in kibibytes
percentMemoryUsage	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of memory usage; value = (memoryUsed / (memoryUsed + memoryFree) x 100 if denomintor is nonzero, or 0, if otherwise.
vmIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Virtual Machine identifier associated with the memory metrics

1.2.33 MesResultNumber

The measResultNumber datatype provides a number 3GPP PM measurement result

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
p	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer reference to the counter
rValue	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Number counter value

1.2.34 MobileFlow

Fields specific to mobility flow events

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
additionalFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	additionalFields - Additional mobileFlow fields if needed.

applicationType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	applicationType - Application type inferred
applProtocolType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	applProtocolType - Application protocol.
applProtocolVersion	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	applProtocolVersion - Application version.

cid	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	cid - Cell Id.
connectionType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	connectionType - Abbreviation referencing a 3GPP reference point e.g., S1-U, S11, etc.
ecgi	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	ecgi - Evolved Cell Global Id.

flowDirection	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	flowDirection - Flow direction, indicating if the reporting node is the source of the flow or destination for the flow.
gtpProtocolType	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	gtpProtocolType - GTP protocol
gtpVersion	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	gtpVersion - GTP protocol version.

httpHeader	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	httpHeader - HTTP request header, if the flow connects to a node referenced by HTTP.
iemi	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	imei - IMEI for the subscriber UE used in this flow, if the flow connects to a mobile device.
imsi	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	imsi - IMSI for the subscriber UE used in this flow, if the flow connects to a mobile device

ipProtocolType	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	ipProtocolType - IP protocol type e.g., TCP, UDP, RTP...
ipVersion	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	ipVersion - IP protocol version e.g., IPv4, IPv6
lac	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	lac - Location area code.

mcc	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	mcc - Mobile country code.
mnc	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	mnc - Mobile network code.
mobileFlowFieldsVersion	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	mobileFlowFieldsVersion - Version of the mobileFlowFields block.

msisdn	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	msisdn - MSISDN for the subscriber UE used in this flow, as an integer, if the flow connects to a mobile device.
otherEndpointIpAddress	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	otherEndpointIpAddress - IP address for the other endpoint, as used for the flow being reported on. Note: current data type (String) may be changed to Common Resource Datatype L3AddressData. =[gh]=
otherEndpointPort	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	otherEndpointPort - IP Port for the reporting entity, as used for the flow being reported on

otherFunctionalRole	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	otherFunctionalRole - Functional role of the other endpoint for the flow being reported on e.g., MME, S-GW, P-GW, PCRF...
rac	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	rac - Routing area code
radioAccessTechnology	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	radioAccessTechnology - Radio Access Technology e.g., 2G, 3G, 4G and 5G. (GSM, UMTS, LTE, 5G)

reportingEndpointIpAddr	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	reportingEndpointIpAddr - IP address for the reporting entity, as used for the flow being reported on. Note: current data type (String) may be changed to Common Resource Datatype L3AddressData. =[gh]=
reportingEndpointPort	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	reportingEndpointPort - IP port for the reporting entity, as used for the flow being reported on.
sac	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sac - Service area code

samplingAlgorithm	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	samplingAlgorithm - Integer identifier for the sampling algorithm or rule being applied in calculating the flow metrics if metrics are calculated based on a sample of packets, or 0 if no sampling is applied.
tac	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	tac - Transport area code
tunnelId	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	tunnelId - Tunnel identifier

vlanId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	vlanId - VLAN identifier used by this flow
_gtpperflowmetrics	GtpPerFlowMetrics	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Mobility GTP Protocol per flow metrics
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'

eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)

nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'

reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)

sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)

timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).

name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.

id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.35 NicPerformance

The nicPerformance datatype consists of the following fields which describe the performance and errors of an of an identified virtual network interface card

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
administrativeState	NicAdminState	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Administrative state: enum: 'inService', 'outOfService'
nicIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network interface card identifier
operationalState	NicOpsState	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Operational state: enum: 'inService', 'outOfService'

receivedBroadcastPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of broadcast packets received as read at the end of the measurement interval
receivedBroadcastPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of broadcast packets received within the measurement interval
receivedDiscardedPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of discarded packets received as read at the end of the measurement interval
receivedDiscardedPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of discarded packets received within the measurement interval
receivedErrorPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of error packets received as read at the end of the measurement interval
receivedErrorPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of error packets received within the measurement interval
receivedMulticastPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of multicast packets received as read at the end of the measurement interval

receivedMulticastPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of multicast packets received within the measurement interval
receivedOctetsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of octets received as read at the end of the measurement interval
receivedOctetsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of octets received within the measurement interval
receivedPercentDiscard	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of discarded packets received; value = (receivedDiscardedPacketsDelta / receivedTotalPacketsDelta) x 100, if denominator is nonzero, or 0, if otherwise.
receivedPercentError	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of error packets received; value = (receivedErrorPacketsDelta / receivedTotalPacketsDelta) x 100, if denominator is nonzero, or 0, if otherwise.
receivedTotalPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of all packets received as read at the end of the measurement interval
receivedTotalPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of all packets received within the measurement interval

receivedUnicastPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of unicast packets received as read at the end of the measurement interval
receivedUnicastPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of unicast packets received within the measurement interval
receivedUtilization	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of utilization received; value = (receivedOctetsDelta / (speed x (lastEpochMicrosec - startEpochMicrosec))) x 100, if denominator is nonzero, or 0, if otherwise.
speed	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Speed configured in mbps.
transmittedBroadcastPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of broadcast packets transmitted as read at the end of the measurement interval
transmittedBroadcastPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of broadcast packets transmitted within the measurement interval
transmittedDiscardedPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of discarded packets transmitted as read at the end of the measurement interval

transmittedDiscardedPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of discarded packets transmitted within the measurement interval
transmittedErrorPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of error packets transmitted as read at the end of the measurement interval
transmittedErrorPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of error packets transmitted within the measurement interval
transmittedMulticastPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of multicast packets transmitted as read at the end of the measurement interval
transmittedMulticastPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of multicast packets transmitted within the measurement interval
transmittedOctetsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of octets transmitted as read at the end of the measurement interval
transmittedOctetsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of octets transmitted within the measurement interval

transmittedPercentDiscard	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of discarded packets transmitted; value = (transmittedDiscardedPacketsDelta / transmittedTotalPacketsDelta) x 100, if denominator is nonzero, or 0, if otherwise.
transmittedPercentError	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of error packets received; value = (transmittedErrorPacketsDelta / transmittedTotalPacketsDelta) x 100, if denominator is nonzero, or 0, if otherwise.
transmittedTotalPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of all packets transmitted as read at the end of the measurement interval
transmittedTotalPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of all packets transmitted within the measurement interval
transmittedUnicastPacketsAccumulated	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Cumulative count of unicast packets transmitted as read at the end of the measurement interval
transmittedUnicastPacketsDelta	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Count of unicast packets transmitted within the measurement interval
transmittedUtilization	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Percentage of utilization transmitted; value = (transmittedOctetsDelta / (speed x (lastEpochMicrosec - startEpochMicrosec))) x 100, if denominator is nonzero, or 0, if otherwise.

valuesAreSuspect	Boolean	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Enumeration: 'true' or 'false'. If 'true' then the vNicPerformance values are likely inaccurate due to counter overflow or other conditions.

1.2.36 Notification

Fields specific to notification events

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	**Type**	**Mult.**	**Stereotypes**	**Description**
additionalFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional notification fields if needed.
arrayOfNamedHashMap	NamedHashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	arrayOfNamedHashMap - Array of named hashMaps

changeContact	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifier for a contact related to the change.
changeIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	System or session identifier associated with the change.
changeType	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Describes what has changed for the entity, for example: configuration changed, capability added, capability removed…

newState	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	New state of the entity, for example: 'inService', 'maintenance', 'outOfService'
notificationFieldsVersion	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the notificationFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
oldState	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Previous state of the entity. For example: "inService", "outOfService", "maintenance"

stateInterface	String	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Card or port name of the entity that changed state.
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'

lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)

nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.

reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.

sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples

version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	

Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.37 Other

The otherFields datatype defines fields for events belonging to the 'other' domain of the commonEventHeader domain enumeration.

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
arrayOfNamedHashMap	ArrayOfNamedHashMap	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of named hashMaps
hashMap	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of name-value pairs.

schemaObjects	ArrayOfSchemaObject	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of schema objects described by name, schema and other meta-information.
otherFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the otherFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'

eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)

nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'

reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)

sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)

timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).

name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.

id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.38 Perf3gpp

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	**Type**	**Mult.**	**Stereotypes**	**Description**
eventAddlFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional key-value pairs if needed

perf3gppFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the perf3gpp event
_measDataCollection	MeasDataCollection	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	3GPP measurement collection structure
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'

eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)

nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'

reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)

sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)

timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).

name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.

id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.39 PnfRegistration

The pnfRegistrationFields datatype defines fields for events belonging to the 'pnfRegistration' domain of the commonEventHeader domain enumeration; it consists of the following fields:

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	**Type**	**Mult.**	**Stereotypes**	**Description**
additionalFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional pnfRegistration fields if needed

lastServiceDate	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 dateOfLastService = date of last service; e.g. 15022017
macAddress	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	MAC address of OAM interface of the unit
manufactureDate	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 dateOfManufacture = manufacture date of the unit; 24032016

modelNumber	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 versionNumber = version of the unit from vendor; e.g. AJ02. Maps to AAI equip-model
oamV4lpAddress	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	IPv4 m-plane IP address to be used by the manager to contact the PNF
oamV6lpAddress	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	IPv6 m-plane IP address to be used by the manager to contact the PNF

pnfRegistrationFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the registrationFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
serialNumber	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 serialNumber = serial number of the unit; e.g. 6061ZW3
softwareVersion	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 swName = active SW running on the unit; e.g. 5gDUv18.05.201

unitFamily	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 vendorUnitFamilyType = general type of HW unit; e.g. BBU
unitType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 vendorUnitTypeNumber = vendor name for the unit; e.g. Airscale
vendorName	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	TS 32.692 vendorName = name of manufacturer; e.g. Nokia. Maps to AAI equip-vendor

domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds

nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name

priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.

sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.

startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.

vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth

description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.40 ProcessStats

The processStats datatype provides metrics on system processes; it consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
forkRate	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of threads created since the last reboot

processIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	processIdentifier
psStateBlocked	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of processes in a blocked state
psStatePaging	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of processes in a paging state
psStateRunning	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of processes in a running state
psStateSleeping	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of processes in a sleeping state
PsStateStopped	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of processes in a stopped state
psStateZombie	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The number of processes in a zombie state

1.2.41 ProcessorDimmAggregateThermalMargin

The processorDimmAggregateThermalMargin datatype provides intelligent platform management interface (ipmi) processor dual inline memory module aggregate thermal margin metrics; it consists of the following fields:

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
processorDimmAggregateThermalMarginIdentifier	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	identifier for the aggregate thermal margin metrics from the processor dual inline memory module
thermalMargin	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the difference between the DIMM's current temperature, in celsius, and the DIMM's throttling thermal trip point

1.2.42 SipSignaling

sipSignalingFields - The sipSignalingFields datatype communicates information about SIP signaling messages, parameters and signaling state.

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	Type	Mult.	Stereotypes	Description
additionalInformation	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	zdditionalInformation - Additional sipSignalling fields.

compressedSip	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	compressedSip - The full SIP request/response including headers and bodies.
correlator	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	correlator - Constant across all events on this call.
localipAddress	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	localIpAddress - IP address on VNF. Note: current data type (String) may be changed to Common Resource Datatype L3AddressData. =[gh]=

localPort	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	localPort - Port on VNF.
remoteipAddress	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	remoteIpAddress - IP address of peer endpoint. Note: current data type (String) may be changed to Common Resource Datatype L3AddressData. =[gh]=
remotePort	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	remotePort - Port of peer endpoint

sipSignalingFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sipSignalingFieldsVersion - Version of the sipSignalingFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
summarySip	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	summarySip - The SIP Method or Response ('INVITE', '200 OK', 'BYE', etc).
_vendorNfnamefields	VendorNfNameFields	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Vendor, NF and nfModule names

domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds

nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name

priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.

sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.

startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.

vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth

description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.43 StateChange

Fields specific to state change events.

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	Type	Mult.	Stereotypes	Description

additionalFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional stateChange fields if needed
newState	invalid	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	New state of the entity: 'inService', 'maintenance', 'outOfService'
OldState	invalid	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Previous state of the entity: 'inService', 'maintenance', 'outOfService'

stateChangeFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the stateChangeFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
stateInterface	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Card or port name of the entity that changed state
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'

eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)

nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'

reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)

sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)

timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).

name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.

id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.44 Syslog

Syslog's can be classified as either Control or Session/Traffic. They differ by message content and expected volume: • Control logs are generally free-form human-readable text used for reporting errors or warnings supporting the operation and troubleshooting of NFs. The volume of these logs is typically less than 2k per day. • Session logs use common structured fields to report normal NF processing such as DNS lookups or firewall rules processed. The volume of these logs is typically greater than 1k per hour (and sometimes as high as 10k per second). VES supports both classes of syslog, however VES is only recommended for control logs or for lower volume session logs, less than 60k per hour. High volume session logging should use a file-based transport solution.

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	**Type**	**Mult.**	**Stereotypes**	**Description**
additionalFields	HashMap	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional syslog fields if needed Ex: {"name1": "value1", "name2: "value2" … }

eventSourceHost	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Hostname of the device
eventSourceType	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Examples: 'other', 'router', 'switch', 'host', 'card', 'port', 'slotThreshold', 'portThreshold', 'virtualMachine', 'virtualNetworkFunction'
syslogSdId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	0-32 char in format name@number, i.e., ourSDID@32473

syslogFacility	Syslog Facility	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Numeric code from 0 to 23 for facility: 0 kernel messages 1 user-level messages 2 mail system 3 system daemons 4 security/authorization messages 5 messages generated internally by syslogd 6 line printer subsystem 7 network news subsystem 8 UUCP subsystem 9 clock daemon 10 security/authorization messages 11 FTP daemon 12 NTP subsystem 13 log audit 14 log alert 15 clock daemon (note 2) 16 local use 0 (local0) 17 local use 1 (local1) 18 local use 2 (local2) 19 local use 3 (local3) 20 local use 4 (local4) 21 local use 5 (local5) 22 local use 6 (local6) 23 local use 7 (local7)
syslogFieldVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the syslogFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
syslogMsg	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Syslog message

syslogMsgHost	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Hostname parsed from non-VES syslog message
syslogPri	Integer	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	0-192 Combined Severity and Facility (see rfc5424)
syslogProc	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Identifies the application that originated the message

syslogProcId	Number	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The process number assigned by the OS when the application was started
syslogSData	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	A <space> separated list of key="value" pairs following the rfc5424 standard for SD-ELEMENT. Deprecated The entire rfc5424 syslogSData object, including square brackets [ ], SD-ID and list of SD-PARAMs
syslogSev	SyslogSev	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Level-of-severity text enumeration defined below: Text Sev Description Emergency 0 system is unusable Alert 1 action must be taken immediately Critical 2 critical conditions Error 3 error conditions Warning 4 warning conditions Notice 5 normal but significant condition Info 6 Informational messages Debug 7 debug-level messages

syslogTag	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Also known as MsgId. Brief non-spaced text indicating the type of message such as 'TCPOUT' or 'BGP_STATUS_CHANGE'; 'NILVALUE' should be used when no other value can be provided
syslogTs	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Timestamp parsed from non-VES syslog message
syslogVer	Number	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	IANA assigned version of the syslog protocol specification: 0: VES 1: IANA RFC5424

domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds

nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name

priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.

sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.

startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.

vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth

description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.45 ThresholdCrossingAlert

The thresholdCrossingAlertFields datatype consists of the following fields:

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	Type	Mult.	Stereotypes	Description

additionalFields	HashMap	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	additionalFields - Additional pnfRegistration fields if needed.
additionalParameters	ThresholdCrossingAlertCounter	1..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of performance counters
alertAction	AlertAction	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Enumeration: 'SET', 'CONT', 'CLEAR'

alertDescription	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unique short alert description (e.g., NE-CPUMEM)
alertType	AlertType	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Enumeration: 'CARD-ANOMALY', 'INTERFACE-ANOMALY', ELEMENT-ANOMALY', 'SERVICE-ANOMALY'
alertValue	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Calculated API value (if applicable)

associatedAlertIdList	String	0..*	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	List of eventIds associated with the event being reported
collectionTimestamp	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Time when the performance collector picked up the data; with RFC 2822 compliant format: 'Sat, 13 Mar 2010 11:29:05 -0800'
dataCollector	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Specific performance collector instance used

elementType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Type of network element (internal AT&T field)
eventSeverity	EventSeverity	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event severity or priority enumeration: 'CRITICAL', 'MAJOR', 'MINOR', 'WARNING', 'NORMAL'
eventStartTimestamp	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Time closest to when the measurement was made; with RFC 2822 compliant format: 'Sat, 13 Mar 2010 11:29:05 -0800'

interfaceName	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Physical or logical port or card (if applicable
networkService	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network name (internal AT&T field)
possibleRootCause	String	0.1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Reserved for future use

thresholdCrossingFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the thresholdCrossingAlertFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'

lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds
nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)

nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name
priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.

reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.
sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.

sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.
startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples

version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.
vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	

Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth
description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.46 VendorNfNameFields

vendorNfNameFields - The vendorNfNameFields provides vendor, nf and nfModule identifying information.

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
nfModuleName	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	nfModuleName - Name of the nfModule generating the event.
nfName	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	nfName - Name of the network function generating the event
vendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	vendorName - Network function vendor name.

1.2.47 VesEvent

An ONAP event is an aggregation of a header and a message. Event messages may be published to a message broker by service instances, resource instances, or ONAP platform components. Service or resource instances may be in support of network infrastructure or customer services. Interested platforms may subscribe to events on the message broker (e.g. Centralized Testing Platform CTP) may see an event on a service VNF instance and perform an automated test as part of a closed loop management policy. Events are unique and distinguishable from one another. ONAP event messages are serialized as a unicode ASCII character string which may be formatted as JSON, XML, etc... Appropriate schemas will be supplied.

Parent class: Notification

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description

domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds

nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name

priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.

sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.

startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.

vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth

description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.48 VoiceQuality

The voiceQuality class provides statistics related to customer facing voice products; consists of the following fields:

Parent class: VesEvent

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

AttributeName	Type	Mult.	Stereotypes	Description

additionalInformation	Hash Map	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Additional voice quality fields
calleeSideCodec	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Callee codec for the call
callerSideCodec	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Caller codec for the call

correlator	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Constant across all events on this call
phoneNumber	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Phone number associated with the correlator
midCallRtcp	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Base64 encoding of the binary RTCP data (excluding Eth/IP/UDP headers)

voiceQualityFieldsVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the voiceQualityFields block as "#.#" where # is a digit; see section 1 for the correct digits to use.
_endofcallvqmsummaries	EndOfCallVqmSummaries	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	End of call voice quality metric summaries
_vendornfnamefields	VendorNfNameFields	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Vendor, NF and nfModule names

domain	Domain	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Event domain enumeration: 'fault', 'heartbeat', 'measurement', 'mobileFlow', 'notification', 'other', 'pnfRegistration', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'
eventType	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	For example: 'applicationNf', 'guestOS', 'hostOS', 'platform'
lastEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	the latest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds

nfcNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function component type: 3 characters (aligned with vfc naming standards)
nfNamingCode	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function type: 4 characters (aligned with vnf and pnf naming standards)
nfVendorName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Network function vendor name

priority	Priority	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Processing priority enumeration: 'High', 'Medium', 'Normal', 'Low'
reportingEntityId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	UUID identifying the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. (Note: the AT&T internal enrichment process shall ensure that this field is populated). The reportingEntityId is an id for the reportingEntityName. See 'reportingEntityName' for more information. reportingEntityId - UUID identifying the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. Note: the AT&T internal enrichment process shall ensure that this field is populated. The reportingEntityId is an id for the reportingEntityName. See reportingEntityName for more information.
reportingEntityName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Name of the entity reporting the event or detecting a problem in another vnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event. reportingEntityName - Name of the entity reporting the event or detecting a problem in another xnf/vm or pnf which is experiencing the problem. May be the same as the sourceName. For synthetic events generated by DCAE, it is the name of the app generating the event.

sequence	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Ordering of events communicated by an event source instance (or 0 if not needed) sequence - Ordering of events communicated by an event source instance (or 0 if not needed)
sourceId	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceId - UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity Note: the AT&T internal enrichment process shall ensure that this field is populate). The sourceId is an id for the sourceName. See sourceName for more information. UUID identifying the entity experiencing the event issue, which may be detected and reported by a separate reporting entity (note: the AT&T internal enrichment process shall ensure that this field is populated). The sourceId is an id for the sourceName. See 'sourceName' for more information.
sourceName	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	sourceName - Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event. Name of the entity experiencing the event issue, which may be detected and reported by a separate reporting entity. The sourceName identifies the device for which data is collected. A valid sourceName must be inventoried in A&AI. If sourceName is a xNFC or VM, then the event must be reporting data for that particular xNFC or VM. If the sourceName is a xNF, comprised of multiple xNFCs, the data must be reported/aggregated at the xNF level. Data for individual xNFC must not be included in the xNF sourceName event.

startingEpochMicrosec	Number	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	startEpochMicrosec - the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpochMicrosec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and DCAE collector will replace it with Collector time stamp (when event is received). the earliest unix time aka epoch time associated with the event from any component--as microseconds elapsed since 1 Jan 1970 not including leap seconds. For measurements and heartbeats, where events are collected over predefined intervals, startEpochMicrosec shall be rounded to the nearest interval boundary (e.g., the epoch equivalent of 3:00PM, 3:10PM, 3:20PM, etc…). For fault events, startEpochMicrosec is the timestamp of the initial alarm; if the same alarm is raised again for changed, acknowledged or cleared cases, startEpoch Microsec must be the same as the initial alarm (along with the same eventId and an incremental sequence number). For devices with no timing source (clock), the default value will be 0 and the VES collector will replace it with Collector time stamp (when the event is received)
timeZoneOffset	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Offset to GMT to indicate local time zone for device formatted as 'UTC+/-hh:mm'; see https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations for UTC offset examples
version	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the event header as "#.#" where # is a digit; see section 1 for the correct digits to use.

vesEventListenerVersion	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Version of the ves event listener api spec that this event is compliant with (as "#" or "#.#" or "#.#.#" where # is a digit; see section 1 for the correct digits to use).
name	String	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	
Status	String	0..1	Experimental OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The current condition of an interaction, such as open, in research, closed, and so forth

description	String	0..1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Defines a textual free-form description of the object.
id	Identifier	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Unambiguously distinguishes different object instances. It is the naming attribute of the object. Identifier of this information element. This attribute shall be globally unique.

1.2.49 measInfoIdInteger

The measInfoIdInteger datatype provides an integer measurement group identifier;

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
iMeasInfoId	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer measurement group Identifier

1.2.50 measResultNull

The measResultNull datatype provides a null 3GPP PM measurement result

Applied stereotypes:

- OpenModelClass
  - support: MANDATORY
- Preliminary

Attribute Name	Type	Mult.	Stereotypes	Description
p	Integer	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Integer reference to the counter
isNull	Boolean	1	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	The VES 7.1 Spec has this attribute as a string. Enumeration: 'true' or 'false'

1.3 Data Types

1.3.1 ArrayOfSchemaObject

Note: The VES Spec has this as a Json based object.

arrayOfSchemaObject - The arrayOfSchemaObject datatype provides an array of json objects, each of which is described by name, schema and other meta-information.

Applied stereotypes:

- Preliminary

Attribute Name	Type	Mult.	Access	Stereotypes	Description
arrayOfSchemaObject	SchemaObject	1..*	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	arrayOfSchemaObject - arrayOfSchemaObject datatype provides an array of SchemaObjects, each of which is described by name, schema and other meta-information.

1.3.2 ArrayofNamedHashMap

Array of named hashMaps

Applied stereotypes:

- Preliminary

Attribute Name	Type	Mult.	Access	Stereotypes	Description
arrayOfNamedHashmap	NamedHashMap	1..*	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Array of named hashMaps

1.3.3 HashMap

The hashMap datatype is an 'associative array', which is an unordered collection of key-value pairs of the form "key": "value", where each key and value are strings. Keys must use camel casing to separate words and acronyms; only the first letter of each acronym shall be capitalized.

Applied stereotypes:

- Preliminary

Attribute Name	Type	Mult.	Access	Stereotypes	Description
hashmapEntry	KeyValuePair	0..*	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	A given entry in the hashmap, which is a key/value pair.

1.3.4 NamedHashMap

namedHashMap [ ] - The namedHashmap datatype is a hashMap which is associated with and described by a name.

Applied stereotypes:

- Preliminary

Attribute Name	Type	Mult.	Access	Stereotypes	Description
name	String	1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	name - Name for the array of name-value pairs.
hashMap	HashMap	1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	hashMap - One or more key:value pairs. Note: in ATTServiceSpecification - VesEventListener v5.4.1 type = field [].

1.3.5 ProcessStats

Applied stereotypes:

1.3.6 SchemaObject

SchemaObject - The SchemaObject datatype provides an object schema, name and other meta-information along with one or more object instances that conform to the schema.

Note: The VES Spec has this as a Json based object.

Applied stereotypes:

- Preliminary

Attribute Name	Type	Mult.	Access	Stereotypes	Description
objectInstances	SchemaObjectInstance	1..*	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	objectInstances - Contains one or more instances of the SchemaObjectInstance object.
objectName	String	1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	objectName - Name of the object.
objectSchema	String	0..1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	objectSchema - schema for the object.
objectSchemaUrl	String	0..1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	objectSchemaUrl - URL to the schema for the object.
nfSubcribedObjectName	String	0..1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	nfSubscribedObjectName - Name of the object associated with the nfSubscriptionId.
nfSubcriptionId	String	0..1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	nfSubscriptionId - Identifies an OpenConfig telemetry subscription on a network function, which configures the network function to send complex object data associated with the SchemaObject.

1.3.7 SchemaObjectInstance

Note: The VES Spec has this as a Json based object.

SchemaObjectInstance [ ] - The SchemabjectInstance datatype provides meta-information about an instance of a SchemaObject along with the actual object instance.

Applied stereotypes:

- Preliminary

Attribute Name	Type	Mult.	Access	Stereotypes	Description
schemaObject	SchemaObject	0..*	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	SchemaObject - Optional recursive specification on SchemaObject
objectInstance	Object	0..1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	objectInstance - Contains an instance conforming to the SchemaObject schema
objectInstanceEpochMicrosec	UnixEpoch	0..1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	objectInstanceEpochMicrosec - the unix time, aka epoch time, associated with this objectInstance--as microseconds elapsed since 1 Jan 1970 not including leap seconds.
objectKeys	Key	0..*	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	objectKeys - An ordered set of keys that identifies this particular instance of SchemaObject (e.g., that places it in a hierarchy).

1.3.8 ThresholdCrossingAlertCounter

Applied stereotypes:

- Preliminary

Attribute Name	Type	Mult.	Access	Stereotypes	Description
criticality	TCACriticality	1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Enumeration: 'CRIT', 'MAJ'

hashMap	HashMap	1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Key is the name of the counter and value is the current value of the counter
thresholdCrossed	String	1	RW	Preliminary OpenModelAttribute · isInvariant: false · valueRange: no range constraint · support: MANDATORY	Last threshold that was crossed

1.4 Enumerations

1.4.1 AlertAction

Possible alertActions within thresholdCrossingAlertFields

Contains Enumeration Literals:

- SET:
- CONT:
- CLEAR:

1.4.2 AlertType

Possible values for ThresholdCrossingAlertFIelds alertType attribute.

Contains Enumeration Literals:

- CARD_ANOMALY:
- INTERFACE_ANOMALY:
- ELEMENT_ANOMALY:
- SERVICE_ANOMALY:

1.4.3 Domain

domain - Event domain enumeration: 'fault', 'heartbeat', 'measurementsForVfScaling', 'mobileFlow', 'other', 'sipSignaling', 'stateChange', 'syslog', 'thresholdCrossingAlert', 'voiceQuality'

Contains Enumeration Literals:

- FAULT:
- HEARTBEAT:
- MEASUREMENT:
- MOBILEFLOW:
- NOTIFICATION:
- OTHER:
- PERF3GPP:
- PNFREGISTRATION:
- SIPSIGNALING:
- STATECHANGE:
- SYSLOG:
- THRESHOLDCROSSINGALERT:

- VOICEQUALITY:

1.4.4 EndpointDescription

Contains Enumeration Literals:

- CALLER:
- CALLEE:

1.4.5 EventSeverity

Event severity enumeration: 'CRITICAL', 'MAJOR', 'MINOR', 'WARNING', 'NORMAL'. NORMAL is used to represent clear.

Contains Enumeration Literals:

- CRITICAL:
- MAJOR:
- MINOR:
- WARNING:
- NORMAL:

1.4.6 NicAdminState

Contains Enumeration Literals:

- IN_SERVICE:
- OUT_OF_SERVICE:

1.4.7 NicOpsState

Contains Enumeration Literals:

- IN_SERVICE:
- OUT_OF_SERVICE:

1.4.8 SyslogFacility

Numeric code from 0 to 23 for facility:
0 kernel messages
1 user-level messages

2 mail system

3 system daemons

4 security/authorization messages

5 messages generated internally by syslogd

6 line printer subsystem

7 network news subsystem

8 UUCP subsystem

9 clock daemon

10 security/authorization messages

11 FTP daemon

12 NTP subsystem

13 log audit

14 log alert

15 clock daemon (note 2)

16 local use 0 (local0)

17 local use 1 (local1)

18 local use 2 (local2)

19 local use 3 (local3)

20 local use 4 (local4)

21 local use 5 (local5)

22 local use 6 (local6)

23 local use 7 (local7)

Contains Enumeration Literals:

- 0:
  - kernel messages
- 1:
  - user-level messages
- 2:
  - mail system
- 3:
  - system daemons
- 4:
  - security/authorization messages
- 5:
  - messages generated internally by syslogd
- 6:
  - line printer subsystem
- 7:
  - network news subsystem
- 8:
  - UUCP subsystem
- 9:
  - clock daemon
- 10:
  - security/authorization messages
- 11:
  - FTP daemon
- 12:
  - NTP subsystem
- 13:
  - log audit
- 14:
  - log alert
- 15:
  - clock daemon
- 16:
  - local use 0 (local0)
- 17:
  - local use 1 (local1)
- 18:
  - local use 2 (local2)
- 19:
  - local use 3 (local3)
- 20:
  - local use 4 (local4)
- 21:
  - local use 5 (local5)
- 22:
  - local use 6 (local6)
- 23:
  - local use 7 (local7)

1.4.9 SyslogSev

Level-of-severity text enumeration defined below:

Text Sev Description

Emergency 0 system is unusable

Alert 1 action must be taken immediately

Critical 2 critical conditions

Error 3 error conditions

Warning 4 warning conditions

Notice 5 normal but significant condition

Info 6 Informational messages

Debug 7 debug-level messages

Contains Enumeration Literals:

- EMERGENCY:
  - 0
  - system is unusable
- ALERT:
  - 1
  - action must be taken immediately
- CRITICAL:
  - critical conditions
  - 2
- ERROR:
  - 3
  - error conditions
- WARNING:
  - 4
  - warning conditions
- NOTICE:
  - normal but significant condition
  - 5
- INFO:
  - Informational messages
  - 6
- DEBUG:
  - debug-level messages
  - 7

1.4.10 TCACriticality

Threshold Crossing Alert counter criticality - possible values of CRIT and MAJ.

Contains Enumeration Literals:

- CRIT:
- MAJ:

1.4.11 VfStatus

Virtual function status enumeration: 'Active', 'Idle', 'Preparing to terminate', 'Ready to terminate', 'Requesting Termination'

Contains Enumeration Literals:

- ACTIVE:
- IDLE:
- PREPARING_TO_TERMINATE:
- READY_TO_TERMINATE:
- REQUESTING_TERMINATION: