NEXERA

Trouble Ticket API (Services Specification)

Warsaw – October 30th 2020

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Document overview

Document data	
Document Name	Trouble Ticket API (Services Specification)
Project	Onboarding OK
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Version	1.6.0

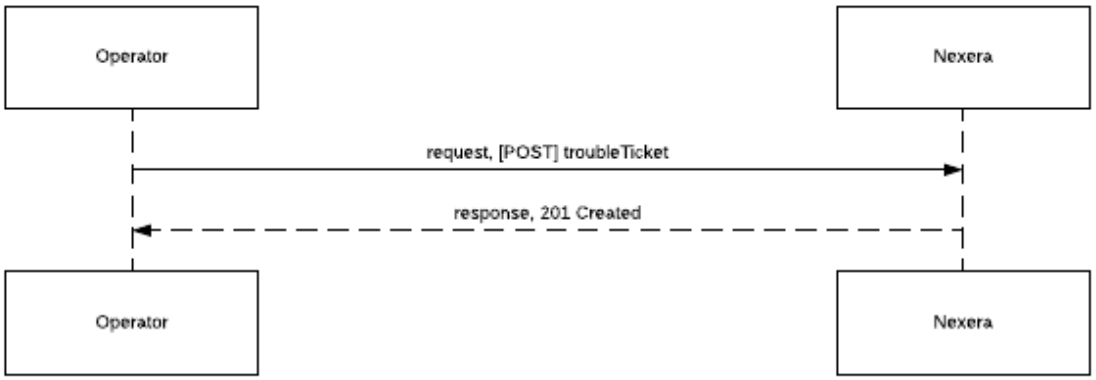
Version history

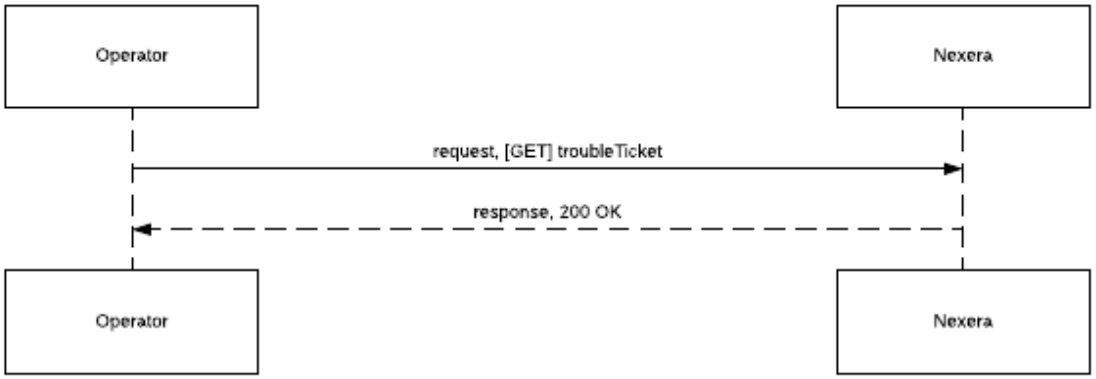
version	date	author	description	status
0.0.1	2020-04-13	bartosz.walczak@enxoo.com	document created	draft
0.0.2	2020-04-22	grzegorz.swinarski@enxoo.com	Complaints update	draft
1.0.0	2020-05-13	grzegorz.swinarski@enxoo.com	Data model update	released
1.1.0	2020-06-02	grzegorz.swinarski@enxoo.com	Get description details	released
1.2.0	2020-06-09	grzegorz.swinarski@enxoo.com	ResolutionCode added to Trouble Ticket body, status values update.	released
1.3.0	2020-10-30	grzegorz.swinarski@enxoo.com	- Meaning change of the ResolutionCode field (description below). - New field: ResolutionPaymentCode added to Trouble Ticket body - Priority values standardization (changed to numeric)	released
1.3.0	2020-12-16	grzegorz.swinarski@enxoo.com	“@” markups update	released
1.4.1	2021-02-24	grzegorz.swinarski@enxoo.com	Document format change	draft
1.5.0	2021-02-26	grzegorz.swinarski@enxoo.com	Document release	release
1.6.0	2021-03-17	patryk.wozniak@enxoo.com	Changed field table at end, added example request for GET	release

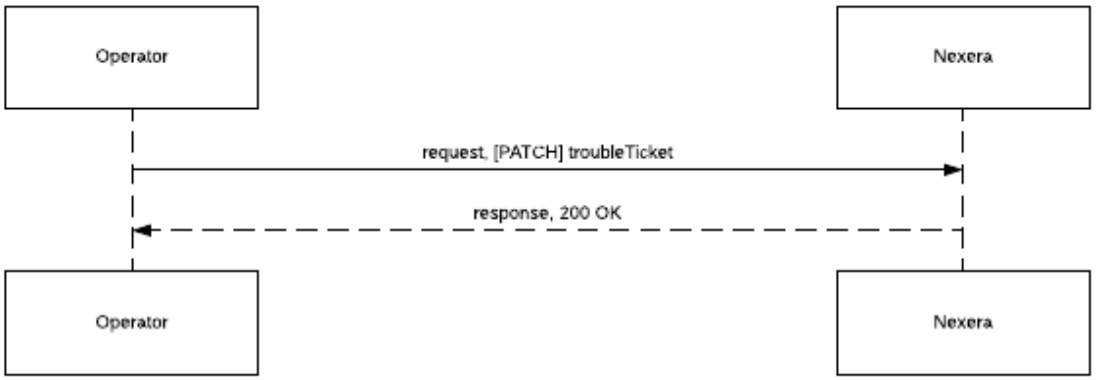
Overview

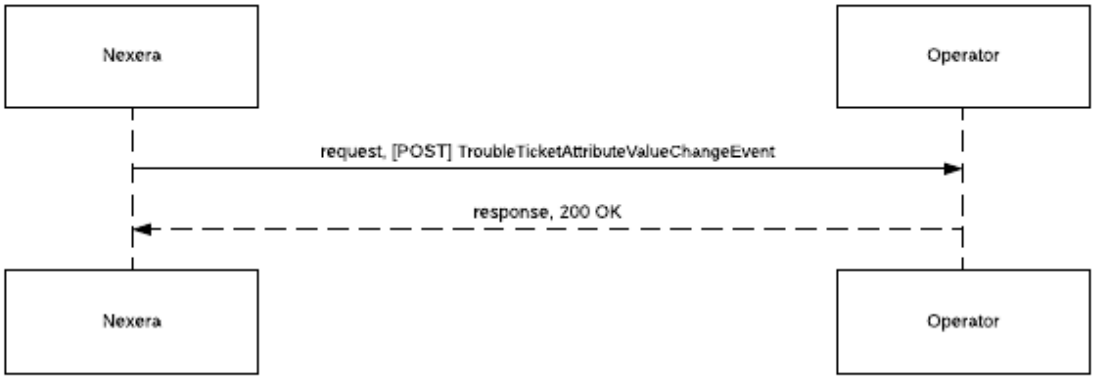
This document describes Trouble Ticket API exposed for Operators and giving the ability to report / update a ticket (Customer Trouble Ticket, Complaint) or retrieve a list of current and historical tickets.

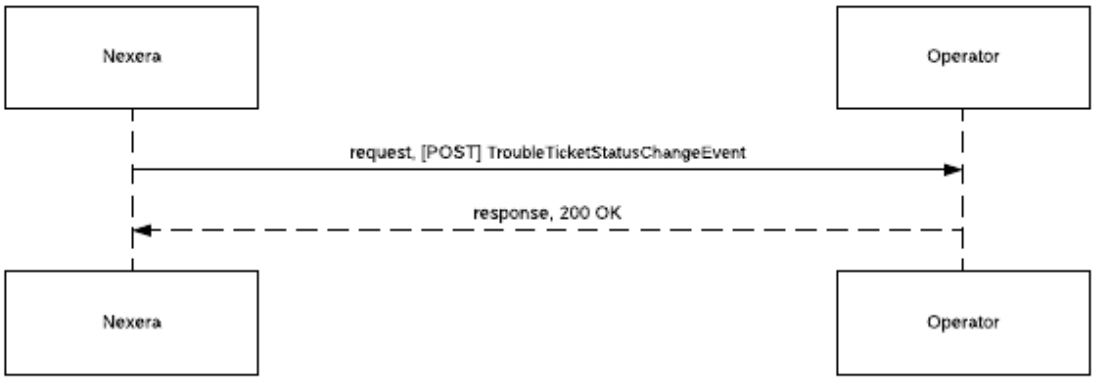
Following flows are available in the API:



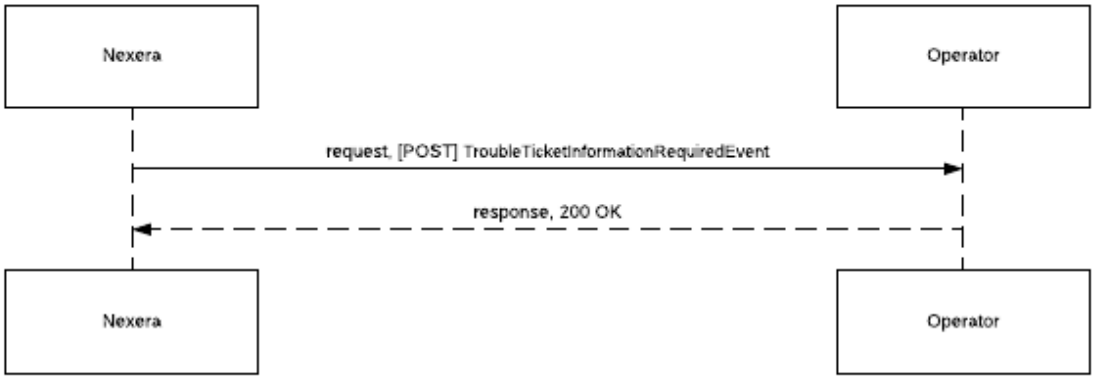



Operator
Nexera
request, [PATCH] troubleTicket
response, 200 OK
Operator
Nexera

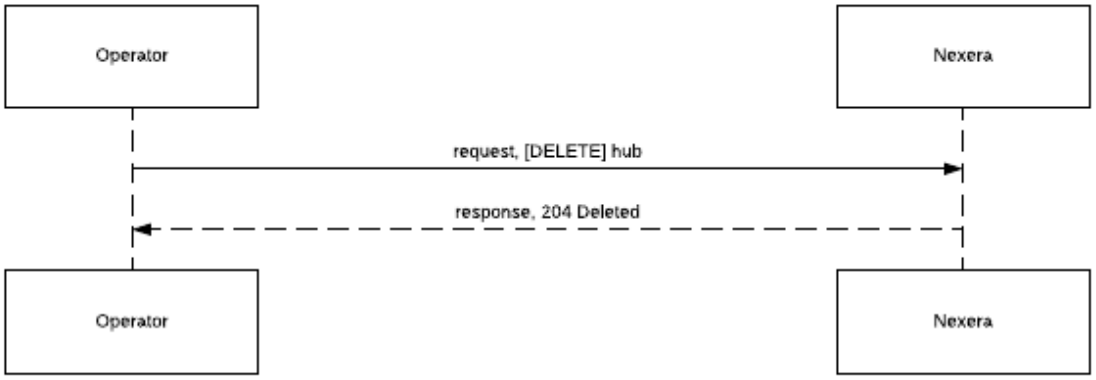

Nexera
Operator
request, [POST] TroubleTicketAttributeValueChangeEvent
response, 200 OK
Nexera
Operator


Nexera
Operator
request, [POST] TroubleTicketStatusChangeEvent
response, 200 OK
Nexera
Operator

Nexera
Operator
request, [POST] TroubleTicketResolvedEvent
response, 200 OK
Nexera
Operator


Nexera
Operator
request, [POST] TroubleTicketInformationRequiredEvent
response, 200 OK
Nexera
Operator

Operator
Nexera
request, [POST] hub
response, 201 Created
Operator
Nexera


Operator
Nexera
request, [DELETE] hub
response, 204 Deleted
Operator
Nexera

General Information

Table below describes the general specification of exposed services.

service type	REST
body format	JSON
encoding	UTF-8
communication type	Synchronous + asynchronous events
security	HTTPS, basic http authentication
base endpoint (TEST)	/api/openapi/troubleTicketManagement/v1/troubleTicket

Trouble Ticket

This section describes API services used in a process of trouble tickets management:

- reporting a new ticket to Nexera (Operator -> Nexera),
- retrieving a list of already reported tickets (Operator -> Nexera),
- retrieving details of existing ticket (Operator -> Nexera),
- updating existing ticket (Operator -> Nexera)

Available Services

A list of available services is presented below.

Operation	URI	Description
POST	/troubleTicket	Create a new ticket
GET	/troubleTicket	Get list of previously reported tickets
GET	/troubleTicket/{troubleTicketId}	Retrieve details of existing ticket
PATCH	/troubleTicket/{troubleTicketId}	Update existing ticket
POST	/hub	Sets the communication endpoint
DELETE	/hub	Resets the communication endpoint address

Supported events

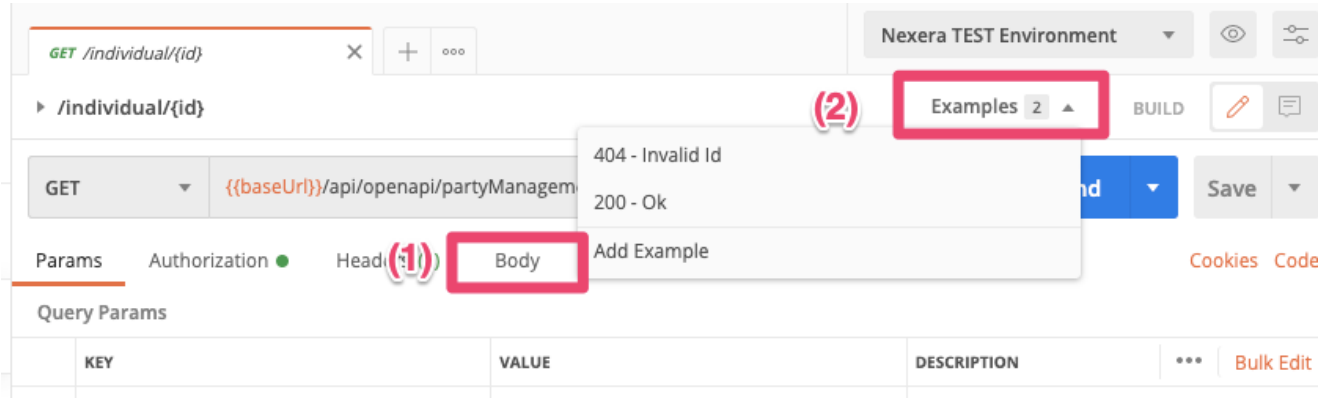
A list of available events is presented below:

- TroubleTicketAttributeValueChangeEvent
- TroubleTicketStatusChangeEvent
- TroubleTicketResolvedEvent
- TroubleTicketInformationRequiredEvent

Services Details

All request templates including example requests and responses are stored in the Postman Collection attached to this document. Postman Collection name is generated using a pattern: “Trouble Ticket Management API - X.Y.Z”, where X.Y.Z should match to the version of this document.

Base request body can be found in the Body tab: (1), example requests with responses (including headers) can be found at (2).



Testing environment configuration file is named: “Nexera TEST Environment.postman_environment.json”.

Authorization method for retrieving access token can be found in the “Nexera Authorization.postman_collection.json” file. Every API method requires an access token.

Trouble Ticket

GET Operation (with filtering feature)

Postman -> Trouble Ticket Management API - X.Y.Z -> troubleTicket -> [GET] /troubleTicket

Supported filtering fields

- id
- ticketType
- ticketSubType

- correlationId
- name
- resolutionDate
- statusChangeDate
- statusChangeReason
- lastUpdate
- creationDate

Detailed information about GET result filtering feature describes document: OpenAPI - Data Filtering.

GET Operation (using Id)

Postman -> Trouble Ticket Management API - X.Y.Z -> troubleTicket -> [GET] /troubleTicket/{id}

POST Operation

Postman -> Trouble Ticket Management API - X.Y.Z -> troubleTicket -> [POST] /troubleTicket

PATCH Operation

Postman -> Trouble Ticket Management API - X.Y.Z -> troubleTicket -> [PATCH] /troubleTicket/{id}

TroubleTicketAttributeValueChangeEvent

Postman -> Trouble Ticket Management API - X.Y.Z -> listener -> [POST]/TroubleTicketAttributeValueChangeEvent

TroubleTicketStatusChangeEvent

Postman -> Trouble Ticket Management API - X.Y.Z -> listener -> [POST]/TroubleTicketStatusChangeEvent

TroubleTicketResolvedEvent

Postman -> Trouble Ticket Management API - X.Y.Z -> listener -> [POST]/TroubleTicketResolvedEvent

TroubleTicketInformationRequiredEvent

Postman -> Trouble Ticket Management API - X.Y.Z -> listener -> [POST]/TroubleTicketInformationRequiredEvent

Register a listener

POST Operation

Postman -> Trouble Ticket Management API - X.Y.Z -> hub -> [POST] /hub

DELETE Operation

Postman -> Trouble Ticket Management API - X.Y.Z -> hub -> [DELETE] /hub

Fields Description

Legend
Standard types (Defined by TM Forum or MEF)
Standard unused fields
Standard fields
Custom types
Custom fields

Data requirement
“P” - Prohibited
“R” - Required
“O” - Optional
“PD” - Process Dependent
“-” - Not supported / not applicable

Field Name test	Type	Description	Process
TroubleTicket			
attachment	AttachmentRefOrValue[]	File(s) attached to the trouble ticket. e.g. picture of broken device, scaning of a bill or charge	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
channel	ChannelRef		Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
origin	String	The origin of the trouble ticket - External System - Phone - Email - Web	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Required Complaint Change: Optional
creationDate	DateTime	The date on which the trouble ticket was created	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited

			Complaint Add: Prohibited Complaint Change: Prohibited
ticketSubtype	String	Supported types: - Financial - Activation - Maintenance - Other	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Required Complaint Change: Optional
description	String	Description of the trouble or issue	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Required Complaint Change: Optional
expectedResolutionDate	DateTime	The expected resolution date determined by the trouble ticket system	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
externalId	String	Additional identifier coming from an external system	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Required Complaint Change: Optional
correlationId	String	Additional identifier coming from an external system	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
href	String	Hyperlink, a reference to the trouble ticket entity	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Optional Complaint Add: Prohibited Complaint Change: Optional
id	String	Unique identifier of the trouble ticket	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
lastUpdate	DateTime	The date and time that the trouble ticked was last updated	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
name	String	Name of the trouble ticket, typically a short description provided by the user that create theticket	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Required Complaint Change: Optional
note	Note[]	The note(s) that are associated to the ticket	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional

priority	Integer	The priority of the trouble ticket and how quickly the issue should be resolved. Range: 1 (highest) to 10 (lowest). The value is set by the ticket management system considering the severity, ticket type etc...	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
relatedEntity	RelatedEntity[]	An entity that is related to the ticket such as a bill, a product, etc. The entity against which the ticket is associated	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
relatedParty	RelatedParty[]	The related party(ies) that are associated to the ticket	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Required Complaint Change: Optional
requestedResolutionDate	DateTime	The resolution date requested by the user	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
resolutionDate	DateTime	The date and time the trouble ticket was resolved	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
severity	String	The severity of the issue. Indicate the implication of the issue on the expected functionality e.g. of a system, application, service etc.. Severity values can be: High, Medium, Low	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
status	String	The current status of the trouble ticket. Possible values are submitted, rejected, acknowledged, inProgress [held, pending], resolved, closed, and cancelled	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Optional Complaint Add: Prohibited Complaint Change: Optional
statusChange	StatusChange[]	The status change history that are associated to the ticket. Populated by the server	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
statusChangeDate	DateTime	The date and time the status changed	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited

statusChangeReason	String	The reason for changing the status	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
resolutionComment	String	Comment for the ticket Resolution	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
resolutionResult	String	In complaints: complaint decision In Trouble Tickets: Steps taken to solve the problem	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
resolutionCode	String	ResolutionResult equivalent, but in the form defined by the operator as some code	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
resolutionPaymentCode		Indicates whether the service is paid or not	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
ticketType	String	Represents a business type of the trouble ticket - Customer_Trouble_Ticket - Complaint	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Required Complaint Change: Optional
troubleTicketRelationship	TroubleTicketRelationship[]	epresents a relationship between trouble tickets	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
@baseType	String	When sub-classing, this defines the super-class	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
@schemaLocation	String	A URI to a JSON-Schema file that defines additional attributes and relationships	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
@type	String	When sub-classing, this defines the sub-class entity name	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
AttachmentRefOrValue			

@referredType	String	The actual type of the target instance when needed for disambiguation	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
description	String	A narrative text describing the content of the attachment	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
href	String	URI for this Attachment	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
id	String	Unique identifier for this particular attachment	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
url	String	Uniform Resource Locator, is a web page address (a subset of URI)	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
name	String	The name of the attachment	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
attachmentType	String	Attachment type such as video, picture	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
content	String	The actual contents of the attachment object, if embedded, encoded as base64	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
mimeType	String	Attachment mime type such as extension file for video, picture and document	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
size	Quantity	The size of the attachment	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional

			Complaint Add: Optional Complaint Change: Optional
validFor	Integer	The period of time for which the attachment is valid	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
ChannelRef			
@referredType	String	The actual type of the target instance when needed for disambiguation	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
href	String	Reference of the related entity	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
id	String	Unique identifier of a related entity	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
name	String	Name of the channel	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
Note			
author	String	Author of the note	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
notedate	DateTime	Date of the note	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
id	String	Identifier of the note within its containing entity (may or may not be globally unique, depending on provider implementation)	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
text	String	Text of the note	Customer Trouble Ticket Add: Required

			Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
RelatedEntity			
@referredType	String	The actual type of the target instance when needed for disambiguation	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
href	String	Reference of the related entity	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
id	String	Unique identifier of a related entity	Customer Trouble Ticket Add: Required/Process dependent Customer Trouble Ticket Change: Required/Process dependent Complaint Add: Required/Process dependent Complaint Change: Required/Process dependent
externalId	String	Operator's identifier of the related entity	Customer Trouble Ticket Add: Required/Process dependent Customer Trouble Ticket Change: Required/Process dependent Complaint Add: Required/Process dependent Complaint Change: Required/Process dependent
name	String	Name of the related entity	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
role	String	The role of an entity.	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Optional Complaint Add: Required Complaint Change: Optional
newSerialNumber	String	New serial number of the replaced device	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
oldSerialNumber	String	Old serial number of the replaced device	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited

			Complaint Change: Prohibited
deviceType	String	Type of the replaced device: CPE, STB, PLC, SIM	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
provisioningStatus	String	Provisioining process status: NEW FAILED COMPLETED	Customer Trouble Ticket Add: Optional/Process dependent Customer Trouble Ticket Change: Optional/Process dependent Complaint Add: Optional/Process dependent Complaint Change: Optional/Process dependent
provisioningComment	String	Additional informations for the provisioning process	Customer Trouble Ticket Add: Optional/Process dependent Customer Trouble Ticket Change: Optional/Process dependent Complaint Add: Optional/Process dependent Complaint Change: Optional/Process dependent
RelatedParty			
@referredType	String	The actual type of the target instance when needed for disambiguation	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
href	String	Reference of the related entity	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
id	String	Unique identifier of a related entity	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
name	String	Name of the related entity	Customer Trouble Ticket Add: Optional Customer Trouble Ticket Change: Optional Complaint Add: Optional Complaint Change: Optional
role	String	Role played by the related party	Customer Trouble Ticket Add: Required Customer Trouble Ticket Change: Required Complaint Add: Required Complaint Change: Required
StatusChange			
changeDate	DateTime	The date and time the status changed	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not

			supported Complaint Add: Not supported Complaint Change: Not supported
changeReason	String	The reason why the status changed	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
status	String	The status of the trouble ticket	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
Quantity			
amount	Float	Numeric value in a given unit	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
units	String	Unit	Customer Trouble Ticket Add: Not supported Customer Trouble Ticket Change: Not supported Complaint Add: Not supported Complaint Change: Not supported
TroubleTicketRelationship			
name	String	Description of the related record	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited
relationshipType	String	Type of the related record	Customer Trouble Ticket Add: Prohibited Customer Trouble Ticket Change: Prohibited Complaint Add: Prohibited Complaint Change: Prohibited