Unify OpenScape Contact Center Enterprise

REST SDK Framework V11

Programming Guide
10/2024

Mitel

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Contents

1. About the REST SDK Framework

The REST SDK Framework allows the development of multimedia applications that integrate with the OpenScape Contact Center system.

The framework consists of a REST interface, which allows sending commands from the application to the OpenScape Contact Center and sending monitoring events from the OpenScape Contact Center to the application.

1.1. REST SDK Framework solution overview

The figure below shows a high level overview of the REST SDK architecture.
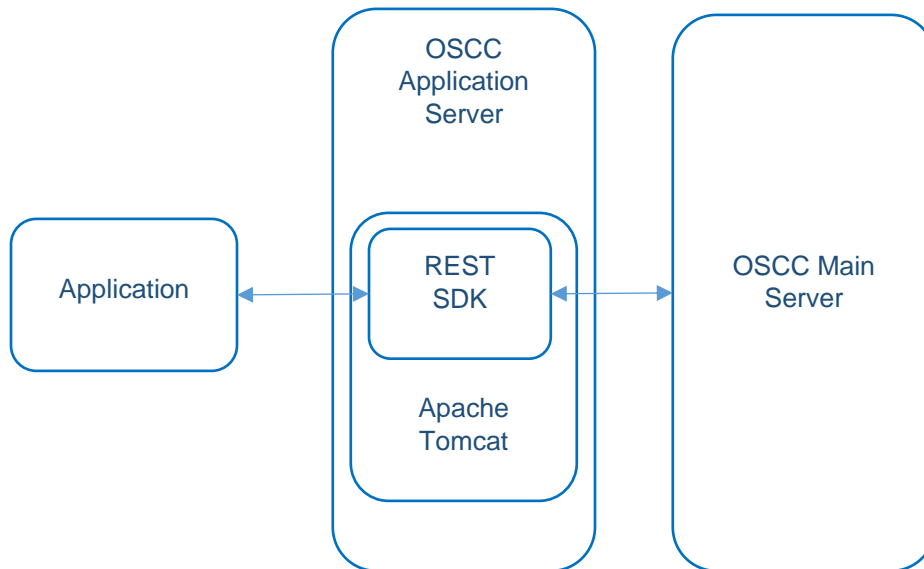
2. REST SDK Framework prerequisites

For Virtual Agent REST interface there are some steps that must be performed before using the API.

- Knowledge on REST (Representational state transfer) web services.
- Configure a REST SDK profile via the Web Manager.
- Install the **OpenScape Contact Center Application Server** (it can be collocated into OSCC server or into another machine).
- Request for an Integration User license.

Note: For more details about the configuration, see *OpenScape Contact Center Manager Administration Guide*.

Note: For more details about installation of the Application Server, see *OpenScape Contact Center Installation Guide*.

3. REST SDK Principles

3.1. Functional Description

To get access to the REST SDK functions, the external application must register on the REST SDK server.

The monitoring events shall be provided by the REST SDK by means of a Webhook mechanism. During the registration process, the application shall provide the URL which OSCC shall access to send the events.

In a multitenant system, the application must send the business unit name in the registration request. The OpenScape Contact Center will validate the received value against the business unit which is configured for the REST SDK application.

3.2. Configuration

The REST SDK instances must be configured in the Web Manager.

To create a new REST SDK instance:

1. Select the tab REST SDK
2. Click **+ Add REST SDK Client**.
3. A pop-up window with the parameters **Client Name** and **Client Token** appears.
   a. **Client Name**: Uniquely identifies the REST SDK instance. The Client Name is a string with up to 32 characters.
   b. **Client Token**: This is a type of password, used to authenticate the REST SDK client during the registration process of the client on the server. You can configure it either manually or generate it automatically by means of a token. Click **Generate Token** and a random 64 bytes token is automatically generated.
4. Click **Add**

The Business Unit Name defines the tenant for which the application has permission to interact in a multitenant system.
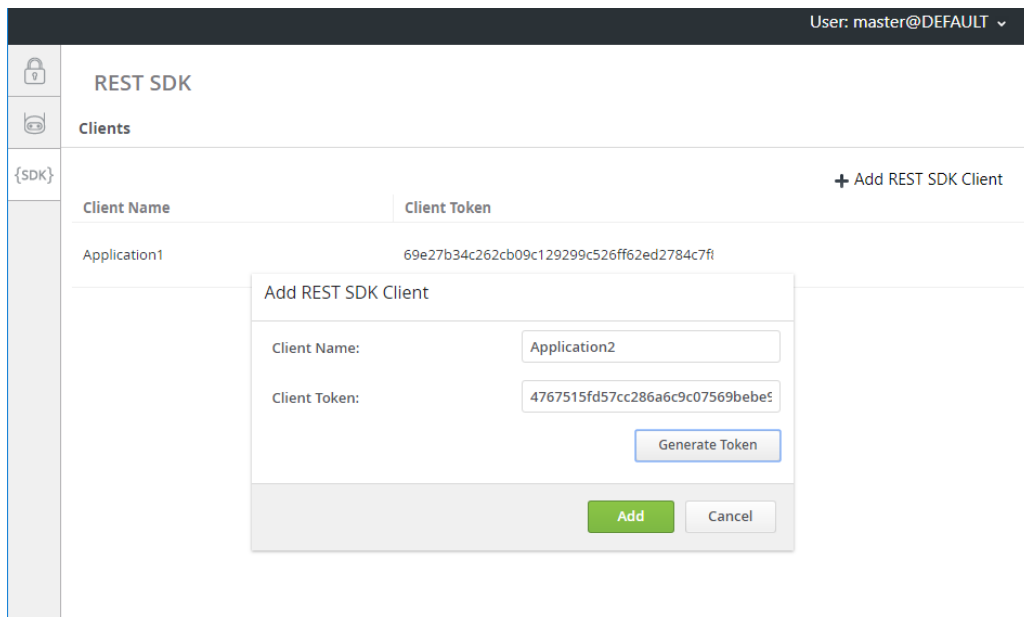
3.3. Simple REST SDK flow examples

Below we can see a simple sequence flow that demonstrates how the entire system will integrate with each system processes.

This is the example of an application connection initiation. The application registers on the OpenScape Contact Center, it logs on to the server with a valid user and requests for monitoring for Admin events, Telephony events, Routing events and Presence events.

```
Application                                              OSCC

    |  POST RegisterApplicationRequest (Name,Token,WebhookURL)  |
    | ───────────────────────────────────────────────────────> |
    |                                                           |
    |                200OK (SessionToken)                       |
    | <─────────────────────────────────────────────────────── |
    |                                                           |
    |                  GET Admin/Users ()                       |
    | ───────────────────────────────────────────────────────> |
    |                                                           |
    |                200OK (List of Users)                      |
    | <─────────────────────────────────────────────────────── |
    |                                                           |
    |            POST Main/Logon (AgentKey,Password)            |
    | ───────────────────────────────────────────────────────> |
    |                                                           |
    |                       200OK                               |
    | <─────────────────────────────────────────────────────── |
    |                                                           |
    |            POST Admin/StartListenforEvents ()             |
    | ───────────────────────────────────────────────────────> |
    |                                                           |
    |                       200OK                               |
    | <─────────────────────────────────────────────────────── |
    |                                                           |
    |        POST Telephony/StartListenforEvents (resource)     |
    | ───────────────────────────────────────────────────────> |
    |                                                           |
    |                       200OK                               |
    | <─────────────────────────────────────────────────────── |
    |                                                           |
    |           POST Routing/StartListenforEvents ()            |
    | ───────────────────────────────────────────────────────> |
    |                                                           |
    |                       200OK                               |
    | <─────────────────────────────────────────────────────── |
    |                                                           |
    |        POST Presence/StartListenforEvents (resource)      |
    | ───────────────────────────────────────────────────────> |
    |                                                           |
    |                       200OK                               |
    | <─────────────────────────────────────────────────────── |
```

3.4. HTTP Messages

All REST SDK HTTP requests need to pass the sessionToken in the Authorization Header.

The Registration does not require this Authorization in the header because the session was not established yet.

Then to register a REST SDK application, a Registration Request must be sent as below:

Sample HTTP RegisterApplication Request with body:

```
POST /restsdk/webapi/main/registerApplication HTTP/1.1
Host: 10.80.199.15:8080
Content-Type: application/json; charset=utf-8
Cache-Control: no-cache
{
   "webhookURL": "10.80.199.11",
   "application" :
   {
      "name": "client0",
      "token": "aaaa",
      "busUnitName": "Default"
   }
}
```

A sessionToken will be received in the RegisterApplication Response as below:

Sample HTTP Registration Response (trace from Wireshark):

```
HTTP/1.1 200
Content-Type: application/json
Content-Length: 129
Date: Thu, 18 Oct 2018 12:38:58 GMT
{
   "errorCode": "NO_ERROR",
   "errorText": "NO_ERROR",
   "sessionToken": "895d36c1dc6dd7851d714a85917edfb7fca9dd9365ad971ff5978696f1b3f20c"
}
```

The HTTP message for a Keep Alive Request is as follows:

Sample request:

```
POST /restsdk/webapi/main/keepalive HTTP/1.1
Host: 10.80.199.15:8080
Content-Type: application/json; charset=utf-8
Authorization: 895d36c1dc6dd7851d714a85917edfb7fca9dd9365ad971ff5978696f1b3f20c
Cache-Control: no-cache
```

Postman-Token: 3b6b9be9-56ce-aa5b-317a-c218cd2bcc82

4. REST SDK Messages

4.1. Main

4.1.1. Main Commands

4.1.1.1. RegisterApplication

Description: request to register an SDK application. The REST SDK Service answers with a session token which must be used on subsequent requests.
Note: In order to register, the client must provide a valid client name and token. The client name and token can be created via WebManager.
URL: POST /restsdk/webapi/main/registerApplication

RegisterApplication Request Object		
Attribute name	**Attribute type**	**Description**
webhookURL	String	URL which shall be used by the OpenScape Contact Center to send the monitoring events.
webhookAPIVersion	String	It indicates the version which is being used by OpenScape Contact Center to send the events.
application	Object	Credentials to be used for application authentication

Message Example:

```
//registerApplication request Object
{
  "webhookURL" : "https://applicationhostaddress/applicationpath",
  "webhookAPIVersion" : "V1",
  "application" : {
    "name" : "client0",
    "token" : "a5e272bcfa964c6dea958b583da4e721703bb2a74bff8533a5818ccaedd71669",
    "busUnitName" : "Company1"
  }
}
```

RegisterApplication Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
sessionToken	String	This token must be used in each subsequent request which is sent by the application. It allows the server to validate the request.

Message Example

```
//RegisterApplication Response
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR",
  "sessionToken" : "11da906e0dbd3a4ac1b5e53a0b245df97bb1158ad3b211e96c1eb5c4af26ff52"
}
```

4.1.1.2. UnregisterApplication

Description: request to unregister the REST SDK application. It requires Authorization header with session token.

Note: When an application is unregistered, it is unsubscribed from all events it previously subscribed and it is logged off from all media. It cannot send requests anymore unless it is registered again.
URL: POST /restsdk/webapi/v2/main/unregisterApplication

UnregisterApplication Request Object		
Attribute name	Attribute type	Description

unregisterApplication Response Object		
Attribute name	Attribute type	Description
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example

```
//unregisterApplication Response
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR",
}
```

4.1.1.3. Logon

Description: request to logon the REST SDK application. The REST SDK application must be logged on to Admin before sending most of the requests, with a few exceptions.
Note 1: It requires Authorization header with session token.
Note 2: The user which logs on here will be used to determine some permissions like for Statistics.
URL: POST /restsdk/webapi/main/logon

Logon Request Object		
Attribute name	Attribute type	Description
agentKey	Integer	Key of the user which shall be used for the application logon.
password	String	Password of the user.

Message Example:

```
//Admin Logon Request Object
{
     "agentKey" : 3,
```

```
    "password" : "p"
}
```

Logon Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//Admin Logon Response
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.1.1.4. KeepAlive

Description: keep alive request to maintain the connection if requests are not sent for a long time
URL: POST /restsdk/webapi/main/keepalive

Message Example:

```
//KeepAliveRequest Object
{},
```

KeepAliveResponse Object		
Attribute name	Attribute type	Description
type	String	
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

MessageExample:

```
//KeepAliveResponse
{
"type" : "keepAlive",
"errorCode" : 0,
"errorDetails" : ""
}
```

4.1.1.5. GetServerState

Description: used to get the availability of a media server. This is a Watchdog Command.
Note 1: supported media realm values: TELEPHONY, CALLBACK, WEB_INTERACTION, OPENMEDIA.
Note 2: the values for serverState attribute on the response are the following: UNKNOWN,
UNAVAILABLE, PARTIALLY_AVAILABLE, AVAILABLE.
Note 3: the PARTIALLY_AVAILABLE state is returned when the requested media server is AVAILABLE,
but the connection state of the Presence server is either UNKNOWN or DISCONNECTED.
URL: POST /restsdk/webapi/main/getserverstate

GetServerState Request Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the state is being requested. See definition of possible values at Realm.

Message Example:

```
//GetServerState Request Object
{
  "realm" : "TELEPHONY",
}
```

GetServerState Response Object		
Attribute name	**Attribute type**	**Description**
serverState	String	State of the server. See definition See definition of possible values at ServerState.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//GetServerState Response Object
{
  "serverState" : "AVAILABLE",
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.1.2. Main Commands (old versions)

4.1.2.1. UnregisterApplication (v1)

Note: request kept for compatibility reasons. Applications should use the latest implementation of UnregisterApplication request.

Description: request to unregister the REST SDK application. It requires Authorization header with session token.

Note: When an application is unregistered, it is unsubscribed from all events it previously subscribed and it is logged off from all media. It cannot send requests anymore unless it is registered again.
URL: POST /restsdk/webapi/main/unregisterApplication

UnregisterApplication Request Object		
Attribute name	**Attribute type**	**Description**
webhookURL	String	URL which shall be used by the OpenScape Contact Center to send the monitoring events.
application	Object	Credentials to be used for application authentication

Message Example:

```
//unregisterApplication request Object
{
  "webhookURL" : "https://applicationhostaddress/applicationpath",
  "application" : {
    "name" : "client0",
    "token" : "a5e272bcfa964c6dea958b583da4e721703bb2a74bff8533a5818ccaedd71669",
    "busUnitName" : "Company1"
  }
}
```

<table>
<tr><th colspan="3">unregisterApplication Response Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>errorCode</td><td>String</td><td>Determines if the request was successfully handled by the server.</td></tr>
<tr><td>errorDetails</td><td>String</td><td>In case of error, it provides a more detailed description of the cause of the error.</td></tr>
<tr><td>sessionToken</td><td>String</td><td>Empty</td></tr>
</table>

Message Example

```
//unregisterApplication Response
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR",
  "sessionToken" : ""
}
```

4.2. Admin

4.2.1. Admin Commands

4.2.1.1. GetUsers

Description: request to query OSCC users on the system.
Note: this request does not require logon. It requires Authorization header with session token.
URL: GET /restsdk/webapi/admin/users

<table>
<tr><th colspan="3">GetUsers Request Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
</table>

<table>
<tr><th colspan="3">GetUsers Response Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>users</td><td>Object</td><td>List of User objects. See the definition of User object.</td></tr>
<tr><td>errorCode</td><td>String</td><td>Determines if the request was successfully handled by the server.</td></tr>
<tr><td>errorDetails</td><td>String</td><td>In case of error, it provides a more detailed description of the cause of the error.</td></tr>
</table>

User Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Database table unique key of the user.
username	String	Name of the user.
firstName	String	First name of the user.
lastName	String	Last name of the user.
middleInitial	String	Middle initial of the user.
departmentKey	Integer	Key of the department to which the user is associated.
acdGroupNumber	String	Group number/Virtual group number to which the user is associated.
mediaTypes	List	List of media types to which the user is associated. See the definition of possible values at MediaType.
type	String	Type of the user. See the definition of possible values at UserType.
agentId	String	Id of the user.
multipleContactHandleCapable	Boolean	Identifies if the agent is allowed to handle multiple contacts at a time.

Message example:

```
//UserResponse Object
{
  "users" :
  [
    {
      "agentKey" : 3,
      "userName" : "UserA",
      "firstName" : "Joe",
      "lastName" : "Miller",
      "middleInitial" : "",
      "departmentKey" : 0,
      "acdGroupNumber" : "0",
      "mediaTypes" : [         //MediaType
        "VOICE",
        "CALLBACK"
      ],
      "type" : "ASSOCIATE_A",
      "agentId" : "100005",
      "multipleContactHandlingCapable" : false
    },
    {
      "agentKey" : 4,
      "userName" : "UserB",
      "firstName" : "Mary",
      "lastName" : "Jane",
      "middleInitial" : "",
      "departmentKey" : 1,
      "acdGroupNumber" : "0",
      "mediaTypes" : [        //MediaType
        "VOICE",
        "CALLBACK"
      ],
      "type" : "ASSOCIATE_A",
      "agentId" : "100006",
      "multipleContactHandlingCapable" : false
    }
  ],
  "errorCode" : "NO_ERROR",
```

```
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.2. GetQueues

Description: request to query OSCC queues on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/queues

GetQueues Response Object		
Attribute name	Attribute type	Description
queues	Object	List of Queue objects. See the definition of Queue object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Queue Object		
Attribute name	Attribute type	Description
key	Integer	Database table unique key of the queue.
name	String	Name of the queue.
description	String	Description of the queue.
mediaType	String	Media type to which the queue is related. See the definition of possible values at MediaType.

Message Example:

```
//GetQueues Response Object
{
  "queues" :
  [
    {
      "key" : 7,
      "name" : "Default Voice Queue",
      "description" : "Default Voice Queue",
      "mediaType" : "VOICE" //MediaType
    },
    {
      "key" : 2,
      "name" : "Default Callback Queue",
      "description" : "Default Callback Queue",
      "mediaType" : "CALLBACK" //MediaType
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.3. GetGroups

Description: request to query OSCC groups on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/groups

GetGroups Response Object		
Attribute name	**Attribute type**	**Description**
groups	Object	List of Group objects. See the definition of Group object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Group Object		
Attribute name	**Attribute type**	**Description**
key	Integer	Database table unique key of the group.
name	String	Name of the group.
description	String	Description of the group.

Message Example:

```
//GroupResponse Object
{
  "groups" :
  [
    {
      "key" : 0,
      "name" : "Group1",
      "description" : "Group 1"
    },
    {
      "key" : 1,
      "name" : "Group2",
      "description" : "Group 2"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.4. GetDepartments

Description: request to query OSCC departments on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/departments

GetDepartments Response Object		
Attribute name	**Attribute type**	**Description**
departments	Object	List of Department objects. See the definition of the Department object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Department Object		
Attribute name	**Attribute type**	**Description**
key	Integer	Database table unique key of the department.
name	String	Name of the department.
description	String	Description of the department.

Message Example:

```
//DepartmentResponse
{
  "departments" :
  [
    {
      "key" : 2,
      "name" : "Service",
      "description" : "Service Department"
    },
    {
      "key" : 1,
      "name" : "Sales",
      "description" : "Sales Department"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.5. GetAggregates

Description: request to query OSCC aggregates on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/aggregates

GetAggregates Response Object		
Attribute name	**Attribute type**	**Description**
aggregates	Object	List of aggregate objects. See the definition of Aggregate object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Aggregate Object		
Attribute name	**Attribute type**	**Description**
description	String	Description of the aggregate.
key	Integer	Database table unique key of the aggregate.
mediaType	String	Media type to which the aggregate is related. See definition of possible values at MediaType.
name	String	Name of the aggregate.

Message Example:

```
//AggregateResponse Object
{
  "aggregates" : [
    {
      "description" : "",
      "key" : 1,
      "mediaType" : "VOICE",
      "name" : "Aggregate 1"
    },
    {
      "description" : "",
      "key" : 2,
      "mediaType" : "VOICE",
      "name" : "Aggregate 2"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.6. GetUnavailableReasons

Description: request to query OSCC unavailable reasons on the system.

Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/unavailablereasons

GetUnavailableReasons Response Object		
Attribute name	**Attribute type**	**Description**
reasons	Object	List of unavailable reason objects. See the definition of the Reason object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//UnavailableReasonResponse Object
{
  "reasons" :
  [
    {
      "reasonKey" : 5,
      "name" : "Reason 1",
      "description" : ""
```

```
    },
    {
      "reasonKey" : 6,
      "name" : "Reason 2",
      "description" : ""
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.7. GetWrapUpReasons

Description: request to query OSCC wrap-up reasons on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/wrapupreasons

GetWrapUpReasons Response Object		
Attribute name	Attribute type	Description
reasons	Object	List of wrap up reason objects. See the definition of the Reason object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//WrapUpReasonResponse Object
{
  "reasons" :
  [
    {
      "reasonKey" : 5,
      "name" : "Reason 1",
      "description" : "Wrap-up for OpenMedia queue."
    },
    {
      "reasonKey" : 6,
      "name" : "Reason 2",
      "description" : "Wrap-up for Voice queue."
    }
  ]
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.8. GetWorkReasons

Description: request to query OSCC work reasons on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/workreasons

GetWorkReasons Response Object		
Attribute name	**Attribute type**	**Description**
reasons	List of Objects	List of work reason objects. See the definition of the Reason object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//WorkReasonResponse Object
{
  "reasons" :
  [
    {
      "reasonKey" : 5,
      "name" : "Automatic",
      "description" : "Automatic work via the communication platform."
    },
    {
      "reasonKey" : 6,
      "name" : "Sales",
      "description" : "Finish sales process"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.9. GetPostProcessingReasons

Description: request to query OSCC Post-processing reasons on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/postprocessingreasons

GetPostProcessingReasons Response Object		
Attribute name	**Attribute type**	**Description**
reasons	Object	List of post processing reason objects. See the definition of the Reason object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//PostProcessingReasonResponse Object
{
  "reasons" :
  [
    {
      "reasonKey" : 5,
      "name" : "Automatic",
      "description" : "Automatic post-processing after contact."
    },
    {
      "reasonKey" : 6,
      "name" : "Mandatory",
      "description" : "Mandatory post-processing required."
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.10. GetCallbackRetryReasons

Description: request to query Callback retry reasons on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/ callbackretryreasons

GetCallbackRetryReasons Response Object		
Attribute name	**Attribute type**	**Description**
reasons	Object	List of Callback retry reasons. See the definition of the Reason object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//PostCallbackRetryReasonsResponse Object
{
  "reasons" :
  [
    {
      "description" : "Automatic post-processing after contact.",
      "reasonKey" : 5,
      "name" : "Automatic"
    },
    {
      "description" : "Mandatory post-processing required.",
      "reasonKey" : 6,
      "name" : "Mandatory"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.11. GetCallbackDeleteReasons

Description: request to query Callback delete reasons on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/ callbackdeletereasons

GetCallbackDeleteReasons Response Object		
Attribute name	**Attribute type**	**Description**
reasons	Object	List of Callback delete reasons. See the definition of the Reasons object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//PostCallbackDeleteReasonsResponse Object
{
  "reasons" :
  [
    {
      "description" : "Automatic post-processing after contact.",
      "reasonKey" : 5,
      "name" : "Automatic"
    },
    {
      "description" : "Mandatory post-processing required.",
      "reasonKey" : 6,
      "name" : "Mandatory"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.12. GetOpenMediaConnectors

Description: request to query OpenMedia connectors on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/ openmediaconnectors

GetOpenMediaConnectors Response Object		
Attribute name	**Attribute type**	**Description**
connectors	Object	List of configured connectors. See the definition of the Connectors object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//OpenMediaConnectorsResponse Object
{
  "connectors" :
  [
    {
      "connectorKey" : 5,
      "connectorName" : "CompanySystem1"
    },
    {
      "connectorKey" : 6,
      "connectorName" : "CompanySystem2"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.13. GetOpenMediaDiscardReasons

Description: request to query OpenMedia discard reasons on the system.
Note: It requires logon and Authorization header with session token.
URL: GET /restsdk/webapi/admin/ openmediadiscardreasons

GetOpenMediaDiscardReasons Response Object		
Attribute name	Attribute type	Description
reasons	Object	List of OpenMedia discard reasons. See the definition of the Reasons object.
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//OpenMediaDiscardReasonsResponse Object
{
  "reasons" :
  [
    {
      "description" : "Default reason.",
      "reasonKey" : 5,
      "name" : "Default discard reason"
    },
    {
      "description" : "Mandatory post-processing required.",
      "reasonKey" : 6,
      "name" : "Mandatory"
    }
  ],
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.14. StartListenForEvents

Description: request to start listening for Admin server events.
Note: It requires logon and Authorization header with session token. No HTTP body is required to be posted.
URL: POST /restsdk/webapi/admin/startlistenforevents

StartListenForEvents Response Object		
Attribute name	Attribute type	Description
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//StartListenForEvents Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.1.15. StopListenForEvents

Description: request to stop listening for Admin server events.

Note: It requires logon and Authorization header with session token. No HTTP body is required to be posted.
URL: POST /restsdk/webapi/admin/stoplistenforevents

StopListenForEvents Response Object		
Attribute name	Attribute type	Description
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//StopListenForEvents Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.2.2. Admin Events

In general, Admin Events have the following structure:

4.2.2.1. OnUserUpdateEvent

Description: event generated when a user is created/updated.

OnUserUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUserUpdateEvent Data Object		
Attribute name	Attribute type	Description
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnUserUpdateEvent Entity Object		
Attribute name	Attribute type	Description
agentKey	Integer	Database table unique key of the user which has been changed.
userName	String	User name of the user.
agentId	String	Id of the user which has been changed.
firstName	String	First name of the user.
lastName	String	Last name of the user.
middleInitial	String	Middle initial of the user.
departmentKey	Integer	Database table unique key of the department to which the user is associated.
acdGroupNumber	String	Group number/Virtual group number to which the user is associated.
mediaTypes	List	List of media types to which the user is associated. See the definition of possible values at MediaTypes.
type	String	Type of the user. See the definition of possible values at UserType.
multipleContactHandlingCapable	Boolean	Identifies if the agent is allowed to handle multiple contacts at a time.

Message Example:

```
//OnUserUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "USER_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "agentKey" : 1,
        "userName" : "jsilva",
```

```
        "agentId" : "1001",
        "firstName" : "jose",
        "lastName" : "silva",
        "middleInitial" : "c",
        "departmentKey" : 0,
        "acdGroupNumber" : "0",
        "mediaTypes" :
        [
          "OPENMEDIA",
          "WEB_COLLABORATION",
          "EMAIL",
          "CALLBACK",
          "VOICE"
        ],
        "type" : "ASSOCIATE_A",
        "multipleContacthandlingCapable" : false,
      }
    }
  }
}
```

4.2.2.2. OnQueueUpdateEvent

Description: event generated when queue is created/updated

OnQueueUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnQueueUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnQueueUpdateEvent Entity Object		
Attribute name	**Attribute type**	**Description**
key	Integer	Database table unique key of the Queue which has been changed.
name	String	Name of the Queue.
description	String	Description of the Queue.
mediaType	String	Media type to which the Queue is related. See the definition of possible values at MediaType.

Message Example:

```
//OnQueueUpdateEvent Object
{
  "type" : "EVENT",
```

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```
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "QUEUE_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "key" : 1,
        "name" : "Default Voice Queue",
        "description" : "Default voice queue",
        "mediaType" : "VOICE"
      }
    }
  }
}
```

4.2.2.3. OnGroupUpdateEvent

Description: event generated when group is created/updated

OnGroupUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnGroupUpdateEvent Data Object		
Attribute name	Attribute type	Description
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnGroupUpdateEvent Entity Object		
Attribute name	Attribute type	Description
key	Integer	Database table unique key of the Group which has been changed.
name	String	Name of the Group.
description	String	Description of the Group.

Message Example:

```
//OnGroupUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "GROUP_UPDATED_EVENT",
```

```
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "key" : 1,
        "name" : "Default Group",
        "description" : "Default group"
      }
    }
  }
}
```

4.2.2.4. OnDepartmentUpdateEvent

Description: event generated when department is created/updated

OnDepartmentUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Data Object	Content of the event. See following data Object definition.

OnDepartmentUpdateEvent Data Object		
Attribute name	Attribute type	Description
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnDepartmentUpdateEvent Entity Object		
Attribute name	Attribute type	Description
key	Integer	Database table unique key of the Department which has been changed.
name	String	Name of the Department.
description	String	Description of the Department.

Message Example:

```
//OnDepartmentUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "DEPARTMENT_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "key" : 1,
        "name" : "Sales1",
        "description" : "Sales Department 1"
```

```
      }
    }
  }
}
```

4.2.2.5. OnAggregateUpdateEvent

Description: event generated when aggregate is created/updated

OnAggregateUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnAggregateUpdateEvent Data Object		
Attribute name	Attribute type	Description
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnAggregateUpdateEvent Entity Object		
Attribute name	Attribute type	Description
key	Integer	Database table unique key of the Aggregate which has been changed.
name	String	Name of the Aggregate.
description	String	Description of the Aggregate.
mediaType	String	Media type to which the aggregate is related. See the definition of possible values at MediaTypes.

Message Example:

```
//OnAggregateUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "AGGREGATE_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "key" : 1,
        "name" : "Aggregate 1",
        "description" : "Aggregate description",
        "mediaType" : "VOICE"
      }
    }
  }
}
```

4.2.2.6. OnPostProcessingReasonUpdateEvent

Description: event generated when post-processing reason is created/updated

OnPostProcessingReasonUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnPostProcessingReasonUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnPostProcessingReasonUpdateEvent Entity Object		
Attribute name	**Attribute type**	**Description**
reasonKey	Integer	Database table unique key of the Post Processing Reason which has been changed.
name	String	Name of the Post Processing Reason.
description	String	Description of the Post Processing Reason.

Message Example:

```
//OnPostProcessingReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "POSTPROCESSINGREASON_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "reasonKey" : 1,
        "name" : "Customer data update",
        "description" : "Agent is updating customer data."
      }
    }
  }
}
```

4.2.2.7. OnUnavailableReasonUpdateEvent

Description: event generated when unavailable reason is created/updated

OnUnavailableReasonUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUnavailableReasonUpdateEvent Data Object		
Attribute name	Attribute type	Description
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnUnavailableReasonUpdateEvent Entity Object		
Attribute name	Attribute type	Description
reasonKey	Integer	Database table unique key of the Unavailable Reason which has been changed.
name	String	Name of the Unavailable Reason.
description	String	Description of the Unavailable Reason.

Message Example:

```
//OnUnavailableReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "UNAVAILABLEREASON_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "reasonKey" : 1,
        "name" : "Lunch break",
        "description" : "Lunch break."
      }
    }
  }
}
```

4.2.2.8. OnWrapUpReasonUpdateEvent

Description: event generated when WrapUp reason is created/updated

OnWrapUpReasonUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnWrapUpReasonUpdateEvent Data Object		
Attribute name	Attribute type	Description

eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnWrapUpReasonUpdateEvent Entity Object		
Attribute name	**Attribute type**	**Description**
reasonKey	Integer	Database table unique key of the Wrap Up Reason which has been changed.
name	String	Name of the Wrap Up Reason.
description	String	Description of the Wrap Up Reason.

Message Example:

```
//OnWrapUpReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "WRAPUPREASON_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "reasonKey" : 1,
        "name" : "Sales registration",
        "description" : "Concluding sales operation."
      }
    }
  }
}
```

4.2.2.9. OnCallbackReasonUpdateEvent

Description: event generated when Callback reason is created/updated

OnCallbackReasonUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnCallbackReasonUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnCallbackReasonUpdateEvent Entity Object		
Attribute name	**Attribute type**	**Description**

reasonKey	Integer	Database table unique key of the Callback Reason which has been changed.
name	String	Name of the Callback Reason.
description	String	Description of the Callback Reason.

Message Example (Retry Reason):

```
//OnCallbackReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "CALLBACK_RETRYREASON_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "reasonKey" : 1,
        "name" : "Sales registration",
        "description" : "Concluding sales operation."
      }
    }
  }
}
```

Message Example (Delete Reason):

```
//OnCallbackReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "CALLBACK_DELETEREASON_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "ADD",
      "entity" : {
        "reasonKey" : 1,
        "name" : "Duplicate callback",
        "description" : "Duplicate callback."
      }
    }
  }
}
```

4.2.2.10. OnOpenMediaDiscardReasonUpdateEvent

Description: event generated when OpenMedia Discard reason is created/updated

OnOpenMediaDiscardReasonUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType

data	Object	Content of the event. See following data Object definition.

OnOpenMediaDiscardReasonUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
eventAction	String	Action which caused the event. See the definition of possible values at EventAction.
entity	Entity Object	Object containing the attributes of updated user.

OnOpenMediaDiscardReasonUpdateEvent Entity Object		
Attribute name	**Attribute type**	**Description**
reasonKey	Integer	Database table unique key of the Wrap Up Reason which has been changed.
name	String	Name of the Wrap Up Reason.
description	String	Description of the Wrap Up Reason.

Message Example:

```
//OnOpenMediaDiscardReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "OPENMEDIA_DISCARDREASON_UPDATED_EVENT",
    "data" :
    {
      "eventAction" : "UPDATE",
      "entity" : {
        "reasonKey" : 1,
        "name" : "Sales registration",
        "description" : "Concluding sales operation."
      }
    }
  }
}
```

4.2.2.11. **OnDeleteEvent**

Description: event generated when an entity is deleted.
The following entities are supported: Aggregates, Groups, Departments, Users, Work reasons, Unavailable reasons, Queues, WrapUp reasons, PostProcessing reasons, Callback retry reasons, Callback delete reasons, OpenMedia discard reasons.

OnDeleteEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Data Object	Object with the keys of the Entities which have been deleted.

OnDeleteEvent Data Object		
Attribute name	**Attribute type**	**Description**
keyList	List of Integer	List with the keys of the Entities which have been deleted.

```
Message Example://OnDeleteEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" :"USER_DELETED_EVENT",
    "data" : {
      "keyList" :[7]
    }
  }
}
```

4.2.2.12. OnServerConnectedEvent

Description: event triggered when connection to Admin server is established.

OnServerConnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "SERVER_CONNECTED_EVENT",
    "data" :
    {
      "serverName" : "localhost"
    }
  }
}
```

4.2.2.13. OnServerDisconnectedEvent

Description: event triggered when connection to Admin server is lost.

OnServerDisconnectedEvent Object		
Attribute name	**Attribute type**	**Description**

realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerDisconnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
serverName	String	Name of the server which has been disconnected.

Message Example:

```
//OnServerDisconnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "SERVER_DISCONNECTED_EVENT",
    "data" :
    {
      "serverName" : "localhost"
    }
  }
}
```

4.2.3. Admin Events (old versions)

These events are kept for backwards compatibility purposes. These events are only triggered if WebhookAPI version is set to V1 upon registering application.

In general, Admin Events have the following structure:

Event Object		
Attribute name	**Attribute type**	**Description**
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.2.3.1. OnUserUpdateEvent (v1)

Description: event generated when a user is created/updated

OnUserUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUserUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Database table unique key of the user which has been changed.
userName	String	User name of the user.
agentId	String	Id of the user which has been changed.
firstName	String	First name of the user.
lastName	String	Last name of the user.
middleInitial	String	Middle initial of the user.
departmentKey	Integer	Database table unique key of the department to which the user is associated.
acdGroupNumber	String	Group number/Virtual group number to which the user is associated.
mediaTypes	List	List of media types to which the user is associated. See the definition of possible values at MediaType.
type	String	Type of the user. See the definition of possible values at UserType.
multipleContactHandlingCapable	Boolean	Identifies if the agent is allowed to handle multiple contacts at a time.

Message Example:

```
//OnUserUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "USER_UPDATED_EVENT",
    "data" :
    {
      "agentKey" : 1,
      "userName" : "jsilva",
      "agentId" : "1001",
      "firstName" : "jose",
      "lastName" : "silva",
      "middleInitial" : "c",
      "departmentKey" : 0,
      "acdGroupNumber" : "0",
      "mediaTypes" :
      [
        "OPENMEDIA",
        "WEB_COLLABORATION",
        "EMAIL",
        "CALLBACK",
        "VOICE"
      ],
      "type" : "ASSOCIATE_A",
      "multipleContacthandlingCapable" : false,
    }
  }
}
```

4.2.3.2. OnQueueUpdateEvent (v1)

Description: event generated when queue is created/updated

OnQueueUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnQueueUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
key	Integer	Database table unique key of the Queue which has been changed.
name	String	Name of the Queue.
description	String	Description of the Queue.
mediaType	String	Media type to which the Queue is related. See the definition of possible values at MediaType.

Message Example:

```
//OnQueueUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "QUEUE_UPDATED_EVENT",
    "data" :
    {
      "key" : 1,
      "name" : "Default Voice Queue",
      "description" : "Default voice queue",
      "mediaType" : "VOICE"
    }
  }
}
```

4.2.3.3. OnGroupUpdateEvent (v1)

Description: event generated when group is created/updated

OnGroupUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnGroupUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**

key	Integer	Database table unique key of the Group which has been changed.
name	String	Name of the Group.
description	String	Description of the Group.

Message Example:

```
//OnGroupUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "GROUP_UPDATED_EVENT",
    "data" :
    {
      "key" : 1,
      "name" : "Default Group",
      "description" : "Default group"
    }
  }
}
```

4.2.3.4. OnDepartmentUpdateEvent (v1)

Description: event generated when department is created/updated

<table>
<tr><th colspan="3">OnDepartmentUpdateEvent Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>realm</td><td>String</td><td>Domain of the contact center for which the event is being reported. See definition of possible values at Realm.</td></tr>
<tr><td>type</td><td>String</td><td>Identification of the event. See definition of possible values at EventType</td></tr>
<tr><td>data</td><td>Object</td><td>Content of the event. See following data Object definition.</td></tr>
</table>

<table>
<tr><th colspan="3">OnDepartmentUpdateEvent Data Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>key</td><td>Integer</td><td>Database table unique key of the Department which has been changed.</td></tr>
<tr><td>name</td><td>String</td><td>Name of the Department.</td></tr>
<tr><td>description</td><td>String</td><td>Description of the Department.</td></tr>
</table>

Message Example:

```
//OnDepartmentUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "DEPARTMENT_UPDATED_EVENT",
    "data" :
    {
      "key" : 1,
      "name" : "Sales1",
      "description" : "Sales Department 1"
```

```
      }
    }
}
```

4.2.3.5. OnAggregateUpdateEvent (v1)

Description: event generated when aggregate is created/updated

OnAggregateUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnAggregateUpdateEvent Data Object		
Attribute name	Attribute type	Description
key	Integer	Key of the Aggregate which has been changed.
name	String	Name of the Aggregate.
description	String	Description of the Aggregate.
mediaType	String	Media type to which the aggregate is related. See the definition of possible values at MediaTypes.

Message Example:

```
//OnAggregateUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "AGGREGATE_UPDATED_EVENT",
    "data" :
    {
      "key" : 1,
      "name" : "Aggregate 1",
      "description" : "Aggregate description",
      "mediaType" : "VOICE"
    }
  }
}
```

4.2.3.6. OnPostProcessingReasonUpdateEvent (v1)

Description: event generated when post-processing reason is created/updated

OnPostProcessingReasonUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnPostProcessingReasonUpdateEvent Data Object		
Attribute name	Attribute type	Description
reasonKey	Integer	Key of the Post Processing Reason which has been changed.
name	String	Name of the Post Processing Reason.
description	String	Description of the Post Processing Reason.

Message Example:

```
//OnPostProcessingReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "POSTPROCESSINGREASON_UPDATED_EVENT",
    "data" :
    {
      "reasonKey" : 1,
      "name" : "Customer data update",
      "description" : "Agent is updating customer data."
    }
  }
}
```

4.2.3.7. OnUnavailableReasonUpdateEvent (v1)

Description: event generated when unavailable reason is created/updated

OnUnavailableReasonUpdateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUnavailableReasonUpdateEvent Data Object		
Attribute name	Attribute type	Description
reasonKey	Integer	Key of the Unavailable Reason which has been changed.
name	String	Name of the Unavailable Reason.
description	String	Description of the Unavailable Reason.

Message Example:

```
//OnUnavailableReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "UNAVAILABLEREASON_UPDATED_EVENT",
    "data" :
    {
      "reasonKey" : 1,
      "name" : "Lunch break",
```

```
        "description" : "Lunch break."
    }
  }
}
```

4.2.3.8. OnWrapUpReasonUpdateEvent (v1)

Description: event generated when WrapUp reason is created/updated

OnWrapUpReasonUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnWrapUpReasonUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
reasonKey	Integer	Key of the Wrap Up Reason which has been changed.
name	String	Name of the Wrap Up Reason.
description	String	Description of the Wrap Up Reason.

Message Example:

```
//OnWrapUpReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "WRAPUPREASON_UPDATED_EVENT",
    "data" :
    {
      "reasonKey" : 1,
      "name" : "Sales registration",
      "description" : "Concluding sales operation."
    }
  }
}
```

4.2.3.9. OnCallbackReasonUpdateEvent (V1)

Description: event generated when Callback reason is created/updated

OnCallbackReasonUpdateEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnCallbackReasonUpdateEvent Data Object		
Attribute name	**Attribute type**	**Description**
reasonKey	Integer	Key of the Callback Reason which has been changed.
name	String	Name of the Callback Reason.
description	String	Description of the Callback Reason.

Message Example (Retry Reason):

```
//OnCallbackReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "CALLBACK_RETRYREASON_UPDATED_EVENT",
    "data" :
    {
      "reasonKey" : 1,
      "name" : "Sales registration",
      "description" : "Concluding sales operation."
    }
  }
}
```

Message Example (Delete Reason):

```
//OnCallbackReasonUpdateEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" : "CALLBACK_DELETEREASON_UPDATED_EVENT",
    "data" :
    {
      "reasonKey" : 1,
      "name" : "Duplicate callback",
      "description" : "Duplicate callback."
    }
  }
}
```

4.2.3.10. **OnDeleteEvent (v1)**

Description: event generated when an entity is deleted.
The following entities are supported: Aggregates, Groups, Departments, Users, Work reasons,
Unavailable reasons, Queues, WrapUp reasons, PostProcessing reasons, Callback retry reasons,
Callback delete reasons.

OnUserDeletedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType

data	List	List with the keys of the Entities which have been deleted.

```
Message Example://OnDeleteEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ADMINISTRATION",
    "type" :"USER_DELETED_EVENT",
    "data" :["7"]
  }
}
```

4.3. Presence

4.3.1. Presence Commands

In general the response to the Presence Commands has the following format:

PresenceCommands Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

4.3.1.1. SetRoutingState

Description: request to set the routing (presence) state for an agent.
Note: the reason attribute only applies for UNAVAILABLE and WORK states and it's the reason key for the reason which is being applied. For AVAILABLE state, the attribute value sent is simply ignored. The reason key can be retrieved with the GetUnavailableReasons and GetWorkReasons requests (Admin Control).
URL: POST /restsdk/webapi/presence/setroutingstate

SetRoutingState Request Object		
Attribute name	**Attribute type**	**Description**
state	String	Routing state to which the agent shall be changed. See definition of possible values at RoutingStates.
agentId	String	Id of the agent for which the routing state shall be changed.
agentKey	Integer	Key of the agent for which the routing state shall be changed.
reason	String	Reason for which the routing state is being changed.

Message Example:

```
//SetRoutingState Request Object
{
  "state" : "AVAILABLE",
  "agentId" : "1000",
  "agentKey" : 3,
```

```
   "reason" : 0
}
//SetRoutingState Response Object
{
   "errorCode" : "PRESENCE_ACTION_SUCCEED",
   "errorDetails" : "PRESENCE_ACTION_SUCCEED"
}
```

4.3.1.2. **RequestPostProcessing**

Description: request to set a post-processing reason when an agent enters on post processing state.
URL: POST /restsdk/webapi/presence/requestpostprocessing

RequestPostProcessing Request Object		
Attribute name	**Attribute type**	**Description**
postProcessingReason	Integer	Key of the post processing reason to be applied to the contact.
agentId	String	Id of the agent which is handling the contact.
agentKey	Integer	Key of the agent which is handling the contact.
uniqueCallId	String	Call ID of the contact to which the post processing reason shall be applied.
requeueCount	Integer	Number of times the contact has been requeued.

Message Example:

```
//RequestPostProcessing Request Object
{
   "postProcessingReason" : 0,
   "agentId" : "1000",
   "agentKey" : 3,
   "uniqueCallId" : "1491539316351272",
   "requeueCount" : 0
}
```
Message Example:

```
//RequestPostProcessing Response Object
{
   "errorCode" : "PRESENCE_ACTION_SUCCEED",
   "errorDetails" : "PRESENCE_ACTION_SUCCEED"
}
```

4.3.1.3. **ExitPostProcessing**

Description: request to exit the post-processing state for an agent.
URL: POST /restsdk/webapi/presence/exitpostprocessing

ExitPostProcessing Request Object		
Attribute name	**Attribute type**	**Description**
agentId	String	Id of the agent which is handling the contact.
agentKey	Integer	Key of the agent which is handling the contact.
uniqueCallId	String	Call ID of the contact which shall exit the post processing state.
requeueCount	Integer	Number of times the contact has been requeued.

Message Example:

```
//ExitPostProcessing Request Object
{
   "agentId" : "1000",
   "agentKey" : 3,
   "uniqueCallId" : "1491539316351272",
```

```
  "requeueCount" : 0
}
```
Message Example:

```
//ExitPostProcessing Response Object
{
  "errorCode" : "PRESENCE_ACTION_SUCCEED",
  "errorDetails" : "PRESENCE_ACTION_SUCCEED"
}
```

4.3.1.4. SetPrimary

Description: request to set a contact as primary contact. Applies for multiple contact handling.
URL: POST /restsdk/webapi/presence/setprimary

SetPrimary Request Object		
Attribute name	**Attribute type**	**Description**
agentId	String	Id of the agent which is handling the contact.
agentKey	Integer	Key of the agent which is handling the contact.
uniqueCallId	String	Call ID of the contact which shall be set to primary.
requeueCount	Integer	Number of times the contact has been requeued.

Message Example:

```
//SetPrimary Request Object
{
  "agentId" : "1000",
  "agentKey" : 3,
  "uniqueCallId" : "1491539316351272",
  "requeueCount" : 0
}
```

Message Example:

```
//SetPrimary Response Object
{
  "errorCode" : "PRESENCE_ACTION_SUCCEED",
  "errorDetails" : "PRESENCE_ACTION_SUCCEED"
}
```

4.3.1.5. CancelMandatoryWrappingUp

Description: request to cancel the mandatory wrap-up for a contact. The agent can then exit post-
processing state without saving the wrap-up reason.
URL: POST /restsdk/webapi/presence/cancelmandatorywrappingup

CancelMandatoryWrappingUp Request Object		
Attribute name	**Attribute type**	**Description**
agentId	String	Id of the agent which is handling the contact.
agentKey	Integer	Key of the agent which is handling the contact.
uniqueCallId	String	Call ID of the contact for which mandatory wrap up shall be canceled..
requeueCount	Integer	Number of times the contact has been requeued.

Message Example:

```
//CancelMandatoryWrappingUp Request Object
{
  "agentId" : "1000",
  "agentKey" : 3,
  "uniqueCallId" : "1491539316351272",
  "requeueCount" : 0
}
//CancelMandatoryWrappingUp Response Object
{
  "errorCode" : "PRESENCE_ACTION_SUCCEED",
  "errorDetails" : "PRESENCE_ACTION_SUCCEED"
}
```

4.3.1.6. SetWrapUpReason

Description: request to set (save) the wrap-up reason(s) for a contact.
URL: POST /restsdk/webapi/presence/setwrapupreason

SetWrapUpReason Request Object		
Attribute name	Attribute type	Description
wrapUpReasons	List	List of reason keys which shall be applied to the contact.
queueKey	Integer	Key of the queue which is associated to this contact.
agentId	String	Id of the agent which is handling the contact.
agentKey	Integer	Key of the agent which is handling the contact.
uniqueCallId	String	Call ID of the contact to which the wrap up reasons shall be applied.
requeueCount	Integer	Number of times the contact has been requeued.

Message Example:

```
//SetWrapUpReason Request Object
{
  "wrapUpReasons" : [1],
  "queueKey" : 1,
  "agentId" : "1000",
  "agentKey" : 3,
  "uniqueCallId" : "1491539316351272",
  "requeueCount" : 0
}
//SetWrapUpReason Response Object
{
  "errorCode" : "PRESENCE_ACTION_SUCCEED",
  "errorDetails" : "PRESENCE_ACTION_SUCCEED"
}
```

4.3.1.7. StartListenForEvents

Description: request to start listening for Presence events. The resource is the agent key.
URL: POST /restsdk/webapi/presence/startlistenforevents

StartListenForEvents Request Object		
Attribute name	Attribute type	Description
resource	Integer	Key of the agent to start monitoring. Wildcard '*' indicates that the request applies to all agents configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StartListenForEvents Request Object
{
  "resource" : 3
}
//StartListenForEvents Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.3.1.8. StopListenForEvents

Description: request to stop listening for Presence events. The resource is the agent key.
URL: POST /restsdk/webapi/presence/stoplistenforevents

StopListenForEvents Request Object		
Attribute name	Attribute type	Description
resource	Integer	Key of the agent to stop monitoring. Wildcard '*' indicates that the request applies to all agents configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StopListenForEvents Request Object
{
  "resource" : "3"
}
//StopListenForEvents Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.3.2. Presence Events

In general, Presence Events have the following structure:

Event Object		
Attribute name	Attribute type	Description
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.3.2.1. OnUserMediaEvent

Description: event triggered when there is a change on media state for a user (e.g. Logon/logoff).

OnUserMediaEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUserMediaEvent Data Object		
Attribute name	Attribute type	Description
agentId	String	Id of agent for which routing state event has been reported.
agentKey	Integer	Key of agent for which routing state event has been reported.
extension	String	Extension number associated to the agent.
mediaType	List	Media type to which the agent is logged on. See definition of possible values at MediaType.
mediaState	String	Presence state of the agent. See definition of possible values at MediaState.
connectorKey	Integer	Key of the connector for which the agent has logged of for OpenMedia.

Message Example:

```
//OnUserMediaEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "PRESENCE",
        "type" : "USER_MEDIA_STATE",
        "data" :
        {
            "agentId" : "100001",
            "agentKey" : 3,
            "extension" : "554181015002",
            "mediaType" : "VOICE",
            "mediaState" : "LOGON",
            "connectorKey" : 0
        }
    }
}
```

4.3.2.2. OnRoutingStateEvent

Description: event triggered when there is a change on the routing/presence state for a user (e.g. Available/unavailable).

OnRoutingStateEvent Object

Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnRoutingStateEvent Data Object		
Attribute name	**Attribute type**	**Description**
agentId	String	Id of agent for which routing state event has been reported.
agentKey	Integer	Key of agent for which routing state event has been reported.
extension	String	Extension number associated to the agent.
handlingStates	List	List of Handling State objects for each call on which the agent is involved. See definition of HandlingState object.
loggedOnMediaTypes	List	List of the media types to which the agent is logged on. See definition of possible values at MediaType.
presenceState	String	Presence state of the agent. See definition of possible values at PresenceStates.
routingState	String	Routing state of the agent. See definition of possible values at RoutingStates.
routingStateReasonKey	Integer	Key of a reason associated to the routing state.

Message Example:

```
//OnRoutingStateEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "PRESENCE",
        "type" : "USER_ROUTING_STATE",
        "data" :
        {
            "agentId" : "100001",
            "agentKey" : 3,
            "extension" : "554181015002",
            "handlingStates" :
            [
                {
                    "uniqueCallId" : "3567890321",
                    "handlingState" : "IDLE",
                    "handlingStateReasonKey" : 0,
                    "primary" : true,
                    "mediaType" : "VOICE"
                }
            ],
```

```
            "loggedOnMediaTypes" :
            [
                "VOICE",
                "CALLBACK"
            ],
            "presenceState" : "AWAY",
            "routingState" : "UNAVAILABLE",
            "routingStateReasonKey" : 0
        }
    }
}
```

4.3.2.3. OnUserHandlingStateEvent

Description: event triggered when there is a change on the handling state for a user (e.g. Contact is
pending/connected). It shows all the contacts the user is currently handling.

OnUserHandlingStateEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUserHandlingStateEvent Data Object		
Attribute name	Attribute type	Description
agentId	String	Id of agent for which handling state event has been reported.
agentKey	Integer	Key of agent for which handling state event has been reported.
handlingStates	List	List of Handling State objects for each call on which the agent is involved. See definition of HandlingState object.

HandlingState Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call ID of the contact.
handlingState	Integer	Handling state of the contact. See definition of possible values at HandlingStates.
handlingStateReasonKey	Integer	Key of reason associated to the handling state.
primary	Boolean	Identifies if this is the primary contact.
mediaType	String	Media type related to the contact.

Message Example:

```
//OnUserHandlingStateEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "PRESENCE",
        "type" : "USER_HANDLING_STATE",
        "data" :
        {
            "agentId" : "100002",
            "agentKey" : 4,
```

```
            "handlingStates" :
            [
                {
                    "uniqueCallId" : "3567890321",
                    "handlingState" : "RINGING",
                    "handlingStateReasonKey" : 4,
                    "primary" : true,
                    "mediaType" : "VOICE"
                }
            ],
        }
    }
}
```

4.3.2.4. OnUserMediaReadyEvent

Description: event triggered when a media is ready (e.g. Telephony server is available again).

OnUserMediaReadyEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUserMediaReadyEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media which is ready to be used.

Message Example:

```
//OnUserMediaReadyEventObject
{
    "type" : "EVENT",
    "data" : {
        "realm" : "PRESENCE",
        "type" : "USER_MEDIA_READY",
        "data" :
        {
            "mediaType" : "VOICE"
        }
    }
}
```

4.3.2.5. OnUserMediaNotReadyEvent

Description: event triggered when a media is not ready (e.g. Telephony server not available/lost

connection).

OnUserMediaNotReadyEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUserMediaNotReadyEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media which is not ready to be used.

Message Example:

```
//OnUserMediaNotReadyEventObject
{
    "type" : "EVENT",
    "data" : {
        "realm" : "PRESENCE",
        "type" : "USER_MEDIA_NOTREADY",
        "data" :
        {
            "mediaType" : "VOICE"
        }
    }
}
```

4.3.2.6. OnServerConnected

Description: event triggered when connection to Presence server is established.

OnServerConnectedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object		
Attribute name	Attribute type	Description
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnected Object
{
    "type" : "EVENT",
    "data" :
    {
        "realm" : "PRESENCE",
        "type" : "SERVER_CONNECTED_EVENT",
```

```
            "data" :
            {
                "serverName" : "localhost"
            }
        }
    }
}
```

4.3.2.7. OnServerDisconnected

Description: event triggered when connection to Presence server is lost.

OnServerDisconnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerDisconnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
serverName	String	Name of the server which has been disconnected.

Message Example:

```
//OnServerDisconnected Object
{
    "type" : "EVENT",
    "data" :
    {
        "realm" : "PRESENCE",
        "type" : "SERVER_DISCONNECTED_EVENT",
        "data" :
        {
            "serverName" : "localhost"
        }
    }
}
```

4.4. Routing

4.4.1. Routing Commands

In general the response to the Routing Commands has the following format:

RoutingCommands Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.

errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

4.4.1.1. QueryCall

Description: request to query an enqueued call on the Routing Server..
URL: POST /restsdk/webapi/routing/querycall

QueryCall Request Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call ID of the contact to be enqueued.

Message Example:

```
//Enqueue Request Object
{
  "uniqueCallId" : "1491539316351272"

}
```

QueryCall Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
routingCall	RoutingCall Object	Data about the call being routed.

RoutingCall Response Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call ID of the call.
description	String	Description of the call.
contactData	Contact Data Object	List of contact data.
mediaType	String	Type of the media. See definition of possible values at MediaType
queueKey	Integer	Key of the queue.
assignAgentKey	Integer	Key of the agent to which the call was assigned.
priority	Integer	Call priority
reserveAgentKey	Integer	Key of the agent to which the call is reserver.
reserveAgentMaximumTime	Integer	Maximum time the call shall remain reserved to an agent.
state	String	Call state. See definition of possible values at SBRCallState

Message Example:

```
//QueryCallResponse Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO ERROR",
  "routingCall": {
    "uniqueCallId": "9121540480019672",
    "description": "General Call",
    "contactData": [{
      "key": "HPPCSuppInfoAddr",
      "value": "http://localhost:8080"
    }],
    "mediaType": "VOICE",
```

```
    "queueKey": 1,
    "assignAgentKey": 0,
    "priority": 20,
    "reserveAgentKey": 0,
    "reserveAgentMaximumTime": 0,
    "state": "QUEUED"
  }
}
```

4.4.1.2. UpdateCall

Description: request to update an enqueued call. Only the following properties can be updated: description, contact data, queueKey and priority.
Note: If the contact is updated via an UpdateCall request and the queueKey attribute is ommited, the contact remains on queueKey: 4. The same is valid if the UpdateCall request is sent with attribute "queueKey": 4. On the other hand, if a different queueKey is sent on UpdateCall request, for example "queueKey": 10, OSCC will enqueue it to queueKey: 10.
URL: POST /restsdk/webapi/routing/updatecall

UpdateCall Request Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call ID of the contact to be enqueued.
description	String	Description for the enqueue command
contactData	List	List of contact data which are being associated to the contact
queueKey	Integer	Key of the queue involved in the contact
priority	Integer	Priority associated to the contact

Message Example:

```
//Enqueue Request Object
{
  "uniqueCallId" : "1491539316351272",
  "description" : "Enqueue to queue Sales",
  "contactData" : [{
    "key" : "customer",
    "value" : "mss"
  },
  {
    "key" : "transaction",
    "value" : "sales"
  }],
  "queueKey" : 7,
  "priority" : 1
}
```

4.4.1.3. EnqueueCall

Description: Enqueues a call to the Routing Server to be assigned to a user.
URL: POST /restsdk/webapi/routing/enqueuecall

EnqueueCall Request Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call ID of the contact to be enqueued.
description	String	Description for the enqueue command
contactData	List	List of contact data which are being associated to the contact
mediaType	String	Media type related to the contact
queueKey	Integer	Key of the queue involved in the contact
priority	Integer	Priority associated to the contact
reserveAgentKey	Integer	Agent to be reserved (0 if no agent reservation)
reserveAgentMaximumTime	Integer	Maximum time the agent shall be reserved (in seconds)
automatedTransfer	Boolean	Indicates if the call has been automatically transferred. Used for statistical purposes.
source	String	Originator of the call to be enqueued
destination	String	Identification of a destination which corresponds to a queue in the Contact Center.
queueProcessingDesired	Boolean	Determines if the Queue Processing of the new queue executed (see Note 1)

Message Example:

```
//EnqueueCall Request Object
{
  "uniqueCallId" : "1491539316351272",
  "description" : "Enqueue to queue Sales",
  "contactData" : [{
    "key" : "customer",
    "value" : "mss"
  },
  {
    "key" : "transaction",
    "value" : "sales"
  }],
  "mediaType" : "VOICE",
  "queueKey" : 7,
  "priority" : 1,
  "reserveAgentKey" : 0,
  "reserveAgentMaximumTime" : 0,
  "automatedTransfer" : true,
  "source" : "554180911597",
  "destination" : "554181015100"
  "queueProcessingDesired" : true
}
```
Note 1: the queueProcessingDesired attribute is optional. If set to true, the Queue
Processing of the new queue will be executed if one of the following conditions are
met:
1. The source queue has no Queue Processing configured;
2. The source queue has Queue Processing configured but its treatment is
completed/finished before the EnqueueCall request is sent.

Example:
OSCC configured with two Voice Queues, Queue A (source queue) and Queue B (destination
queue). A call is routed and enqueued to Queue A, which has no Queue Processing
configured (None). A REST SDK application is used to enqueue the call to Queue B,
which has Queue Processing configured. If the EnqueueCall request is sent with

```
queueProcessingDesired set to true, the Queue Processing of Queue B will be started as
soon as the call is enqueued and no Available agent is found to assign the call.
```

4.4.1.4. DequeueCall

Description: Dequeues a call from a queue.
URL: POST /restsdk/webapi/routing/dequeuecall

DequeueCall Request Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call ID of the contact to be dequeued.
abandonedCall	Boolean	Indicates if the call shall be indicated as abandoned

Message Example:

```
//DequeueCall Request Object
{
  "uniqueCallId" : "1491539316351272",
  "abandonedCall" : true
}
```

4.4.1.5. AddContactData

Description: request to add a contact data to an enqueued contact.
URL: POST /restsdk/webapi/routing/addcontactdata

AddContactData Request Object		
Attribute name	Attribute type	Description
key	String	Key of the contact data.
value	String	Value of the contact data.
uniqueCallId	String	Call ID of the contact.

Message Example:

```
//AddContactData Request Object
{
  "key" : "customer",
  "value" : "mss",
  "uniqueCallId" : "1491539316351272",
}
```

4.4.1.6. RemoveContactData

Description: request to remove a contact data (by key) from an enqueued contact.
URL: POST /restsdk/webapi/routing/removecontactdata

RemoveContactData Request Object		
Attribute name	Attribute type	Description
key	String	Key of the contact data to be removed.
uniqueCallId	String	Call ID of the contact.

Message Example:

```
//RemoveContactData Request Object
{
  "key" : "customer",
  "uniqueCallId" : "1491539316351272"
}
```

4.4.1.7. ClearContactData

Description: request to clear (remove all) contact data from an enqueued contact.
URL: POST /restsdk/webapi/routing/clearcontactdata

ClearContactData Request Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call ID of the contact.

Message Example:

```
//ClearContactData Request Object
{
  "uniqueCallId" : "1491539316351272"
}
```

4.4.1.8. StartListenForEvents

Description: request to start listening for Routing control events.
Note: It requires Admin logon and Authorization header with session token. No HTTP body is required to be posted.
URL: POST /restsdk/webapi/routing/startlistenforevents

StartListenForEvents Response Object		
Attribute name	Attribute type	Description
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//StartListenForEvents Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.4.1.9. StopListenForEvents

Description: request to stop listening for Routing control events.
Note: It requires logon and Authorization header with session token. No HTTP body is required to be

posted.
URL: POST /restsdk/webapi/routing/stoplistenforevents

StopListenForEvents Response Object		
Attribute name	Attribute type	Description
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

Message Example:

```
//StopListenForEvents Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR"
}
```

4.4.2. Routing Events

In general, Routing Events have the following structure:

Event Object		
Attribute name	Attribute type	Description
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.4.2.1. OnAssignCallEvent

Description: event triggered when a contact is assigned to an agent.

OnAssignCallEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnAssignCallEvent Data Object		
Attribute name	Attribute type	Description
agentExtension	String	Extension number of the agent to which the contact is being assigned.
agentKey	Integer	Key of the agent to which the contact is being assigned.
uniqueCallId	String	Call ID of the call being assigned.
mediaType	String	Media type related to the contact.

Message Example:

```
//OnAssignCallEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "ASSIGN_CALL_EVENT",
    "data" :
    {
      "agentExtension" : "554181021120",
      "agentKey" : 3,
      "uniqueCallId" : "2491535069604582",
      "mediaType" : "VOICE"
    }
  }
}
```

4.4.2.2. OnUnassignCallEvent

Description: event triggered when a contact is unassigned to an agent (e.g. external caller abandoned call).

OnUnassignCallEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnUnassignCallEvent Data Object		
Attribute name	Attribute type	Description
agentKey	Integer	Key of the agent from which the contact is being unassigned.
uniqueCallId	String	Call ID of the call being unassigned.
mediaType	String	Media type related to the contact.

Message Example:

```
//OnUnassignCallEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "UNASSIGN_CALL_EVENT",
    "data" :
    {
      "agentKey" : 3,
      "uniqueCallId" : "2491535069604582",
      "mediaType" : "VOICE"
    }
  }
}
```

4.4.2.3. OnEnqueueCallEvent

Description: event triggered when a contact is enqueued.

OnEnqueueCallEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnEnqueueCallEvent Data Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call ID of the call being dequeued.
description	String	Description of the contact.
priority	Integer	Priority associated to the contact.
queueKey	Integer	Key of the queue associated to this contact.
mediaType	String	Media type related to the contact.

Message Example:

```
//OnEnqueueCallEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "ENQUEUE_CALL_EVENT",
    "data" :
    {
      "uniqueCallId" : "2491535069604582",
      "description" : "General Call",
      "priority" : 20,
      "queueKey" : 1
      "mediaType" : "VOICE"
    }
  }
}
```

4.4.2.4. OnDequeueCallEvent

Description: event triggered when a contact is dequeued.

OnDequeueCallEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDequeueCallEvent Data Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call ID of the call being dequeued.
description	String	Description of the contact.
priority	Integer	Priority associated to the contact.
queueKey	Integer	Key of the queue associated to this contact.
dequeueReason	String	Reason by which the contact has been dequeued. See definition of possible values at DequeueReasons.
mediaType	String	Media type related to the contact. See definition of possible values at MediaType

Message Example:

```
//OnDequeueCallEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "DEQUEUE_CALL_EVENT",
    "data" :
    {
      "uniqueCallId" : "2491535069604582",
      "description" : "General Call",
      "priority" : 20,
      "queueKey" : 1
      "dequeueReason" : "CALLABANDONED",
      "mediaType" : "VOICE"
    }
  }
}
```

4.4.2.5. OnRoutingUpdateInformationEvent

Description: event triggered after the call is enqueued and waiting to be assigned to an agent.

OnRoutingUpdateInformationEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnRoutingUpdateInformationEvent Data Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call ID to which contact data is being associated.
contactData	List	List of ContactData objects which are being associated to the contact.
description	String	Description of the contact.
priority	Integer	Priority associated to the contact.
queueKey	Integer	Key of the queue involved in the contact.
mediaType	String	Media type related to the contact.

ContactData Object		
Attribute name	**Attribute type**	**Description**
key	String	Label which identifies the contact data.
value	String	Content of the contact data.

Message Example:

```
//OnRoutingUpdateInformationEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "ROUTING_INFORMATION_UPDATED_EVENT",
    "data" :
    {
      "uniqueCallId" : "2491535069604582",
      "contactData" :
      [
        {
          "key" : "key0",
          "value" : "value0"
        },
        {
          "key" : "__HPPC_SuppInfoAddress",
          "value" : "http://localhost:8080"
        }
      ]
      "description" : "General Call",
      "priority" : 20,
      "queueKey" : 1
      "mediaType" : "VOICE"
    }
  }
}
```

4.4.2.6. OnTimeoutCallEvent

Description: event triggered when a contact times out (e.g. no agent is available to handle the call).

OnTimeoutCallEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnTimeoutCallEvent Data Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call ID of the call which has been timed out.
telephoneNumber	String	Extension number of where the call has been transferred to (the time out extension).
mediaType	String	Media type corresponding to the event.

Message Example:

```
//OnTimeoutCallEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "TIMEOUT_CALL_EVENT",
    "data" :
    {
      "uniqueCallId" : "2491535069604582",
      "telephoneNumber" : "1234",
      "mediaType" : "VOICE"
    }
  }
}
```

4.4.2.7. OnServerConnected

Description: event triggered when connection to Routing server is established.

OnServerConnectedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object		
Attribute name	Attribute type	Description
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "SERVER_CONNECTED_EVENT",
    "data" :
    {
      "serverName" : " 6002@10.80.2.206"
```

```
      }
    }
}
```

4.4.2.8. OnServerDisconnected

Description: event triggered when connection to Routing server is lost.

OnServerDisconnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerDisconnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
serverName	String	Name of the server which has been disconnected.

Message Example:
```
//OnServerDisconnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "ROUTING",
    "type" : "SERVER_DISCONNECTED_EVENT",
    "data" :
    {
      "serverName" : " 6002@10.80.2.206"
    }
  }
}
```

4.5. Telephony

4.5.1. Telephony Commands

In general the response to the Telephony Commands has the following format:

PresenceCommands Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

4.5.1.1. Logon

Description: request to logon an agent on Voice media.
URL: POST /restsdk/webapi/v2/telephony/logon

Logon Request Object		
Attribute name	Attribute type	Description
agentKey	Integer	Key of the agent which shall be logged on.
extension	String	Extension number which shall be associated to the agent.

Message Example:

```
//Logon Object
{
"agentKey" : 3,
"extension" : "554181015002"
}
```

4.5.1.2. Logoff

Description: request to logoff an agent from Voice media.
URL: POST /restsdk/webapi/v2/telephony/logoff

Logoff Request Object		
Attribute name	Attribute type	Description
agentKey	String	Key of the agent which shall be logged off.

Message Example:

```
//Logoff Object
{
  "agentKey" : 3
}
```

4.5.1.3. Dial

Description: request to dial a number.
URL: POST /restsdk/webapi/telephony/dial

Dial Request Object		
Attribute name	Attribute type	Description
from	String	Extension number of the call originator.
to	String	Extension number of the call destination. This is the number to be dialed.
numberToDisplay	String	Number to be displayed to the call destination.
nameToDisplay	String	Name to be displayed to the call destination.

Message Example:

```
//Dial Object
{
  "from" : "554181015002",
  "to" : "0498972231466",
  "numberToDisplay" : "554181015002",
```

```
  "nameToDisplay" : "Agent 1"
},
```

4.5.1.4. Answer

Description: request to answer a phone call on the extension.
URL: POST /restsdk/webapi/telephony/answer

Answer Request Object		
Attribute name	Attribute type	Description
from	String	Extension number on which the call shall be answered.

Message Example:

```
//Answer Object
{
  "from" : "554181015002"
},
```

4.5.1.5. Disconnect

Description: request to disconnect the extension from the active call.
URL: POST /restsdk/webapi/telephony/disconnect

Disconnect Request Object		
Attribute name	Attribute type	Description
from	String	Extension number for which the call shall be disconnected.
workflowDisconnected	Boolean	Indicates if the call was disconnected via workflow. Used for statistical purposes.

Message Example:

```
//Disconnect Object
{
  "from" : "554181015002",
  "workflowDisconnected" : false
},
```

4.5.1.6. Consult

Description: request to consult another extension.
URL: POST /restsdk/webapi/telephony/consult

Consult Request Object		
Attribute name	Attribute type	Description
from	String	Extension number of the consulting party.
to	String	Extension number of the consulted party.
uniqueCallId	String	Call ID of the call leg to be put on consultation hold.

Message Example:

```
//Consult Object
{
  "from" : "554181015002",
  "to" : "554181015003",
  "uniqueCallId" : "1491539316351272"
},
```

4.5.1.7. Hold

Description: request to hold a call.
URL: POST /restsdk/webapi/telephony/hold

Hold Request Object		
Attribute name	Attribute type	Description
from	String	Extension number of the holding party.
uniqueCallId	String	Call ID of the call leg to be put on hold.

Message Example:

```
//Hold Object
{
  "from" : "554181015002",         //this is the holding party.
  "uniqueCallId" : "1491539316351272"   //Call Id to be held.
},
```

4.5.1.8. Retrieve

Description: request to retrieve a held call.
URL: POST /restsdk/webapi/telephony/retrieve

Retrieve Request Object		
Attribute name	Attribute type	Description
from	String	Extension number of the holding party.
uniqueCallId	String	Call ID of the call leg to be retrieved.

Message Example:

```
//Retrieve Object
{
  "from" : "554181015002",
  "uniqueCallId" : "1491539316351272"
},
```

4.5.1.9. Reconnect

Description: request to reconnect a held call, when consulting another extension.
URL: POST /restsdk/webapi/telephony/reconnect

Reconnect Request Object		
Attribute name	**Attribute type**	**Description**
from	String	Extension number of the consulting party.
uniqueCallId	String	Call ID of the call leg which is on consultation hold and shall be reconnected.

Message Example:

```
//Reconnect Object
{
  "from" : "554181015002",
  "uniqueCallId" : "1491539316351272"
},
```

4.5.1.10. Conference

Description: request to create a conference.
URL: POST /restsdk/webapi/telephony/conference

Conference Request Object		
Attribute name	**Attribute type**	**Description**
from	String	Extension number of the consulting party.
uniqueCallId	String	Call ID of the call leg which on consultation hold.

Message Example:

```
//Conference Object
{
  "from" : "554181015002",
  "uniqueCallId" : "1491539316351272"
},
```

4.5.1.11. Transfer

Description: request to transfer a call, after a consult.
URL: POST /restsdk/webapi/telephony/transfer

Transfer Request Object		
Attribute name	**Attribute type**	**Description**
from	String	Extension number of the consulting party.
uniqueCallId	String	Call ID of the call leg which on consultation hold.

Message Example:

```
//Transfer Object
{
  "from" : "554181015002",
  "uniqueCallId" : "1491539316351272"
}
```

4.5.1.12. SingleStepTransfer

Description: request to perform a single step transfer.
URL: POST /restsdk/webapi/telephony/singlesteptransfer

SingleStepTransfer Request Object		
Attribute name	**Attribute type**	**Description**
from	String	Extension number of the transferring party.
to	String	Extension number of the destination of the transfer.
uniqueCallId	String	Call ID of the active call.
workflowTransfer	Boolean	Indicates if the call was transferred via workflow. Used for statistical purposes.

Message Example:

```
//SingleStepTransfer Object
{
  "from" : "554181015002",
  "to" : "554181015003",
  "uniqueCallId" : "1491539316351272",
  "workflowTransfer" : false
}
```

4.5.1.13. TransferToVoiceMail

Description: request to transfer to voice mail.
URL: POST /restsdk/webapi/telephony/transfertovoicemail

TransferToVoiceMail Request Object		
Attribute name	**Attribute type**	**Description**
from	String	Extension number of the transferring party.
to	String	Extension number of the destination of the transfer.
uniqueCallId	String	Call ID of the active call.

Message Example:

```
//TransferToVoiceMail Object
{
  "from" : "554181015002",
  "to" : "554181015003",
  "uniqueCallId" : "1491539316351272"
}
```

4.5.1.14. Divert

Description: The Divert method transfers a call from a queue to a user's extension. To do this, they must pass the extension to which they want to divert the call.
URL: POST /restsdk/webapi/telephony/divert

Divert Request Object		
Attribute name	**Attribute type**	**Description**
from	String	Extension number of the ringing party
to	String	Extension number of the destination of the divert.

uniqueCallId	String	Call ID of the active call.

Message Example:

```
//Divert Request Object
{
  "from" : "554181015002",
  "to" : "554181015003",
  "uniqueCallId" : "1491539316351272",
}
```

4.5.1.15. SetUserPreferredDevice

Description: request to set the preferred device for an extension.
URL: POST /restsdk/webapi/telephony/setuserpreferreddevice

SetUserPreferredDevice Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key of the agent for which Preferred Device shall be removed.
deviceId	String	Extension number which is associated to the agent.
forwardDestination	String	Destination of the Preferred Device.

Message Example:

```
//SetUserPreferredDevice Object
{
  "agentKey" : 3,
  "deviceid" : "554181015002",
  "forwardDestination" : "554180911597"
}
```

4.5.1.16. RemoveUserPreferredDevice

Description: request to remove the preferred device from an extension.
URL: POST /restsdk/webapi/telephony/removeuserpreferreddevice

RemoveUserPreferredDevice Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key of the agent for which Preferred Device shall be removed.
deviceId	String	Extension number which is associated to the agent.

Message Example:

```
//RemoveUserPreferredDevice Object
{
  "agentKey" : 3,
  "deviceid" : "554181015002"
}
```

4.5.1.17. UpdateContactData

Description: request to update the contact data of a telephony contact.
URL: POST /restsdk/webapi/telephony/updatecontactdata

UpdateContactData Request Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call Id of the Telephony contact for which the content shall be added.
contactData	List of Contact Data	The contact data to be update on a Telephony contact.

Message Example:

```
//UpdateContactData Object
{
  "uniqueCallId": "W869020181026170830001",
  "contactData": [{
    "key": "key0",
    "value": "value0"
  }, {
    "key": "key1",
    "value": "value1"
  }]
}
```

4.5.1.18. QueryLine

Description: request to query line state.
URL: POST /restsdk/webapi/v2/telephony/queryline

QueryLine Request Object		
Attribute name	**Attribute type**	**Description**
extension	String	Extension for which data is being queried.

Message Example:

```
//QueryLine Request Object
{
  "extension" : "554133416000"
}
```

QueryLine Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
agentId	String	Id of the agent which is associated to this extension.
uniqueCallId	String	Call ID which is active for this extension.
agentKey	Integer	Key of the agent which is associated to this extension.
teamKey	Integer	Key of the team to which this extension is associated.
firstCallId	String	First Call ID which is associated to this extension.
secondCallId	String	Second Call ID which is associated to this extension.
resourceType	String	Type of resource from Telephony realm perspective. See definition of possible values at LineResourceType.
status	String	Status of the extension. See definition of possible values at LineState.
prevStatus	String	Previous status of the extension. See definition of possible values at LineState.
type	String	Type of the device which corresponds to this extension. See definition of possible values at Type.

stateEnteredAt	String	Time at which the extension entered at the current state.
busUnitKey	Integer	Key of tenant to which this extension is associated.

Message Example:

```
//QueryLine Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO ERROR",
  "agentId" : "1000",
  "uniqueCallId" : "5701539803885842",
  "agentKey" : 4,
  "teamKey" : 1,
  "firstCallId" : "FF00010000000BD8A8D5B69E36901",
  "secondCallId" : "FF00010000000BD8A8D5B69E45634",
  "resourceType" : "AGENTEXTENSION",
  "status" : "CONSULTING",
  "prevStatus" : "RINGING",
  "type" : "UNKNOWNTYPE",
  "stateEnteredAt": "2018-10-17T19:18:10Z",
  "busUnitKey" : "1",
}
```

4.5.1.19. QueryCall

Description: request to query call state.
URL: POST /restsdk/webapi/telephony/querycall

QueryCall Request Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call ID for which data is being queried.

Message Example:

```
//QueryCall Object
{
  "uniqueCallId" : "5701539803885842"
}
```

QueryCall Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
contactType	String	Type of the contact. See definition of possible values at ContactType.
type	String	Type of the call. See definition of possible values at CallType.
state	String	State of the call. See definition of possible values at CallState.
origDNIS	String	Original destination number.
origQueueDNIS	String	Extension number of the original queue.
origANI	String	Extension number of initial call originator.
routingANI	String	ANI which was used for routing.
routingDNIS	String	DNIS which was used for routing.
acdGroupNumber	String	Group number/Virtual group number.
origACDQ	String	Queue to which the call has been originally queued.
origCallId	String	Initial Call ID.

origCallingParty	Object	Data about the call which originated the call. See the definition of the Party object.
origAnsweringParty	Object	Data about the party which originally answered the call. See the definition of the Party object.
origAnsweringAgent	Object	Data about the agent which originally answered the call. See the definition of the Party object.
initiator	Object	Data about the party which has just initiated voice service. See the definition of the Party object.
targetParty	Object	Data about the party which is the target of the call. See the definition of the Party object.
numIvrVisits	Integer	Number of times the call went through the IVR.
strFrom	String	Extension number which was reported on Screen Pop API.
divertDestination	String	Extension number of the divert destination.
busUnitKey	Integer	Key of tenant for which the call is being handled.
queueKey	Integer	Key of the queue the contact has been routed to.

Message Example:

```
//QueryCallResponse Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO ERROR",
  "contactType" : "ROUTED_VOICE,
  "type" : "INT2ACD",
  "state" : "CONNECTED",
  "origDNIS" : "554181015100",
  "origQueueDNIS" : "554181015001",
  "origANI" : "554180911597",
  "routingANI" : "554180911597",
  "routingDNIS" : "554181015100",
  "acdGroupNumber" : "554181015001",
  "origACDQ" : "554181015001",
  "origCallId" : "0300010000000000BD8A8D5B69E36901",
  "origCallingParty" :
  {
    "agentKey": 0,
    "device": "554180911597",
    "type": "EXTERNAL"
  },
  "origAnsweringParty" :
  {
    "agentKey": 3,
    "device": "554181015004",
    "type": "AGENT"
  },
  "origAnsweringAgent" :
  {
    "agentKey": 3,
    "device": "554181015004",
    "type": "AGENT"
  },
  "initiator" :
  {
```

```
    "agentKey": 0,
    "device": "554180911597",
    "type": "EXTERNAL"
  },
  "targetParty" :
  {
    "agentKey": 0,
    "device": "554181015100",
    "type": "UNKNOWN"
  },
  "numIvrVisits" : 1
  "strFrom" : "",
  "divertDestination" : "554181015004",
  "busUnitKey" : 1,

  "strFrom" : "",
  "divertDestination" : "554181015004",
  "busUnitKey" : 1,
  "queueKey" : 1
}
```

4.5.1.20. StartListenForEvents

Description: request to start listening for Telephony server events. The resource is the extension number.
Note: if '*' is passed, all the subscribers configured for the tenant in the OpenScape Contact Center will
be monitored.
URL: POST /restsdk/webapi/telephony/startlistenforevents

StartListenForEvents Request Object		
Attribute name	Attribute type	Description
resource	String	Extension number of the station to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StartListenForEvents Request Object
{
  "resource" : "554181015002"
}
```

4.5.1.21. StopListenForEvents

Description: request to stop listening for Telephony server events. The resource is the extension number.
URL: POST /restsdk/webapi/telephony/stoplistenforevents

StopListenForEvents Request Object		
Attribute name	Attribute type	Description

resource	String	Extension number of the station to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StopListenForEvents Request Object
{
  "resource" : "554181015002"
}
```

4.5.2. Telephony Events

In general, Telephony Events have the following structure:

Event Object		
Attribute name	**Attribute type**	**Description**
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.5.2.1. OnDeliveredEvent

Description: event triggered when a call is delivered.

OnDeliveredEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnDeliveredEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
deliveredToParty	Object	Data about the party which is being alerted. See the definition of Party Object.
fromParty	Object	Data about current source party. See the definition of Party Object.
toParty	Object	Data about current destination party. See the definition of Party Object.
heldParty	Object	Data about current held party. See the definition of Party Object.

redirectParty	Object	Data about the party which has last forwarded the call. See the definition of Party Object.
reason	String	Reason for which the call is alerting the destination. See definition of possible values at DeliveredReasons.

Message Example:

```
//OnDeliveredEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "DELIVERED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "1501535040072742",
      "sequenceNumber": 0,
      "lcsType": "ALERTING",
      "contactType": "ROUTED_VOICE",
      "normalCause": "INVALID_NUMBER_FORMAT",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "deliveredToParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
      "fromParty": {
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      },
      "toParty": {
        "agentKey": 0,
        "device": "554181022110",
        "type": "AGENT"
      },
      "heldParty": {
        "agentKey": 0,
        "device": "",
        "type": "UNKNOWN"
      },
      "redirectParty": {
        "agentKey": -1,
        "device": "",
        "type": "INTERNAL"
      },
      "reason": "UNDEFINED"
    }
  }
}
```

4.5.2.2. OnDisconnectedEvent

Description: event triggered when one of the call parties disconnects.

OnDisconnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnDisconnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
disconnectedParty	Object	Data about the party which has been disconnected. See the definition of Party Object.
reason	String	Reason for which the call has been disconnected. See definition of possible values at DisconnectReasons.

Message Example:

```
//OnDisconnectedEvent Object{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "DISCONNECTED_EVENT",
    "data" :
    {
    "mediaType": "VOICE",
    "resource": "554181021113",
    "uniqueCallId": "1111535044018952",
    "sequenceNumber": 0,
    "lcsType": "CONNECTED",
    "contactType": "ROUTED_VOICE",
    "normalCause": "MULTIPLE_ALERTING",
    "originalFrom": "554181021119",
    "originalTo": "554181022110",
```

```
    "disconnectedParty": {
      "agentKey": 0,
      "device": "554181021119",
      "type": "AGENT"
    },
    "reason": "UNDEFINED"
  }
}
```

4.5.2.3. OnQueuedEvent

Description: event triggered when a call is queued.

OnQueuedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnQueuedEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
fromParty	Object	Data about current source party. See the definition of Party Object.
toParty	Object	Data about current destination party. See the definition of Party Object.
queuedParty	Object	Data about the queue party. See the definition of Party Object.

Message Example:

```
//OnQueuedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "QUEUED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
```

```
      "resource": "554181021110",
      "uniqueCallId": "3341535057392202",
      "sequenceNumber": 0,
      "lcsType": "QUEUED",
      "contactType": "ROUTED_VOICE",
      "normalCause": "TIMEOUT",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "fromParty": {
        "agentKey": -1,
        "device": "",
        "type": "UNKNOWN"
      },
      "toParty": {
        "agentKey": -1,
        "device": "",
        "type": "UNKNOWN"
      },
      "queuedParty": {
        "agentKey": 0,
        "device": "554181021110",
        "type": "QUEUE"
      }
    }
  }
}
```

4.5.2.4. OnEstablishedEvent

Description: event triggered when a call is answered.

OnQueuedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnQueuedEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.

normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
fromParty	Object	Data about current source party. See the definition of Party Object.
toParty	Object	Data about current destination party. See the definition of Party Object.
redirectParty	Object	Data about the party which has last forwarded the call. See the definition of Party Object.

Message Example:

```
//OnEstablishedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "ESTABLISHED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "1081535045429592",
      "sequenceNumber": 0,
      "lcsType": "CONNECTED",
      "contactType": "ROUTED_VOICE",
      "normalCause": "INVALID_NUMBER_FORMAT",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "fromParty": {
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      },
      "toParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
      "redirectParty": {
        "agentKey": -1,
        "device": "",
        "type": "INTERNAL"
      }
    }
  }
}
```

4.5.2.5. OnDivertedEvent

Description: event triggered when a call is diverted.

OnDivertedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnDivertedEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
divertedParty	Object	Data about the party which has been diverted to a new destination. See the definition of Party Object.
divertingParty	Object	Data about the party has diverted the call to a new destination. See the definition of Party Object.
destinationParty	Object	Data about the party to which the call has been diverted. See the definition of Party Object.

Message Example:

```
//OnDivertedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "DIVERTED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021110",
      "uniqueCallId": "5261535055499272",
      "sequenceNumber": 0,
      "lcsType": "NULL",
      "contactType": "ROUTED_VOICE",
      "normalCause": "INVALID_NUMBER_FORMAT",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "divertedParty": {
```

```
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      },
      "divertingParty": {
        "agentKey": 0,
        "device": "554181021110",
        "type": "RCG"
      },
      "destinationParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
    }
  }
}
```

4.5.2.6. OnHeldEvent

Description: event triggered when a call is held.

OnHeldEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnHeldEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
heldParty	Object	Data about the party which has been put on hold. See the definition of Party Object.
holdingParty	Object	Data about the party which has put the other party on hold. See the definition of Party Object.

Message Example:

```
//OnHeldEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "HELD_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "2831535059550752",
      "sequenceNumber": 0,
      "lcsType": "HOLD",
      "contactType": "ROUTED_VOICE",
      "normalCause": "CSTA_SINGLE_STEP_TRANSFER",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "heldParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
      "holdingParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      }
    }
  }
}
```

4.5.2.7. OnRetrievedEvent

Description: event triggered when a held call is retrieved.

OnRetrievedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnRetrievedEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.

resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
heldParty	Object	Data about the party which was on hold and has just been retrieved. See the definition of Party Object.
retrievingParty	Object	Data about the party which retrieved the call from hold. See the definition of Party Object.

Message Example:

```
//OnRetrievedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "RETRIEVED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "4841535060746862",
      "sequenceNumber": 0,
      "lcsType": "CONNECTED",
      "contactType": "ROUTED_VOICE",
      "normalCause": "CSTA_SINGLE_STEP_TRANSFER",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "heldParty": {
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      },
      "retrievingParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      }
    }
  }
}
```

4.5.2.8. OnConferencedEvent

Description: event triggered when a conference is created.

OnConferencedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnConferencedEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
invitedParty	Object	Data about the party which was added to the conference call. See the definition of Party Object.
invitingParty	Object	Data about the party which added a new member to the conference call. See the definition of Party Object.
conferenceParties	List of Objects	List of the parties which are participating in the conference call.

Message Example:

```
//OnConferencedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "CONFERENCED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "4821535053654902",
      "sequenceNumber": 0,
      "lcsType": "CONNECTED",
      "contactType": "ROUTED_VOICE",
      "normalCause": "NUMBER_CHANGED",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "invitedParty": {
```

```
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      },
      "invitingParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
      "conferenceParties": [
        {
          "agentKey": 0,
          "device": "554181021119",
          "type": "AGENT"
        },
        {
          "agentKey": 5,
          "device": "554181021114",
          "type": "AGENT"
        },
        {
          "agentKey": 3,
          "device": "554181021113",
          "type": "AGENT"
        }
      ]
    }
  }
}
```

4.5.2.9. OnFailedEvent

Description: event triggered on fail scenarios.

OnFailedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnFailedEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.

normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
fromParty	Object	Data about the current source party. See the definition of Party Object.
toParty	Object	Data about the current destination party. See the definition of Party Object.
failedParty	Object	Data about the party on which the call has failed. See the definition of Party Object.

Message Example:

```
//OnFailedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "FAILED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "7631535062233862",
      "sequenceNumber": -1,
      "lcsType": "CONNECTED",
      "contactType": "DIRECT_INTERNAL_VOICE",
      "normalCause": "OVERFLOW",
      "originalFrom": "554181021113",
      "originalTo": "554181021119",
      "fromParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
      "toParty": {
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      },
      "failedParty": {
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      }
    }
  }
}
```

4.5.2.10. OnOriginatedEvent

Description: event triggered when dialing to another extension.

OnOriginatedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnOriginatedEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
referenceCallId	String	FUTURE – Call ID of Callback Calls.
fromParty	Object	Data about the current source party. See the definition of Party Object.
toParty	Object	Data about the current destination party. See the definition of Party Object.

Message Example:

```
//OnOriginatedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "ORIGINATED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "4331535062940702",
      "sequenceNumber": -1,
      "lcsType": "CONNECTED",
      "contactType": "NONE",
      "normalCause": "CONSULTATION",
      "originalFrom": "554181021113",
      "originalTo": "554181021119",
```

```
      "referenceCallId": "",
      "fromParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
      "toParty": {
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      }
    }
  }
}
```

4.5.2.11. OnServiceInitiatedEvent

Description: event triggered when a phone goes offhook.

OnServiceInitiatedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServiceInitiatedEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
Consult	Boolean	Consultation call?
initiatedParty	Object	Data about the party which went offhook. See the definition of Party Object.

Message Example:

```
//OnServiceInitiatedEvent Object
{
  "type" : "EVENT",
```

```
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "SERVICE_INITIATED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "1341535063665572",
      "sequenceNumber": -1,
      "lcsType": "INITIATE",
      "contactType": "NONE",
      "normalCause": "CONSULTATION",
      "originalFrom": "554181021113",
      "originalTo": "",
      "consult": false,
      "initiatedParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      }
    }
  }
}
```

4.5.2.12. OnTransferredEvent

Description: event triggered when a call is transferred.

OnTransferredEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnTransferredEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported. See definition of possible values at MediaType.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.

originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
fromParty	Object	Data about the transferring party. See the definition of Party Object.
toParty	Object	Data about the transferred-to party. See the definition of Party Object.
transferredParty	Object	Data about the transferred party. See the definition of Party Object.
redirectParty	Object	Data about the last party from which the call was forwarded. See the definition of Party Object.

Message Example:

```
//OnTransferredEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "TRANSFERRED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "4291535065409342",
      "sequenceNumber": 0,
      "lcsType": "NULL",
      "contactType": "ROUTED_VOICE",
      "normalCause": "NETWORK_NOT_OBTAINABLE",
      "originalFrom": "554181021119",
      "originalTo": "554181022110",
      "fromParty": {
        "agentKey": 3,
        "device": "554181021113",
        "type": "AGENT"
      },
      "toParty": {
        "agentKey": 5,
        "device": "554181021114",
        "type": "AGENT"
      },
      "transferredParty": {
        "agentKey": 0,
        "device": "554181021119",
        "type": "AGENT"
      },
      "redirectParty": {
        "agentKey": -1,
        "device": "",
        "type": "INTERNAL"
      }
    }
  }
```

```
    }
}
```

4.5.2.13. OnNetworkReachedEvent

Description: event triggered when seizing a trunk for an external call

OnNetworkReachedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnNetworkReachedEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
lcsType	String	Local Connection State of the device. See definition of possible values at LCSType.
contactType	String	Type of contact. See definition See definition of possible values at ContactType.
normalCause	String	Cause for which a change in the device state led to the generation of the event. See definition of possible values at EventCause.
originalFrom	String	Extension number of the original source of this call.
originalTo	String	Extension number of the original destination of this call.
fromParty	Object	Data about the current source party. See the definition of Party Object.
toParty	Object	Data about the current destination party. See the definition of Party Object.

Message Example:

```
//OnNetworkReachedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "NETWORKREACHED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554180911612",
      "uniqueCallId": "2491535069604582",
      "sequenceNumber": -1,
      "lcsType": "CONNECTED",
      "contactType": "DIRECT_OUTGOING_VOICE",
      "normalCause": "CSTA_SINGLE_STEP_TRANSFER",
```

```
      "originalFrom": "554180911612",
      "originalTo": "554181021120",
      "fromParty": {
        "agentKey": 0,
        "device": "554181021120",
        "type": "EXTERNAL"
      },
      "toParty":{
        "agentKey": 0,
        "device": "554181021120",
        "type": "EXTERNAL"
      }
    }
  }
}
```

4.5.2.14. OnServicesEnabled

Description: event triggered for almost all telephony actions to indicate which services are possible in that state.

OnServiceEnabled Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServicesEnabled Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Extension number of device for which the event is being reported.
uniqueCallId	String	Call ID related to the event is being reported.
sequenceNumber	Integer	Number of times this contact has been requeued.
answer	Boolean	Telephony Answer request.
available	Boolean	Presence Available request.
conference	Boolean	Telephony Conference request.
consult	Boolean	Telephony Consult request.
dial	Boolean	Telephony Dial request.
disconnect	Boolean	Telephony Disconnect request.
divert	Boolean	Telephony Divert request.
hold	Boolean	Telephony Hold request.
logoff	Boolean	Telephony Logoff request.
logon	Boolean	Telephony Logon request
reconnect	Boolean	Telephony Reconnect request.
retrieve	Boolean	Telephony Retrieve request.
transfer	Boolean	Telephony Transfer request.
unavailable	Boolean	Presence Unavailable request.

| work | Boolean | Presence Work request. |

Message Example:

```
//OnServicesEnabled Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "SERVICE_ENABLED_EVENT",
    "data" :
    {
      "mediaType": "VOICE",
      "resource": "554181021113",
      "uniqueCallId": "",
      "requeueCount": 0,
      "answer": false,
      "available": false,
      "conference": false,
      "consult": false,
      "dial": true,
      "disconnect": false,
      "divert": false,
      "hold": false,
      "logoff": true,
      "logon": false,
      "reconnect": false,
      "retrieve": false,
      "transfer": false,
      "unavailable": true,
      "work": true
    }
  }
}
```

4.5.2.15. OnServerConnectedEvent

Description: event triggered when connection to Telephony server is established.

OnServerConnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object

Attribute name	Attribute type	Description
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY",
    "type" : "SERVER_CONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6001:10.81.3.116"
    }
  }
}
```

4.5.2.16. OnServerDisconnectedEvent

Description: event triggered when connection to Telephony server is lost.

OnServerDisconnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerDisconnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
serverName	String	Name of the server which has been disconnected.

Message Example:

```
//OnServerDisconnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "TELEPHONY ",
    "type" : "SERVER_DISCONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6001:10.81.3.116"
    }
```

```
    }
}
```

4.5.3. Telephony Common Objects

<table>
<tr><th colspan="3">Party Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>agentKey</td><td>Integer</td><td>Agent key of the party. It contains value '0' if not associated to an agent.</td></tr>
<tr><td>device</td><td>String</td><td>Extension number of the party.</td></tr>
<tr><td>type</td><td>String</td><td>Device type of the party. See definition See definition of possible values at PartyTypes.</td></tr>
</table>

4.5.4. Telephony Commands (old versions)

Note: request kept for compatibility reasons. Applications should use the latest implementation of the Telephony Commands.

4.5.4.1. Logon (v1)

Description: request to logon an agent on Voice media.
URL: POST /restsdk/webapi/telephony/logon

<table>
<tr><th colspan="3">Logon Request Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>agentId</td><td>String</td><td>Id of the agent which shall be logged on.</td></tr>
<tr><td>extension</td><td>String</td><td>Extension number which shall be associated to the agent.</td></tr>
</table>

Message Example:

```
//Logon Object
{
"agentID" : "1000",
"extension" : "554181015002"
}
```

4.5.4.2. Logoff (v1)

Description: request to logoff an agent from Voice media.
URL: POST /restsdk/webapi/telephony/logoff

<table>
<tr><th colspan="3">Logoff Request Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>agentId</td><td>String</td><td>Id of the agent which shall be logged off.</td></tr>
</table>

Message Example:

```
//Logoff Object
{
  "agentId" : "1000"
}
```

4.5.4.3. QueryLine (v1)

Description: request to query line state.
URL: POST /restsdk/webapi/telephony/queryline

QueryLine Request Object		
Attribute name	**Attribute type**	**Description**
extension	String	Extension for which data is being queried.

Message Example:

```
//QueryLine Request Object
{
  "extension" : "554133416000"
}
```

QueryLine Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
agentId	String	Id of the agent which is associated to this extension.
uniqueCallId	String	Call ID which is active for this extension.
agentKey	Integer	Key of the agent which is associated to this extension.
teamKey	Integer	Key of the team to which this extension is associated.
firstCallId	String	First Call ID which is associated to this extension.
secondCallId	String	Second Call ID which is associated to this extension.
resourceType	String	Type of resource from Telephony realm perspective. See definition of possible values at LineResourceType.
adminResourceType	String	Type of resource from Admin realm perspective. See definition of possible values at LineResourceTypes.
status	String	Status of the extension. See definition of possible values at LineState.
prevStatus	String	Previous status of the extension. See definition of possible values at LineState.
type	String	Type of the device which corresponds to this extension. See definition of possible values at Type.
stateEnteredAt	String	Time at which the extension entered at the current state.
busUnitKey	Integer	Key of tenant to which this extension is associated.

Message Example:

```
//QueryLine Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO ERROR",
  "agentId" : "1000",
  "uniqueCallId" : "5701539803885842",
  "agentKey" : 4,
  "teamKey" : 1,
  "firstCallId" : "FF00010000000BD8A8D5B69E36901",
```

```
  "secondCallId" : "FF00010000000BD8A8D5B69E45634",
  "resourceType" : "AGENTEXTENSION",
  "adminResourceType" : "AGENTEXTENSION",
  "status" : "CONSULTING",
  "prevStatus" : "RINGING",
  "type" : "UNKNOWNTYPE",
  "stateEnteredAt": "2018-10-17T19:18:10Z",
  "busUnitKey" : "1",
}
```

4.6. Callback

4.6.1. Callback Commands

All requests require logon on Admin and an Authorization header with the session token.

In general the response to the Callback Commands has the following format:

Callback Commands Response Object		
Attribute name	Attribute type	Description
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

4.6.1.1. Logon

Description: request to logon an agent on Callback media.
URL: POST /restsdk/webapi/callback/logon

Logon Request Object		
Attribute name	Attribute type	Description
agentKey	Integer	Key number of the agent which shall be logged on.
extension	String	Extension number which shall be associated to the agent.

Message Example:

```
//Logon Object
{
  "agentKey" : 5,
  "extension" : "554181015002"
}
```

4.6.1.2. Logoff

Description: request to logoff an agent from Callback media.
URL: POST /restsdk/webapi/callback/logoff

Logoff Request Object		
Attribute name	Attribute type	Description
agentKey	Integer	Key number of the agent which shall be logged off.

Message Example:

```
//Logoff Object
{
  "agentKey" : 5
}
```

4.6.1.3. Accept

Description: request to accept the callback delivered to the agent.
URL: POST /restsdk/webapi/callback/accept

Accept Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent for which callback shall be accepted.

Message Example:

```
///Accept Object
{
  "agentKey" : 5
}
```

4.6.1.4. Complete

Description: request to complete the callback handled by the agent.
URL: POST /restsdk/webapi/callback/complete

Complete Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent for which callback shall be completed.
successful	Boolean	Indicate if the callback has been successfully completed.
retryDelay	Integer	The retryDelay unit is minutes. For retryDelay = 0, the callback is set to retry now. For retryDelay >= 1, the callback is set to retry later with the specified phoneNumber.
retryReasonKey	Integer	Key of the reason for which the callback shall be retried.
phoneNumber	String	Phone number to which the callback shall be retried.
maxReached	Boolean	The maxReached flag is used to set callback result reason as maximum retries reached.

Message Example:

```
//Complete Object
{
  "agentKey": 3,
  "successful": true,
  "retryDelay": 0,
  "retryReasonKey": 0,
  "phoneNumber": "554180811093",
  "maxReached": false
}
```

4.6.1.5. Create

Description: request to create a callback.
URL: POST /restsdk/webapi/callback/create

Create Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent for which callback shall be created.
name	String	Name of callback to be created.
queueKey	Integer	Key of the queue for which the callback shall be created.
description	String	Text with more details about the callback;
priority	Integer	Priority which will be set to the created callback;
reserveAgentKey	Integer	Key of the agent to which the callback shall be reserved. If no reservation to agent, value shall be set to 0.
schedule	Schedule Object	The start and end of the time interval in which the callback shall be executed and the phone number to be dialed.
contactData	ContactData Object	List of key value pairs for attributes of this callback.

Message Example:

```
//Create Object
{
  "agentKey": 3,
  "name": "sdkname",
  "queueKey": 3,
  "description": "sdkdesc",
  "priority": 20,
  "reserveAgentKey": 0,
  "schedule": [{
    "startTime": "2019-01-25T10:04:42-02:00",
    "endTime": "2019-01-25T12:37:59-02:00",
    "phoneNumber": "551138172345"
  }],
  "contactData": [{
    "key": "key0",
    "value": "value0"
  }, {
    "key": "key1",
    "value": "value1"
  }]
}
```

4.6.1.6. Delete

Description: request to delete the callback which was delivered to an agent.
URL: POST /restsdk/webapi/callback/delete

Delete Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key of the agent for which the callback shall be deleted.

reasonKey	Integer	Key of the reason to delete the callback.

Message Example:

```
//Delete Object
{
  "agentKey": 3,
  "reasonKey": 6
}
```

4.6.1.7. QueryNewCallbacks

Description: request to query new callbacks (i.e. Callbacks with status = 0 on Callback Server). Since this request is asynchronous, the query result comes as an event of type NEW_CALLBACKS_LIST_EVENT. It's required that the application is listening on Callback events, on any agentKey (or all keys with wildcard *).
URL: POST /restsdk/webapi/callback/querynewcallbacks

QueryNewCallbacks Request Object		
Attribute name	**Attribute type**	**Description**
origin	String	Determines the type of callback to be queried. See definition of possible values at CallbackOrigin.
fromTime	String	Begin of the time interval for the query.
toTime	String	End of the time interval for the query.
queueKeys	List of Integers	List of keys of the queues for which the callback shall be queried.

Message Example:

```
//QueryNewCallbacks Object
{
   "origin": "ORIGIN_DESKTOP",
  "fromTime": "2019-01-25T10:05:42-02:00",
  "toTime": "2019-01-25T12:37:59-02:00",
  "queueKeys": [1, 3, 5]
}
```

4.6.1.8. Update

Description: request to update a callback. It's possible to update an active callback, or a callback which was not delivered to an agent yet (it's still being processed on database). If an active callback is being updated, the start time of the first active schedule cannot be changed.
URL: POST /restsdk/webapi/callback/update

Update Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent for which callback shall be updated.
uniqueCallId	String	Call ID of the callback to be updated.
name	String	Name of the callback to be updated.

queueKey	Integer	Key of the queue for which the callback shall be updated.
description	String	Text with more details about the callback;
priority	Integer	Priority which will be set to the created callback;
reserveAgentKey	Integer	Key of the agent to which the callback shall be reserved. If no reservation to agent, value shall be set to 0.
reserveAgentTime	Integer	Time in seconds for which the agent will be reserved for the callback.
schedule	Schedule Object	The start and end of the time interval in which the callback shall be executed and the phone number to be dialed.
contactData	ContactData Object	List of key value pairs for attributes of this callback.
retryTime	String	Time when the callback shall be retried.
reasonKey	Integer	Key of the reason for which the callback shall be retried.
status	String	Status of the callback. See definition of possible values at CallbackStatus.

Message Example:

```
//Update Object
{
  "agentKey": 3,
  "uniqueCallId": "C7041543247160029"
  "name": "sdkname",
  "queueKey": 3,
  "description": "sdkdesc",
  "priority": 20,
  "reserveAgentKey": 0,
  "reserveAgentTime": 0,
  "schedule": [{
    "startTime": "2019-01-25T10:04:42-02:00",
    "endTime": "2019-01-25T12:37:59-02:00",
    "phoneNumber": "551138172345"
  }],
  "contactData": [{
    "key": "key0",
    "value": "value0"
  }, {
    "key": "key1",
    "value": "value1"
  }]
  "retryTime": "2019-01-25T17:04:42-02:00",
  "reasonKey": 12,
  "status": "CALLBACKSTATUS_NEW"
}
```

4.6.1.9. StartListenForEvents

Description: request to start listening for Callback server events. The resource is the user key.
Note: if '*' is passed, all the subscribers configured for the tenant in the OpenScape Contact Center will be monitored.
URL: POST /restsdk/webapi/callback/startlistenforevents

StartListenForEvents Request Object		
Attribute name	**Attribute type**	**Description**

resource	String	Key of the user to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StartListenForEvents Request Object
{
  "resource" : "3"
}
```

4.6.1.10. StopListenForEvents

Description: request to stop listening for Callback server events. The resource is the user key.
URL: POST /restsdk/webapi/callback/stoplistenforevents

StopListenForEvents Request Object		
Attribute name	Attribute type	Description
resource	String	Key of the user to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StopListenForEvents Request Object
{
  "resource" : "3"
}
```

4.6.2. Callback Events

In general, Callback Events have the following structure:

Event Object		
Attribute name	Attribute type	Description
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.6.2.1. OnDeliveredCallbackEvent

Description: event triggered when a callback is delivered to an agent.

OnDeliveredCallbackEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.

type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnDeliveredCallbackEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the callback was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
name	String	Name of the callback.
description	String	Description of the callback.
schedules	Schedules Object	List of schedules for that agent.
contactData	ContactData Object	List of contact data key values.

Message Example:

```
// OnDeliveredCallbackEvent Object
{
    "type": "EVENT",
    "data": {
        "realm": "CALLBACK",
        "type": "DELIVERED_CALLBACK_EVENT",
            "data": {
                "mediaType": "CALLBACK",
                "resource": "3",
                "uniqueCallId": "C8511543249806039",
                "requeueCount": 0,
                "name": "sdkname",
                "description": "sdkdesc",
                "schedules": [{
                    "startTime": "2018-11-26T15:55:57Z",
                    "endTime": "2018-11-26T18:21:43Z",
                    "phoneNumber": "1119",
                    "status": "ACTIVE"
                }],
                "contactData": [{
                    "key": "key0",
                    "value": "value0"
                }, {
                    "key": "key1",
                    "value": "value1"
                }]
            }
    }
}
```

4.6.2.2. OnDivertedCallbackEvent

Description: event triggered when a callback is deleted by an agent.

OnDivertedCallbackEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnDivertedCallbackEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the callback was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
reasonKey	Integer	Key of the reason the agent used for deleting the callback.

Message Example:

```
// OnDivertedCallbackEvent Object
{
    "type": "EVENT",
    "data": {
        "realm": "CALLBACK",
        "type": "DIVERTED_CALLBACK_EVENT",
            "data": {
                "mediaType": "CALLBACK",
                "resource": "3",
                "uniqueCallId": "C8511543249806039",
                "requeueCount": 1,
                "reasonKey": 6
            }
    }
}
```

4.6.2.3. OnMakeCallFailedCallbackEvent

Description: event triggered when it's not possible to make a callback call (e.g. Accept request sent but agent's extension is busy).

OnMakeCallFailedCallbackEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnMakeCallFailedCallbackEvent Data Object		
Attribute name	Attribute type	Description

mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the callback was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.

Message Example:

```
// OnMakeCallFailedCallbackEvent Object
{
    "type": "EVENT",
    "data": {
        "realm": "CALLBACK",
        "type": "MAKECALLFAILED_CALLBACK_EVENT",
            "data": {
                "mediaType": "CALLBACK",
                "resource": "3",
                "uniqueCallId": "C8511543249806039",
                "requeueCount": 1
            }
        }
    }
}
```

4.6.2.4. OnServerConnected

Description: event triggered when connection to Callback server is established.

OnServerConnectedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object		
Attribute name	Attribute type	Description
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "CALLBACK",
    "type" : "SERVER_CONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6007:10.81.3.116"
    }
```

```
    }
}
```

4.6.2.5. OnServerDisconnected

Description: event triggered when connection to Callback server is lost.

<table>
<tr><th colspan="3">OnServerDisconnectedEvent Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>realm</td><td>String</td><td>Domain of the contact center for which the event is being reported. See definition of possible values at Realm.</td></tr>
<tr><td>type</td><td>String</td><td>Identification of the event. See definition of possible values at EventType</td></tr>
<tr><td>data</td><td>Object</td><td>Content of the event. See following data Object definition.</td></tr>
</table>

<table>
<tr><th colspan="3">OnServerDisconnectedEvent Data Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>serverName</td><td>String</td><td>Name of the server which has been disconnected.</td></tr>
</table>

Message Example:

```
//OnServerDisconnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "CALLBACK",
    "type" : "SERVER_DISCONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6007:10.81.3.116"
    }
  }
}
```

4.6.3. Callback Common Objects

4.6.3.1. Schedule Object

<table>
<tr><th colspan="3">Schedule Object</th></tr>
<tr><th>Attribute name</th><th>Attribute type</th><th>Description</th></tr>
<tr><td>startTime</td><td>String</td><td>Start of the time interval of the callback.</td></tr>
<tr><td>endTime</td><td>String</td><td>End of the time interval of the callback.</td></tr>
<tr><td>phoneNumber</td><td>String</td><td>Phone number which shall be callback back.</td></tr>
</table>

4.6.3.2. Schedules Object

Schedules Object		
Attribute name	**Attribute type**	**Description**
List of:		
startTime	String	Start of the time interval of the callback.
endTime	String	End of the time interval of the callback.
phoneNumber	String	Phone number which shall be callback back.
status	String	Status of the scheduled callback. See definition of possible values at CallbackScheduleStatus.

4.6.3.3. ContactData Object

ContactData Object		
Attribute name	**Attribute type**	**Description**
List of:		
key	String	Identification of the contact data.
value	String	Content of the contact data.

4.7. Web Collaboration

4.7.1. Web Collaboration Commands

All requests require that the application is logged on Admin and an Authorization header with the session token.

In general the response to the Web Collaboration Commands has the following format:

Web Collaboration Commands Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

4.7.1.1. Logon

Description: request to logon an agent on Web Collaboration media.
URL: POST /restsdk/webapi/webcollaboration/logon

Logon Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent which shall be logged on.

Message Example:

```
//Logon Object
{
  "agentKey" : 5
}
```

4.7.1.2. Logoff

Description: request to logoff an agent from Web Collaboration media.
URL: POST /restsdk/webapi/webcollaboration/logoff

Logoff Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent which shall be logged off.

Message Example:

```
//Logoff Object
{
  "agentKey" : 5
}
```

4.7.1.3. Accept

Description: request to accept a Web Collaboration session/conference invite delivered to the agent.
URL: POST /restsdk/webapi/webcollaboration/accept

Accept Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent which shall accept the WebCollaboration session/conference invite.
uniqueCallId	String	Call Id of the Web Collaboration session/conference invite to be accepted.

Message Example:

```
//Accept Object
{
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.4. Disconnect

Description: request to disconnect an agent from a Web Collaboration session.
URL: POST /restsdk/webapi/webcollaboration/disconnect

Disconnect Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key number of the agent for which the Web Collaboration session shall be disconnected.

uniqueCallId	String	Call Id of the Web Collaboration session to be disconnected.

Message Example:

```
//Disconnect Object
{
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.5. InviteAgent

Description: request to invite an agent to join a Web Collaboration session.
URL: POST /restsdk/webapi/webcollaboration/inviteagent

InviteAgent Request Object		
Attribute name	**Attribute type**	**Description**
invitedAgentKey	Integer	Key number of the agent who shall be invited to join the Web Collaboration session.
agentKey	Integer	Key number of the agent who shall be inviting the other agent to join the Web Collaboration session.
uniqueCallId	String	Call Id of the Web Collaboration session.

Message Example:

```
//InviteAgent Object
{
  "invitedAgentKey" : 9,
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.6. DeclineInvite

Description: request to decline an invite to join a Web Collaboration session.
URL: POST /restsdk/webapi/webcollaboration/declineinvite

DeclineInvite Request Object		
Attribute name	**Attribute type**	**Description**
invitedAgentKey	Integer	Key number of the agent who shall decline the invite to join the Web Collaboration session.
agentKey	Integer	Key number of the agent who had sent the invite which shall be declined.
uniqueCallId	String	Call Id of the Web Collaboration session.

Message Example:

```
//DeclineInvite Object
{
  "invitedAgentKey" : 9,
  "agentKey" : 5,
```

```
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.7. CallMe

Description: request to send a call me to the customer. The customer can then reply with a phone number to be called by the agent.
URL: POST /restsdk/webapi/webcollaboration/callme

CallMe Request Object		
Attribute name	Attribute type	Description
agentKey	Integer	Key number of the agent who is starting the Call Me function.
uniqueCallId	String	Call Id of the Web Collaboration session for which the Call Me function shall be started.

Message Example:

```
//CallMe Object
{
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.8. RequeueToQueue

Description: request to requeue a Web Collaboration session to another queue.
URL: POST /restsdk/webapi/webcollaboration/requeuetoqueue

RequeueToQueue Request Object		
Attribute name	Attribute type	Description
queueKey	Integer	Key number of the queue to which the Web Collaboration session shall be requeued.
agentKey	Integer	Key number of the agent who is handling this Web Collaboration session.
uniqueCallId	String	Call Id of the Web Collaboration session which shall be requeued.

Message Example:

```
//RequeueToQueue Object
{
  "queueKey" : 8,
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.9. RequeueToAgent

Description: request to requeue a Web Collaboration session to another agent.
URL: POST /restsdk/webapi/webcollaboration/requeuetoagent

RequeueToAgent Request Object		
Attribute name	Attribute type	Description
toAgentKey	Integer	Key number of the agent to which the Web Collaboration session shall be requeued.
priority	Integer	Priority for the requeued Web Collaboration session.
agentKey	Integer	Key number of the agent who is handling this Web Collaboration session.
uniqueCallId	String	Call Id of the Web Collaboration session which shall be requeued.

Message Example:

```
//RequeueToAgent Object
{
  "toAgentKey" : 8,
  "priority" : 1,
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.10. AddContent

Description: request to add content to a Web Collaboration session.
URL: POST /restsdk/webapi/webcollaboration/addcontent

AddContent Request Object		
Attribute name	Attribute type	Description
content	String	The content to be added on the behalf of the agent to a Web Collaboration session.
agentKey	Integer	Key number of the agent on whose behalf the content shall be added.
uniqueCallId	String	Call Id of the Web Collaboration session for which the content shall be added.

Message Example:

```
//AddContent Object
{
  "content" : "How are you doing?",
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.11. UpdateContactData

Description: request to update the contact data of a Web Collaboration session.
URL: POST /restsdk/webapi/webcollaboration/updatecontactdata

UpdateContactData Request Object		
Attribute name	Attribute type	Description
contactData	List of Contact Data	The contact data to be update on a Web Collaboration session.
agentKey	Integer	Key number of the agent on whose behalf the content shall be added.
uniqueCallId	String	Call Id of the Web Collaboration session for which the content shall be added.

Message Example:

```
//UpdateContactData Object
{
  "contactData": [{
    "key": "key0",
    "value": "value0"
  }, {
    "key": "key1",
    "value": "value1"
  }],
  "agentKey" : 5,
  "uniqueCallId": "W869020181026170830001"
}
```

4.7.1.12. StartListenForEvents

Description: request to start listening for Web Collaboration media events. The resource is the user key.
Note: if '*' is passed, all the subscribers configured for the tenant in the OpenScape Contact Center will be monitored.
URL: POST /restsdk/webapi/webcollaboration/startlistenforevents

StartListenForEvents Request Object		
Attribute name	Attribute type	Description
resource	String	Key of the user to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StartListenForEvents Request Object
{
  "resource" : "3"
}
```

4.7.1.13. StopListenForEvents

Description: request to stop listening for Web Collaboration events. The resource is the user key.
URL: POST /restsdk/webapi/ webcollaboration /stoplistenforevents

StopListenForEvents Request Object		
Attribute name	Attribute type	Description

resource	String	Key of the user to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StopListenForEvents Request Object
{
  "resource" : "3"
}
```

4.7.2. Web Collaboration Events

In general, Web Collaboration Events have the following structure:

Event Object		
Attribute name	**Attribute type**	**Description**
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.7.2.1. OnDeliveredWebChatEvent

Description: event triggered when a Web Collaboration session is delivered to an agent.

OnDeliveredWebChatEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDeliveredWebChatEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the Web Collaboration was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
source	String	Content of the source field of the Web Collaboration request.
destination	String	Content of the destination field of the Web Collaboration request.
invitingAgentKey	Integer	Key of the agent who is inviting to join a Web Collaboration session. This field is only used if an agent is inviting another agent to join a Web Collaboration session.
deliveredReason	String	Reason for the delivery of the Web Collaboration session. See definition of possible values at WebCollaborationDeliveredReason.
contactData	ContactData Object	List of key value pairs of Contact Data.
chatContent	ChatContent Object	List of formatted content items.

Message Example:

```
// OnDeliveredWebChatEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "WEB_INTERACTION",
        "type": "DELIVERED_WEB_CHAT_EVENT",
            "data": {
                "mediaType": "WEB_COLLABORATION",
                "resource": "3",
                "uniqueCallId": "W869020181027100055005",
                "requeueCount": 0,
                "source": "sourceweb",
                "destination": "destweb",
                "invitingAgentKey": 0,
                "deliveredReason": "NORMAL_ASSIGNMENT",
                "contactData": [{
                    "key": "Key1",
                    "value": "val1"
                }, {
                    "key": "Key2",
                    "value": "val2"
{              }, {
                    "key": "Key3",
                    "value": "val3"
                }, {
                    "key": "___HPPC_UserLanguage",
                    "value": "1"
                }],
                "chatContent": [{
                    "chatCommiter": "CUSTOMER",
                    "content": "<TABLE width='95%'  border='0' cellspacing='0'
cellpadding='2'><TR><TD width='2%' valign='top'><IMG SRC='images/customericon.gif'
WIDTH='16' HEIGHT='16'/></TD><TD width='98%'><FONT face=Tahoma size=2><FONT
contentEditable=false style=\"BACKGROUND-COLOR: #ffffff\" tabIndex=-1 face=Tahoma
size=2>11/27/2018</FONT>, <FONT contentEditable=false style=\"BACKGROUND-COLOR:
#ffffff\" tabIndex=-1 face=Tahoma size=2>10:00 AM</FONT> <FONT contentEditable=false
style=\"BACKGROUND-COLOR: #ffffff\" tabIndex=-1 face=Tahoma
size=2><STRONG>Name</STRONG></FONT><STRONG>
says</STRONG></FONT></TD></TR><TR><TD> </TD><TD valign='top'><FONT face=Tahoma
size=2>Can you tell me about...</FONT></TD></TR></TABLE>"
                }, {
                    "chatCommiter": "SYSTEM",
                    "content": "<TABLE width='95%'  border='0' cellspacing='0'
cellpadding='2'><TR><TD width='2%' valign='top'><IMG SRC='images/systemicon.gif'
WIDTH='16' HEIGHT='16'/></TD><TD width='98%'><FONT face=Tahoma size=2><FONT
contentEditable=false style=\"BACKGROUND-COLOR: #ffffff\" tabIndex=-1 face=Tahoma
size=2>11/27/2018</FONT>, <FONT contentEditable=false style=\"BACKGROUND-COLOR:
#ffffff\" tabIndex=-1 face=Tahoma size=2>10:00 AM</FONT> <FONT contentEditable=false
style=\"BACKGROUND-COLOR: #ffffff\" tabIndex=-1 face=Tahoma size=2><STRONG><FONT
face=Tahoma size=2>System</FONT></STRONG></FONT><STRONG>
```

```
says</STRONG></FONT></TD></TR><TR><TD> </TD><TD valign='top'><FONT face=Tahoma
size=2>Welcome to the contact center, powered by OpenScape Contact Center. 
Please hold while we connect you to an agent.</FONT></TD></TR></TABLE>"
        }]
    }
  }
}
```

4.7.2.2. OnDivertedWebChatEvent

Description: event triggered when an agent declines an invite to a Web Collaboration session.

OnDivertedWebChatEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDivertedWebChatEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent who had sent the invitation to join a Web Collaboration session.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
refusingAgentKey	Integer	Key of the agent who refused the invitation to join a Web Collaboration session.
divertReason	String	Reason for the refuse of the Web Collaboration session. See definition of possible values at WebCollaborationDivertReason.

Message Example:

```
// OnDivertedWebChatEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "WEB_INTERACTION",
        "type": "DIVERTED_WEB_CHAT_EVENT",
            "data": {
                "mediaType": "WEB_COLLABORATION",
                "resource": "3",
                "uniqueCallId": "W869020181027100055005",
                "requeueCount": 0,
                "refusingAgentKey": 4,
                "divertReason": "INVITATION_REJECTED"
            }]
        }
    }
```

```
}
```

4.7.2.3. OnContentWebChatEvent

Description: event triggered when a content is added to a Web Collaboration session.

OnContentWebChatEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnContentWebChatEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent added the content to the Web Collaboration session.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
chatContent	ChatContent Object	List of formatted content items.

Message Example:

```
// OnContentWebChatEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "WEB_INTERACTION",
        "type": "CONTENT_WEB_CHAT_EVENT",
            "data": {
                "mediaType": "WEB_COLLABORATION",
                "resource": "3",
                "uniqueCallId": "W869020181027100055005",
                "requeueCount": 0,
                "chatContent": [{
                    "chatCommiter": "AGENT",
                    "content": "<TABLE width='95%'  border='0' cellspacing='0'
cellpadding='2'><TR><TD width='2%' valign='top'><IMG SRC='images/agenticon.gif'
WIDTH='16' HEIGHT='16'/></TD><TD width='98%'><FONT face=Tahoma size=2><FONT
contentEditable=false style=\"BACKGROUND-COLOR: #ffffff\" tabIndex=-1 face=Tahoma
size=2>11/27/2018</FONT>, <FONT contentEditable=false style=\"BACKGROUND-COLOR:
#ffffff\" tabIndex=-1 face=Tahoma size=2>10:17 AM</FONT> <FONT contentEditable=false
style=\"BACKGROUND-COLOR: #ffffff\" tabIndex=-1 face=Tahoma
size=2><STRONG>agent</STRONG></FONT><STRONG>
says</STRONG></FONT></TD></TR><TR><TD> </TD><TD valign='top'>hi <img
src=\"images/angry.gif\"></TD></TR></TABLE>"
```

```
        }]
    }
  }
}
```

4.7.2.4. OnDisconnectedWebChatEvent

Description: event triggered when participant disconnects from a Web Collaboration session.

OnDisconnectedWebChatEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDisconnectedWebChatEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent who disconnected the Web Collaboration session.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
disconnectedAgentKey	Integer	Key of the agent who disconnected from the Web Collaboration session.
disconnectReason	String	Reason for the disconnection of the Web Collaboration session. See definition of possible values at WebCollaborationDisconnectReason.

Message Example:

```
// OnDisconnectedWebChatEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "WEB_INTERACTION",
        "type": "DISCONNECTED_WEB_CHAT_EVENT",
            "data": {
                "mediaType": "WEB_COLLABORATION",
                "resource": "3",
                "uniqueCallId": "W869020181027100055005",
                "requeueCount": 0,
                "disconnectedAgentKey": 0,
                "disconnectReason": "NORMAL_DISCONNECT"
        }
    }
}
```

4.7.2.5. OnEstablishedWebChatEvent

Description: event triggered when a Web Collaboration session is established with an agent.

OnEstablishedWebChatEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnEstablishedWebChatEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent who accepted the invitation to join the Web Collaboration session.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.

Message Example:

```
// OnEstablishedWebChatEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "WEB_INTERACTION",
        "type": "ESTABLISHED_WEB_CHAT_EVENT",
            "data": {
                "mediaType": "WEB_COLLABORATION",
                "resource": "3",
                "uniqueCallId": "W869020181027100055005",
                "requeueCount": 0
        }
    }
}
```

4.7.2.6. OnConferencedWebChatEvent

Description: event triggered when a Web Collaboration session becomes a conference (with more than 2 participants).

OnConferencedWebChatEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.

type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnConferencedWebChatEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent who joined the Web Collaboration conference session.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
joinedAgentKey	Integer	Key of the agent who joined the Web Collaboration conference session.
numberOfAgents	Integer	Number of the agents who are participating in the Web Collaboration session.

Message Example:

```
// OnConferencedWebChatEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "WEB_INTERACTION",
        "type": "CONFERENCED_WEB_CHAT_EVENT",
        "data": {
            "mediaType": "WEB_COLLABORATION",
            "resource": "3",
            "uniqueCallId": "W869020181027100055005",
            "requeueCount": 0,
            "joinedAgentKey": 3,
            "numberOfAgents": 2
        }
    }
}
```

4.7.2.7. OnCallMeAnswerWebChatEvent

Description: event triggered when a customer answers to a CallMe request.

OnCallMeAnswerWebChatEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnCallMeAnswerWebChatEvent Data Object		
Attribute name	**Attribute type**	**Description**

mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent who sent the Call Me request to the customer.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
phoneNumber	String	Phone number to be used to call the customer.

Message Example:

```
// OnCallMeAnswerWebChatEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "WEB_INTERACTION",
        "type": "CALL_ME_ANSWER_WEB_CHAT_EVENT",
            "data": {
                "mediaType": "WEB_COLLABORATION",
                "resource": "3",
                "uniqueCallId": "W869020181027100055005",
                "requeueCount": 0,
                "phoneNumber": "+55(41)80911597"
            }
        }
    }
}
```

4.7.2.8. OnServerConnectedEvent

Description: event triggered when connection to WebInteraction server is established.

OnServerConnectedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object		
Attribute name	Attribute type	Description
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "WEB_INTERACTION",
    "type" : "SERVER_CONNECTED_EVENT",
    "data" :
```

```
    {
      "serverName" : "6020:10.81.3.116"
    }
  }
}
```

4.7.2.9. OnServerDisconnectedEvent

Description: event triggered when connection to WebInteraction server is lost.

OnServerDisconnectedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerDisconnectedEvent Data Object		
Attribute name	Attribute type	Description
serverName	String	Name of the server which has been disconnected.

Message Example:

```
//OnServerDisconnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "WEB_INTERACTION",
    "type" : "SERVER_DISCONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6020:10.81.3.116"
    }
  }
}
```

4.7.3. Web Collaboration Common Objects

4.7.3.1. ChatContent Object

ChatContent Object		
Attribute name	Attribute type	Description
chatCommiter	String	Identification of the party which added the content. See definition of possible values at WebCollaborationChatCommiter enum.
content	String	Formatted content.

4.7.3.2. ContactData Object

ContactData Object		
Attribute name	Attribute type	Description

List of:		
key	String	Identification of the contact data.
value	String	Content of the contact data.

4.8. OpenMedia

4.8.1. OpenMedia Commands

All requests require that the application is logged on Admin and an Authorization header with the session token.

In general the response to the OpenMedia Commands has the following format:

OpenMedia Commands Response Object		
Attribute name	Attribute type	Description
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

4.8.1.1. Logon

Description: request to logon an agent on an OpenMedia connector.
URL: POST /restsdk/webapi/openmedia/logon

Logon Request Object		
Attribute name	Attribute type	Description
connectorKey	Integer	Key number of the connector to which the agent shall be logged on.
agentKey	Integer	Key number of the agent which shall be logged on.

Message Example:

```
//Logon Object
{
  "connectorKey" : 5,
  "agentKey" : 5
}
```

4.8.1.2. Logoff

Description: request to logoff an agent from an OpenMedia connector.
URL: POST /restsdk/webapi/openmedia/logoff

Logoff Request Object		
Attribute name	Attribute type	Description
connectorKey	Integer	Key number of the connector to which the agent shall be logged off.
agentKey	Integer	Key number of the agent which shall be logged off.

Message Example:

```
//Logoff Object
{
  "connectorKey" : 5,
  "agentKey" : 5
}
```

4.8.1.3. Accept

Description: request to accept an OpenMedia session delivered to the agent.
URL: POST /restsdk/webapi/openmedia/accept

Accept Request Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call Id of the OpenMedia session to be accepted.

Message Example:

```
//Accept Object
{
  "uniqueCallId": "OB8690201810261708300001"
}
```

4.8.1.4. Disconnect

Description: request to disconnect an agent from an OpenMedia session.
URL: POST /restsdk/webapi/openmedia/disconnect

Disconnect Request Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call Id of the OpenMedia session to be disconnected.

Message Example:

```
//Disconnect Object
{
  "uniqueCallId": "OB8690201810261708300001"
}
```

4.8.1.5. QueryEligibleUsers

Description: request to query logged on agents on the specified connector.
URL: POST /restsdk/webapi/openmedia/queryeligigleusers

QueryEligigleUsersRequest Object		
Attribute name	**Attribute type**	**Description**
connectorKey	Integer	Key of the connector for which the users shall be queried.

Message Example:

```
//QueryEligibleUsersRequest Object
{
```

```
    "connectorKey" : 1
}
```

QueryEligigleUsersResponse Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
agentKeys	List of Integer	List of keys of the agents who are eligible for the passed connector.

Message Example:

```
//QueryEligibleUsersResponse Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR",
  "agentKeys" : [3]
}
```

4.8.1.6. Reply

Description: request to reply an OpenMedia contact.
URL: POST /restsdk/webapi/openmedia/reply

Reply Request Object		
Attribute name	**Attribute type**	**Description**
connectorName	String	Name of the connector
replyTo	String	OPTIONAL - Refers to the inReplyTo id on the objectToBePublished which is sent to the connector. If the replyTo attribute is missing or empty, OpenMedia Server will use the last published id as the "inReplyTo id".
content	String	Content of the reply message.
uniqueCallId	String	Call Id of the OpenMedia session to be replied.

Message Example:

```
//Reply Object
{
  "connectorName": " CustomerSystem ",
  "replyTo": "ID456454343_4567890",
  "content": "How can I help you?",
  "uniqueCallId": "OB8690201810261708300001"
}
```

4.8.1.7. Defer

Description: request to defer an OpenMedia contact. The contact must be in Established state (i.e. Accepted by an agent) in order to be deferred. The REST SDK allows to defer both Real-Time and Non

Real-Time OpenMedia contacts.
URL: POST /restsdk/webapi/openmedia/defer

Defer Request Object		
Attribute name	Attribute type	Description
agentKey	String	Key of the agent who is deferring the OpenMedia contact.
connectorKey	String	Key of the connector which originated the contact.
draftMessage	String	OPTIONAL - Content of the draft message.
uniqueCallId	String	Call Id of the OpenMedia session to be deferred.

Message Example:

```
//Defer Object
{
  "agentKey": 3,
  "connectorKey": 1
  "draftMessage": "How can I help you?",
  "uniqueCallId": "OB869020181026170830001"
}
```

4.8.1.8. Resume

Description: request to resume a deferred OpenMedia contact.
URL: POST /restsdk/webapi/openmedia/resume

Resume Request Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call Id of the OpenMedia session to be resumed.

Message Example:

```
//Resume Object
{
  "uniqueCallId": "OB869020181026170830001"
}
```

4.8.1.9. RequeueToQueue

Description: request to requeue an OpenMedia contact to another queue.
URL: POST /restsdk/webapi/openmedia/requeuetoqueue

RequeueToQueue Request Object		
Attribute name	Attribute type	Description
queueKey	Integer	Key number of the queue to which the OpenMedia session shall be requeued.
priority	Integer	Key number of the agent who is handling this OpenMedia session.
draftMessage	String	OPTIONAL - Content of the draft message.
uniqueCallId	String	Call Id of the OpenMedia session which shall be requeued.

Message Example:

```
//RequeueToQueue Object
{
  "queueKey" : 8,
  "priority" : 20,
  "draftMessage": "How can I help you?",
  "uniqueCallId": "O8690201810261708300001"
}
```

4.8.1.10. RequeueToAgent

Description: request to requeue an OpenMedia contact to another agent.
URL: POST /restsdk/webapi/openmedia/requeuetoagent

RequeueToAgent Request Object		
Attribute name	Attribute type	Description
toAgentKey	Integer	Key number of the agent to which the OpenMedia session shall be requeued.
priority	Integer	Priority for the requeued OpenMedia session.
draftMessage	String	OPTIONAL - Content of the draft message.
uniqueCallId	String	Call Id of the OpenMedia session which shall be requeued.

Message Example:

```
//RequeueToAgent Object
{
  "toAgentKey" : 8,
  "priority" : 1,
  "draftMessage": "How can I help you?",
  "uniqueCallId": "O8690201810261708300001"
}
```

4.8.1.11. Discard

Description: request to discard an OpenMedia contact. It is possible to discard both Real-Time and Non Real-Time OpenMedia contacts.
URL: POST /restsdk/webapi/openmedia/discard

Discard Request Object		
Attribute name	Attribute type	Description
reasonKey	Integer	Key number of the reason for which the OpenMedia contact has been discarded.
uniqueCallId	String	Call Id of the OpenMedia session which shall be requeued.

Message Example:

```
//Discard Object
{
  "reasonKey" : 8,
```

```
  "uniqueCallId": "O869020181026170830001"
}
```

4.8.1.12. QueryDeferredMessages

Description: request to query deferred OpenMedia messages/contacts.
URL: POST /restsdk/webapi/openmedia/querydeferredmessages

QueryDeferredMessages Request Object		
Attribute name	**Attribute type**	**Description**
agentKey	Integer	Key of the agent for which the deferred messages shall be queried.

Message Example:

```
//QueryDeferredMessages Request Object
{
  "connectorKey" : 1
}
```

QueryDeferredMessages Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
deferredList	DeferredList Object	List of contacts which are deferred for this agent.

Message Example:

```
// QueryDeferredMessages Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR",
  "agentKeys" : [{
    "uniqueCallId": "O869020181026170830001",
    "queueKey" : 5,
    "connectorKey" : 1,
    "connectorName": "CustomerSystem",
    "arrivalTime": "2019-09-19T14:17:56Z",
    "deferTime" : "2019-09-19T14:18:45Z",
    "from" : "John Smith",
    "to": "Sales"
  }]
}
```

4.8.1.13. GetStream

Description: request to get the stream of an OpenMedia contact. Since this request is asynchronous, the result comes as an event of type STREAM_RESPONSE_OPENMEDIA_EVENT. Thus, it's required OpenMedia event listening on the AgentKey related to the agent who requested the stream (which is probably handling the contact).
URL: POST /restsdk/webapi/openmedia/getstream

GetStream Request Object		
Attribute name	**Attribute type**	**Description**
uniqueCallId	String	Call Id of the OpenMedia contact for which the stream shall be collected.

Message Example:

```
//GetStream Object
{
  "uniqueCallId": "O8690201810261708300001"
}
```

4.8.1.14. StartListenForEvents

Description: request to start listening for OpenMedia events. The resource is the user key.
Note: if '*' is passed, all the subscribers configured for the tenant in the OpenScape Contact Center will be monitored.
URL: POST /restsdk/webapi/openmedia/startlistenforevents

StartListenForEvents Request Object		
Attribute name	**Attribute type**	**Description**
resource	String	Key of the user to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StartListenForEvents Request Object
{
  "resource" : "3"
}
```

4.8.1.15. StopListenForEvents

Description: request to stop listening for OpenMedia events. The resource is the user key.
URL: POST /restsdk/webapi/ openmedia /stoplistenforevents

StopListenForEvents Request Object		
Attribute name	**Attribute type**	**Description**
resource	String	Key of the user to be monitored. Wildcard '*' indicates that the request applies to all extension numbers configured for the corresponding tenant in the OpenScape Contact Center.

Message Example:

```
//StopListenForEvents Request Object
{
  "resource" : "3"
}
```

4.8.2. OpenMedia Events

In general, OpenMedia Events have the following structure:

Event Object		
Attribute name	**Attribute type**	**Description**
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.8.2.1. OnDeliveredOpenMediaEvent

Description: event triggered when a OpenMedia contact is delivered to an agent.

OnDeliveredOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDeliveredOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the OpenMedia contact was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
conversationId	String	Conversation ID of the OpenMedia contact.
interactionId	String	Interaction ID of the OpenMedia message in the contact.
connectorKey	Integer	Key of the OpenMedia connector which originated the contact.
connectorName	String	Name of the OpenMedia connector which originated the contact.
realTime	Boolean	Indicates if the contact is real time or non real time.
draftMessage	String	Message typed by the agent so far.
autoSuggestMessage	String	Suggested message.
contactData	ContactData Object	List of contact data
openMediaContent	OpenMediaContent Object	Content of the initial message.

Message Example:

```
// OnDeliveredOpenMediaEvent Object
```

```
{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "DELIVERED_OPENMEDIA_EVENT",
            "data": {
                "mediaType": "OPENMEDIA",
                "resource": "3",
                "uniqueCallId": "O869020181027100055005",
                "requeueCount": 0,
                "conversationId" : "OAF0DEC5C0300",
                "interactionId" : "OAF0DEC5C0300",
                "connectorKey": 1,
                "connectorName": "CompanySystem",
                "realTime": false,
                "draftMessage": "",
                "autoSuggestMessage": "Thank you for your message!",
                "contactData": [{
                    "key": "Key1",
                    "value": "val1"
                 }, {
                    "key": "Key2",
                    "value": "val2"
                 }, {
                    "key": "Key3",
                    "value": "val3"
                 }, {
                    "key": "___HPPC_UserLanguage",
                    "value": "1"
                 }],
                "openMediaContent" : {
                    "id" : "703545976517482_703546026517477",
                    "sourceName" : "John Smith",
                    "time" : "2019-05-27T19:17:53Z",
                    "content" : "fafasfasfasd",
                    "commiter" : "CUSTOMER",
                    "title" : "Sales Testing",
                    "destinationName" : "aaa",
                    "attachments" : [{
                        "type" : "imagem",
                        "content" : "jpg image",
                        "url" : "http://evoque:8080/Circuit.jpg"
                    }, {
                        "type" : "image/jpg",
                        "content" : "jpg image",
                        "url" : "https://cdn.voxasdad-
cdn.com/uploads/chorus_image/image/57914095/Royal_Guard_set_cover.1512774916.jpg?file=
as0id1=1d=cd=csda=vermiverm=21d,dx912xwq"
                    } ]
                }
            }
        }
}
```

4.8.2.2. OnDisconnectedOpenMediaEvent

Description: event triggered when disconnecting from an OpenMedia contact.

OnDisconnectedOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDisconnectedOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent from which the OpenMedia contact was disconnected.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
discardReasonKey	Integer	Key of the reason for which the OpenMedia session was discarded.
disconnectReason	String	Reason for disconnection. See definition of possible values at OpenMediaDisconnectReason enum.

Message Example:

```
// OnDisconnectedOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "DISCONNECTED_OPENMEDIA_EVENT",
        "data": {
            "mediaType": "OPENMEDIA",
            "resource": "3",
            "uniqueCallId": "O869020181027100055005",
            "requeueCount": 0,
            "discardReasonKey" : 1,
            "disconnectReason" : "AGENTREPLIED"
        }
    }
}
```

4.8.2.3. OnDivertedOpenMediaEvent

Description: event triggered when an OpenMedia contact is diverted (i.e. Delivered to an agent but returns to queue).

OnDivertedOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDivertedOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being diverted. See definition of possible values at MediaType.
resource	String	Key of the agent to which the OpenMedia contact was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
divertReason	String	Reason for diversion. See definition of possible values at OpenMediaDivertReason enum.

Message Example:

```
// OnDivertedOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "DIVERTED_OPENMEDIA_EVENT",
        "data": {
            "mediaType": "OPENMEDIA",
            "resource": "3",
            "uniqueCallId": "O869020181027100055005",
            "requeueCount": 0,
            "divertReason" : "RNA"
        }
    }
}
```

4.8.2.4. OnEstablishedOpenMediaEvent

Description: event triggered when an OpenMedia contact is established.

OnEstablishedOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnEstablishedOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.

resource	String	Key of the agent to which the OpenMedia contact was established.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.

Message Example:

```
// OnEstablishedOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "ESTABLISHED_OPENMEDIA_EVENT",
        "data": {
            "mediaType": "OPENMEDIA",
            "resource": "3",
            "uniqueCallId": "O869020181027100055005",
            "requeueCount": 0
        }
    }
}
```

4.8.2.5. OnDeferredOpenMediaEvent

Description: event triggered when an OpenMedia contact is deferred.

OnDeferredOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnDeferredOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the OpenMedia contact was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
deferReason	String	Reason for deferring. See definition of possible values at OpenMediaDeferReason enum.

Message Example:

```
// OnDeferredOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
```

```
        "realm": "OPENMEDIA",
        "type": "DEFERRED_OPENMEDIA_EVENT",
        "data": {
                "mediaType": "OPENMEDIA",
                "resource": "3",
                "uniqueCallId": "O869020181027100055005",
                "requeueCount": 0,
                "deferReason": "AGENTDEFER"
        }
    }
}
```

4.8.2.6. OnResumedOpenMediaEvent

Description: event triggered when an OpenMedia contact is resumed.

OnResumedOpenMediaEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnResumedOpenMediaEvent Data Object		
Attribute name	Attribute type	Description
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the OpenMedia contact was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
deferReason	String	Reason for resuming. See definition of possible values at OpenMediaResumeReason enum.
draftMessage	String	Draft message by agent.

Message Example:

```
// OnResumedOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "RESUMED_OPENMEDIA_EVENT",
        "data": {
                "mediaType": "OPENMEDIA",
                "resource": "3",
                "uniqueCallId": "O869020181027100055005",
                "requeueCount": 0,
                "deferReason": "DEFERRESUMED"
                "draftMessage": "draft msg by agent"
        }
    }
}
```

4.8.2.7. OnTransferredOpenMediaEvent

Description: event triggered when an OpenMedia contact is requeued (either to a queue or to another agent).

OnTransferredOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnTransferredOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent to which the OpenMedia contact was delivered.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
toAgentKey	Integer	Key of the agent to which the OpenMedia contact was requeued (only if reserved for agent).
transferReason	String	Reason for transferring. See definition of possible values at OpenMediaTransferReason enum.
transferTarget	String	Target of transfer. See definition of possible values at OpenMediaTransferTarget enum.

Message Example:

```
// OnTransferredOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "TRANSFERRED_OPENMEDIA_EVENT",
        "data": {
            "mediaType": "OPENMEDIA",
            "resource": "3",
            "uniqueCallId": "O869020181027100055005",
            "requeueCount": 0,
            "toAgentKey": 0,
            "transferReason": "NORMAL",
            "transferTarget": "QUEUE"
        }
    }
}
```

4.8.2.8. OnContentAddedOpenMediaEvent

Description: event triggered when customer sends/adds content to an OpenMedia (Realtime contact).

The event is also triggered after a requeue, providing the messages exchanged between the previous agent and the customer.

OnContentAddedOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

OnCotentAddedOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
mediaType	String	Media type for which the event is being reported. See definition of possible values at MediaType.
resource	String	Key of the agent for which the content was added.
uniqueCallId	String	Call ID related to the event that is being reported.
requeueCount	Integer	Number of times this contact has been requeued.
openMediaContent	OpenMediaContent Object	Added content.

Message Example:

```
// OnContentAddedOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "CONTENT_ADDED_OPENMEDIA_EVENT",
        "data": {
            "mediaType": "OPENMEDIA",
            "resource": "3",
            "uniqueCallId": "O869020181027100055005",
            "requeueCount": 0,
            "openMediaContent" : {
                "id" : "703545976517482_703546026517477",
                "sourceName" : "John Smith",
                "time" : "2019-05-27T19:17:53Z",
                "content" : "fafasfasfasd",
                "commiter" : "AGENT",
                "title" : "Sales Testing",
                "destinationName" : "John Smith",
                "attachments" :[]
            }
        }
    }
}
```

4.8.2.9. StreamResponseOpenMediaEvent

Description: event triggered as a response to the GetStream request.

StreamResponseOpenMediaEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

StreamResponseOpenMediaEvent Data Object		
Attribute name	**Attribute type**	**Description**
connectorKey	Integer	Media type for which the event is being reported.
stream	Stream Object	Key of the agent for which the content was added.

Message Example:

```
// StreamResponseOpenMediaEvent Object

{
    "type": "EVENT",
    "data": {
        "realm": "OPENMEDIA",
        "type": "STREAM_RESPONSE_OPENMEDIA_EVENT",
            "data": {
                "connectorKey": 1,
                "stream" : {
                    "id" : "703545976517482_703546026517400",
                    "sourceName" : "John Smith",
                    "time" : "2019-05-27T19:17:53Z",
                    "content" : "Message 1: this is the original complaint.",
                    "commiter" : "CUSTOMER",
                }, {
                    "id" : "703545976517482_703546026517501",
                    "sourceName" : "Martin Jones",
                    "time" : "2019-05-27T19:17:58Z",
                    "content" : "Message 2: this is the response from the agent.",
                    "commiter" : "AGENT",
                }]
            }
    }
}
```

4.8.2.10. OnServerConnected

Description: event triggered when connection to OpenMedia server is established.

OnServerConnectedEvent Object		
Attribute name	**Attribute type**	**Description**

realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object		
Attribute name	Attribute type	Description
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "OPENMEDIA",
    "type" : "SERVER_CONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6007:10.81.3.116"
    }
  }
}
```

4.8.2.11. OnServerDisconnected

Description: event triggered when connection to OpenMedia server is lost.

OnServerDisconnectedEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerDisconnectedEvent Data Object		
Attribute name	Attribute type	Description
serverName	String	Name of the server which has been disconnected.

Message Example:

```
//OnServerDisconnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "OPENMEDIA",
    "type" : "SERVER_DISCONNECTED_EVENT",
    "data" :
    {
```

```
      "serverName" : "6007:10.81.3.116"
    }
  }
}
```

4.8.3. OpenMedia Common Objects

4.8.3.1. DeferredList Object

DeferredList Object		
Attribute name	**Attribute type**	**Description**
List of:		
uniqueCallId	String	Call ID of the OpenMedia contact
queueKey	Integer	Key of the queue.
connectorKey	Integer	Key of the connector which originated the OpenMedia contact.
connectorName	String	Name of the connector which originated the OpenMedia contact.
arrivalTime	String	Time the OpenMedia contact was received.
deferTime	String	Time the OpenMedia contact was deferred.
from	String	Originator of the initial message.
to	String	Destination of the initial message.

4.8.3.2. OpenMediaContent Object

OpenMediaContent Object		
Attribute name	**Attribute type**	**Description**
id	String	ID of the content
sourceName	String	Name of the content originator
time	String	Time the content was created.
content	String	Content of posted message.
commiter	String	Identification of the committer of the message. See definition of possible values at OpenMediaCommiter.
title	String	Title of the content.
destinationName	String	Destination of the initial message.
attachments	Attachments Object	List of attachments

4.8.3.3. Attachments Object

Attachments Object		
Attribute name	**Attribute type**	**Description**
List of:		
type	String	Type of the attachment.
content	String	Content of the attachment.
url	String	Attachment location.

4.8.3.4. Stream Object

Stream Object		
Attribute name	**Attribute type**	**Description**
List of:		
id	String	Message id.
sourceName	String	Name of the message originator.
time	String	Time the message was created.
content	String	Content of the message.
commiter	String	Identification of the committer of the message. See definition of possible values at OpenMediaCommiter.

4.9. Real-Time Statistics

4.9.1. Real-Time Statistics Commands

All requests require that the application is logged on Admin and an Authorization header with the session token.

In general the response to the Real-Time Statistics Commands has the following format:

RealTime Commands Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.

4.9.1.1. StartQuery

Description: request to start a query on RealTime Statistics. A maximum number of five (5) queries of each type can run at the same time per REST SDK application. There are 13 types of queries, therefore one REST SDK application may have up to 65 RealTime queries running at the same time. If the query is successfully started on RealTime Server, the queryId is returned on response with a value greater than zero.

The types of query are: User Real-Time, Queue Real-Time, Group Real-Time, Aggregate Real-Time, Contact Real-Time, Callback Real-Time, User Cumulative, Queue Cumulative, Group Cumulative, Aggregate Cumulative, User Wrapup Reason Cumulative, Queue Wrapup Reason Cumulative, Aggregate Wrapup Reason Cumulative.

If the user which was used to perform the Admin Logon on REST SDK application is not a Master user (Admin logon), this user must have permission to monitor the requested entities (resources) which are provided on "keyList" attribute. This can be configured on Manager (Edit user -> Monitor tab).

The "fromTime" attribute is mandatory when starting cumulative queries, and it must be on ISO 8601 format. It has no effect on realtime queries. The format allowed for "fromTime" attribute is yyyy-mm-ddThh:mm:ssZ (UTC) or yyyy-mm-ddThh:mm:ss±hh:mm (with offset).

The "keyList" list attribute is mandatory. If the same key appears multiple times on the "keyList", it will be considered only once. For example: "keyList": [3, 4, 5, 3, 3, 4, 5, 7] will be considered simply as "keyList": [3, 4, 5, 7].

Since the "keyList" attribute is a list of Integers, the use of wildcard (*) is not possible. For example, it's not allowed to use: "keyList": [*] or even "keyList": "*".

URL: POST /restsdk/webapi/realtime/startquery

StartQuery Request Object		
Attribute name	**Attribute type**	**Description**
queryType	String	Identification of the committer of the message. See definition of possible values at RealTimeQueryType.
keyList	List of Integers	List of the keys of the elements of the corresponding queried type.
fromTime	String	Start time for the cumulative statistics data.

Message Examples:

```
//StartQuery Object
{
  "queryType" : "USER_REALTIME",
  "keyList" : [2,3,5]
}

//StartQuery Object (cumulative query)
{
  "queryType" : "USER_CUMULATIVE",
  "keyList" : [5],
  "fromTime" : "2019-09-02T11:00:00Z",
}
```

StartQuery Response Object		
Attribute name	**Attribute type**	**Description**
errorCode	String	Determines if the request was successfully handled by the server.
errorDetails	String	In case of error, it provides a more detailed description of the cause of the error.
queryId	Integer	Identifies the query. This parameter will be present in the real-time statistics events.

Response Example:

```
//StartQuery Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR",
  "queryId" : 26
}
```

4.9.1.2. StopQuery

Description: request to stop a query on RealTime Server. The application can only stop queries started by itself, i.e. It cannot stop queries started by other SDK applications or OSCC clients. If the application unregisters or its session token expires, all queries started by this application will be automatically stopped.
URL: POST /restsdk/webapi/realtime/stopquery

StopQuery Request Object		
Attribute name	**Attribute type**	**Description**
queryId	Integer	Identification of the query to be stopped.

Message Examples:

```
//StopQuery Object
{
  "queryId" : 26
}
```

Response Examples:

```
//StopQuery Response Object
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "NO_ERROR",
}
```

```
//StopQuery Response Object (stop failed)
{
  "errorCode" : "NO_ERROR",
  "errorDetails" : "StopRealTimeQuery - Application is not a valid listener for
queryId [26]",
}
```

4.9.2. Real Time Statistics Events

When starting a RealTime Server query, the SDK Application receives a response with the queryId associated to the started query. Then, it periodically receives events with the query results.

Events are posted on the Webhook provided on application register request. Unless the application stops the query or unregisters (either by request or by timeout), the REST SDK service will keep posting the events associated to that query on the provided Webhook. The events will bring the associated queryId and a list of monitored elements. Each monitored resource will have its own element on the list if the logged REST SDK user (which started the query) has permission to monitor it. Otherwise, the results for the said resource will not be included on the "elements" list.

The "timeInterval" attribute on cumulative queries will always be on UTC time, even if "fromTime" on the associated StartQuery request was on local time (with offset). A quarter of an hour is considered one interval, or a "timeInterval".

The first event of a cumulative query (soon after starting the query) will report statistics for the current/latest and past intervals, i.e. all statistics gathered since the provided time ("fromTime") for the cumulative period. Then, the following events correspond only to the current interval, if data is available. If not, data for the previous interval is considered. The only exceptions for this are Wrap-up reason cumulative events, which bring data only for the current interval (once the first event with current/latest and past intervals is sent).

All statistics times are measured in seconds.

In general, Real Time Statistics Events have the following structure:

Event Object

Attribute name	Attribute type	Description
type	String	Type of message. See definition of possible values at MessageType
data	Object	Content of the message. See definition of this object for each event type.

4.9.2.1. UserRealTimeEvent

Description: event triggered when UserRealTime information is available. The monitored resource is the userKey

UserRealTimeEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

UserRealTimeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported..

Elements Object		
Attribute name	Attribute type	Description
userKey	Integer	Key of the user.
extension	String	Telephone extension that the user is logged on to.
presenceState	String	Presence state of the user. See definition of possible values at PresenceStates enum.
timeInPresenceState	Integer	Amount of time that the user has been in the current presence state.
routingState	String	Routing state of the user. See definition of possible values at RoutingStates enum.
timeInRoutingState	Integer	Amount of time that the user has been in the current routing state.
routingStateReasonKey	Integer	Key of the Unavailable reason or Work reason that the user selected.
minUnusedCapacity	Integer	The maximum number of contacts (including direct contacts) that the user can accept before reaching their configured capacity.
maxUnusedCapacity	Integer	The minimum number of contacts (including direct contacts) that the user can accept before reaching their configured capacity.
contacts	List of Contacts Object	List of the contacts the user is handling.

Contacts Object		
Attribute name	Attribute type	Description
uniqueCallId	String	Call ID of the contact.
description	String	Description of the contact.
associatedQueueKey	Integer	Key of the queue this contact is associated to.
requeueCount	Integer	Indicates how many times this contact has been requeued.
contactType	String	Type of the contact. See definition of possible values at ContactType enum.

handlingState	String	State of the user while handling a contact. See definition of possible values at HandlingStates enum.
handlingStateReason	Integer	Key of the reason for which the user is in this handling state.
primaryContact	Boolean	Indicates if this is the primary contact.
userHandlingTime	Integer	Indicates how long the user is handling this contact.
activeContactTime	Integer	Indicates how long the contact is active for this user.
timeInHandlingState	Integer	Indicates how long the user is in this handling state.

Message Example:

```
// UserRealTimeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "USER_REALTIME_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "userKey" : 3,
                "extension" : "554181021112",
                "presenceState" : "ACTIVE",
                "timeInPresenceState" : 7,
                "routingState" : "AVAILABLE",
                "timeInRoutingState" : 12,
                "routingStateReasonKey" : 0,
                "minUnusedCapacity" : 0,
                "maxUnusedCapacity" : 0,
                "contacts" : [ {
                    "uniqueCallId" : "6141567464070452",
                    "description" : "General Call",
                    "associatedQueueKey" : 1,
                    "requeueCount" : 0,
                    "contactType" : "ROUTED_VOICE",
                    "handlingState" : "CONNECTED",
                    "handlingStateReason" : 0,
                    "primaryContact" : true,
                    "userHandlingTime" : 5,
                    "activeContactTime" : 5,
                    "timeInHandlingState" : 5
                } ]
            } ]
        }
    }
}
```

4.9.2.2. QueueRealTimeEvent

Description: event triggered when QueueRealTime information is available. The monitored resource is the queueKey

QueueRealTimeEvent Object

Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

QueueRealTimeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported..

Elements Object		
Attribute name	Attribute type	Description
abandonedRate	Float	Weighted percentage of the last 24 contacts routed to the queue that were abandoned.
avgAbandonedWaitTime	Float	Average amount of time that contacts waited in the queue before being abandoned, based on the last 10 contacts that were abandoned.
avgAnsweredWaitTime	Float	Average amount of time that contacts waited in the queue before being answered, based on the last 10 contacts that were abandoned.
queuedContacts	Integer	Number of contacts that are waiting in the queue.
overflowedContacts	Integer	Number of contacts waiting in the queue that have overflowed.
oldestContactWaitingTime	Integer	Amount of time that the oldest contact has been waiting in the queue.
estimatedAnsweredWaitTime	Integer	Estimated amount of time that contacts will spend in the queue before being routed to a user.
estimatedServiceLevel	Float	Estimated service level of the queue.
serviceLevel	Float	Current service level, calculated based on the last 24 contacts routed to the queue.
queueKey	Integer	Key of the queue for which this event has been generated.

Message Example:

```
// QueueRealTimeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "QUEUE_REALTIME_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "abandonedRate" : 10.8,
                "avgAbandonedWaitTime" : 8.0,
                "avgAnsweredWaitTime" : 20.0,
                "queuedContacts" : 1,
                "overflowedContacts" : 0,
                "oldestContactWaitTime" : 4,
                "estimatedAnsweredWaitTime" : 20,
                "estimatedServiceLevel" : 71.2,
                "serviceLevel" : 56.8,
```

```
            "queueKey" : 1
        } ]
    }
}
}
```

4.9.2.3. GroupRealTimeEvent

Description: event triggered when GroupRealTime information is available. The monitored resource is the groupKey

GroupRealTimeEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

GroupRealTimeEvent Data Object		
Attribute name	**Attribute type**	**Description**
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported..

Elements Object		
Attribute name	**Attribute type**	**Description**
idleUsers	Integer	Number of users in the group who are in Idle presence state.
groupKey	Integer	Key of the group.
loggedOnUsers	Integer	Number of users in the group who are logged on.
totalCallsWaiting	Integer	Number of contacts waiting in queue for a group.
awayUsers	Integer	Number of users in the group who are in Away presence state.
userHandlingRoutedCalls	Integer	Number of users in the group who are handling routed contacts.
userHandlingDirectCalls	Integer	Number of users in the group who are handling direct contacts.
busyUsers	Integer	Number of users in the group who are in Busy presence state.

Message Example:

```
// GroupRealTimeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "GROUP_REALTIME_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "idleUsers" : 0,
                "groupKey" : 1,
                "loggedOnUsers" : 2,
                "totalCallsWaiting" : 0,
                "awayUsers" : 0,
                "usersHandlingRoutedCalls" : 1,
```

```
                   "usersHandlingDirectCalls" : 1,
                   "busyUsers" : 0
              } ]
         }
    }
}
```

4.9.2.4. AggregateRealTimeEvent

Description: event triggered when AggregateRealTime information is available. The monitored resource is the aggregateKey

AggregateRealTimeEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

AggregateRealTimeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported..

Elements Object		
Attribute name	Attribute type	Description
abandonedRate	Float	Weighted percentage of the last 24 contacts routed to the aggregate that were abandoned.
avgAbandonedWaitTime	Float	Average amount of time that contacts waited in the aggregate before being abandoned, based on the last 10 contacts that were abandoned.
avgAnsweredWaitTime	Float	Average amount of time that contacts waited in the aggregate before being answered, based on the last 10 contacts that were abandoned.
queuedContacts	Integer	Number of contacts that are waiting in the aggregate.
overflowedContacts	Integer	Number of contacts waiting in the queue that have overflowed.
oldestContactWaitingTime	Integer	Amount of time that the oldest contact has been waiting in the aggregate.
estimatedAnsweredWaitTime	Integer	Estimated amount of time that contacts will spend in the aggregate before being routed to a user.
estimatedServiceLevel	Float	Estimated service level of the queue.
serviceLevel	Float	Current service level, calculated based on the last 24 contacts routed to the queue.
aggregateKey	Integer	Weighted percentage of the last 24 contacts routed to the queue that were abandoned.

Message Example:

```
// AggregateRealTimeEvent Object
{
```

```
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "AGGREGATE_REALTIME_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "abandonedRate" : 10.8,
                "avgAbandonedWaitTime" : 8.0,
                "avgAnsweredWaitTime" : 20.0,
                "queuedContacts" : 1,
                "overflowedContacts" : 0,
                "oldestContactWaitTime" : 4,
                "estimatedAnsweredWaitTime" : 20,
                "estimatedServiceLevel" : 71.2,
                "serviceLevel" : 56.8,
                "aggregateKey" : 1
            } ]
        }
    }
}
```

4.9.2.5. ContactRealTimeEvent

Description: event triggered when ContactRealTime information is available, i.e. Contact is queued or being handled by an agent. The monitored resource is the queueKey

ContactRealTimeEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

ContactRealTimeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	Attribute type	Description
destination	String	Destination to which the contact was sent.
uniqueCallId	String	Call Id of the contact.
source	String	Source where the contact was generated.
contactState	String	Current state of the contact. See definition of possible values at ContactState enum.
description	String	Description of the contact.
qualifyingAgentsCount	Integer	Number of agents eligible to receive a given call.
queueKey	Integer	Database table unique key of the queue entity associated with this contact.
timeInState	Integer	Amount of time that the contact has been in its current state.
totalWaitTime	Integer	Amount of time that the contact has been waiting in the system.

mediaType	String	Media type of the contact.
currentPriority	Integer	Current priority of the contact.

Message Example:

```
// ContactRealTimeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "CONTACT_REALTIME_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "destination" : "554181022110",
                "uniqueCallId" : "6051567528596712",
                "source" : "554181021119",
                "contactState" : "QUEUED",
                "description" : "General Call",
                "qualifyingAgentsCount" : 2,
                "queueKey" : 1,
                "timeInState" : 1,
                "totalWaitTime" : 1,
                "mediaType" : "VOICE",
                "currentPriority" : 20
            } ]
        }
    }
}
```

4.9.2.6. CallbackRealTimeEvent

Description: event triggered when CallbackRealTime information is available, i.e. Callback is scheduled or being handled by an agent. The monitored resource is the queueKey

CallbackRealTimeEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

CallbackRealTimeEvent Data Object		
Attribute name	**Attribute type**	**Description**
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object

Attribute name	Attribute type	Description
queueKey	Integer	Database table unique key of the queue.
uniqueCallId	String	Call Id of the callback in the system.
customerName	String	Name of the customer who is to be called back.
description	String	Description associated with the callback.
origin	String	Origin of the callback. See definition of possible values at CallbackOrigin enum.
state	Integer	Current state of the callback. See definition of possible values at ContactState enum.
timeInState	Integer	Amount of time that the callback has been in this state.
attemptCount	Integer	Number of callback attempts made.

Message Example:

```
// CallbackRealTimeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "CALLBACK_REALTIME_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "queueKey" : 1,
                "uniqueCallId" : "C8771567527295009",
                "customerName" : "cb",
                "description" : "desc",
                "origin" : "ORIGIN_DESKTOP",
                "state" : "SCHEDULED",
                "timeInState" : 15,
                "attemptCount" : 1
            } ]
        }
    }
}
```

4.9.2.7. UserCumulativeEvent

Description: event triggered when UserCumulative information is available, usually while the monitored user is logged on a media. The monitored resource is the userKey.

UserCumulativeEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

UserCumulativeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	**Attribute type**	**Description**
timeInterval	String	Time range that specifies the start of the 15-minute period to which it refers.
userKey	Integer	Database table unique key of the user.
utilization	Float	Percentage of the user's logged-on time that was spent handling contacts.
offered	Integer	Number of offered and direct contacts that were offered to the user.
requeued	Integer	Number of routed contacts that the user requeued.
abandonedWhileRinging	Integer	Number of routed contacts which were abandoned while being offered to the user.
handled	Integer	Number of routed and direct contacts which were handled by the user.
unhandledRouted	Integer	Number of routed contacts that the user transferred directly without requeuing.
undeliveredRouted	Integer	Number of routed contacts that were assigned to the user but were not delivered to the user's extension.
disconnectedRoutedCalls	Integer	Number of routed contacts that were handled by the user and completed without being transferred or requeued.
routedTransferred	Integer	Number of routed contacts that the user transferred directly without requeuing.
routedHeld	Integer	Number of routed calls and callbacks that the user placed on hold.
routedConsulted	Integer	Number of routed contacts that were consulted out by the user. If the user consulted out more than once during a single contact, the contact is counted only once.
totalIdleTime	Integer	Amount of time the user spent in Idle presence state.
totalAwayTime	Integer	Amount of time the user spent in Away presence state.
totalBusyTime	Integer	Amount of time the user spent in Busy presence state.
totalLogonTime	Integer	Amount of time the user spent logged on.
totalRoutedTalkTime	Integer	Amount of time the user spent in Talking handling state.
totalOtherTime	Integer	Amount of time the user spent in Other handling state.
totalRoutedHoldTime	Integer	Amount of time the user spent in Hold handling state.
totalPendingTime	Integer	Amount of time the user spent in Pending handling state.
totalPostProcessingTime	Integer	Amount of time the user spent in Post-processing handling state.
ringingTime	Integer	Total amount of time that the user's extension was ringing for routed or direct contacts (incoming) or listening to the ringing of a dialed extension (outgoing).
handlingTime	Integer	Amount of time that the user spent handling routed and direct contacts.
maximumRoutedHandlingTime	Integer	Maximum amount of time spent handling a routed contact.

Message Example:

```
// UserCumulativeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "USER_CUMULATIVE_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
```

```
                "timeInterval" : "2019-09-03T17:15:00Z",
                "userKey" : 3,
                "utilization" : 99.3,
                "offered" : 1,
                "requeue" : 0,
                "abandonedWhileRinging" : 0,
                "handled" : 1,
                "unhandledRouted" : 0,
                "undeliveredRouted" : 0,
                "disconnectedRoutedCalls" : 1,
                "routedTransferred" : 0,
                "routedHeld" : 0,
                "routedConsulted" : 0,
                "totalIdleTime" : 407,
                "totalAwayTime" : 0,
                "totalBusyTime" : 0,
                "totalLogonTime" : 444,
                "totalRoutedTalkTime" : 34,
                "totalOtherTime" : 2,
                "totalRoutedHoldTime" : 0,
                "totalPendingTime" : 2,
                "totalPostProcessingTime" : 0,
                "ringingTime" : 2,
                "handlingTime" : 34,
                "maximumRoutedHandlingTime" : 34
            } ]
        }
    }
}
```

4.9.2.8. QueueCumulativeEvent

Description: event triggered when QueueCumulative information is available, usually when contacts were enqueued on the monitored queue. The monitored resource is the queueKey.

QueueCumulativeEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

QueueCumulativeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	Attribute type	Description
timeInterval	String	Time range that specifies the start of the 15-minute period to which it refers.

receivedContacts	Integer	Number of contacts that were received in the queue.
answeredContacts	Float	Number of contacts routed to the queue that were answered.
abandonedContacts	Integer	Number of contacts that were abandoned while waiting in the queue or while being offered to the user.
redirectedOutOfScope	Integer	Number of contacts received in the queue that were redirected.
serviceLevel	Integer	Percentage of contacts routed to the queue that were answered within the site-defined or queue-defined service level.
abandonedRate	Integer	Percentage of contacts routed to the queue that were abandoned before being answered.
averageWaitTime	Integer	Average amount of time that contacts waited in the queue before being answered, abandoned or redirected.
maximumWaitTime	Integer	Maximum amount of time that a contact waited in the queue before being answered, abandoned or redirected.
queueKey	Integer	Database table unique key of the queue.

Message Example:

```
// QueueCumulativeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "QUEUE_CUMULATIVE_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "timeInterval" : "2019-09-03T17:45:00Z",
                "receivedContacts" : 1,
                "answeredContacts" : 0,
                "abandonedContacts" : 1,
                "redirectedOutOfScope" : 0,
                "serviceLevel" : 100.0,
                "abandonedRate" : 100.0,
                "averageWaitTime" : 28.0,
                "maximumWaitTime" : 28,
                "queueKey" : 1
            } ]
        }
    }
}
```

4.9.2.9. GroupCumulativeEvent

Description: event triggered when GroupCumulative information is available, usually while users are logged on a media on the monitored group. The monitored resource is the groupKey.

GroupCumulativeEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.

type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

GroupCumulativeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	Attribute type	Description
timeInterval	String	Time range that specifies the start of the 15-minute period to which it refers.
groupKey	Integer	Database table unique key of the group
callsReceived	Integer	Number of contacts that were received by the group.
callsOffered	Integer	Number of contacts that were offered to the group.
consultOut	Integer	Number of contacts associated with the group that were consulted out by the first answering user.
transferOut	Integer	Number of contacts associated with the group that were transferred by the first answering user.
receivedHereOfferedElsewhere	Integer	Number of routed contacts that were received in the group, which is the primary group configured to handle these contacts but were offered to another group.

Message Example:

```
// GroupCumulativeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "GROUP_CUMULATIVE_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "timeInterval" : "2019-09-03T18:15:00Z",
                "groupKey" : 1,
                "callsReceived" : 3,
                "callsOffered" : 1,
                "consultOut" : 0,
                "transferOut" : 0,
                "receivedHereOfferedElsewhere" : 0
            } ]
        }
    }
}
```

4.9.2.10. AggregateCumulativeEvent

Description: event triggered when AggregateCumulative information is available, usually when contacts were enqueued on a queue of the monitored aggregate. The monitored resource is the aggregateKey.

AggregateCumulativeEvent Object

Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

AggregateCumulativeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	Attribute type	Description
timeInterval	String	Time range that specifies the start of the 15-minute period to which it refers.
receivedContacts	Integer	Number of contacts that were received in the aggregate.
answeredContacts	Float	Number of contacts routed to the aggregate that were answered.
abandonedContacts	Integer	Number of contacts that were abandoned while waiting in the aggregate or while being offered to the user.
redirectedOutOfScope	Integer	Number of contacts received in the aggregate that were redirected.
serviceLevel	Integer	Percentage of contacts routed to the aggregate that were answered within the site-defined or queue-defined service level.
abandonedRate	Integer	Percentage of contacts routed to the aggregate that were abandoned before being answered.
averageWaitTime	Integer	Average amount of time that contacts waited in the aggregate before being answered, abandoned or redirected.
maximumWaitTime	Integer	Maximum amount of time that a contact waited in the aggregate before being answered, abandoned or redirected.
aggregateKey	Integer	Database table unique key of the aggregate.

Message Example:

```
// AggregateCumulativeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "AGGREGATE_CUMULATIVE_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "timeInterval" : "2019-09-03T17:45:00Z",
                "receivedContacts" : 3,
                "answeredContacts" : 1,
                "abandonedContacts" : 2,
                "redirectedOutOfScope" : 0,
                "serviceLevel" : 100.0,
                "abandonedRate" : 66.7,
                "averageWaitTime" : 9.0,
                "maximumWaitTime" : 17,
                "aggregateKey" : 1
```

```
            } ]
        }
    }
}
```

4.9.2.11. UserWrapUpReasonCumulativeEvent

Description: event triggered when UserWrapUpReasonCumulative information is available, usually when the monitored user saves one or more Wrap-up reasons. The monitored resource is the userKey.

UserWrapUpReasonCumulativeEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

UserWrapUpReasonCumulativeEvent Data Object		
Attribute name	**Attribute type**	**Description**
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	**Attribute type**	**Description**
timeInterval	String	Time range that specifies the start of the 15-minute period to which it refers.
wrapUpReasonKey	Integer	Database table unique key of the wrapup reason.
count	Integer	Number of objects UserWrapUpReasonCumulativeElement.
userKey	Integer	Database table unique key of a queue.

Message Example:

```
// UserWrapUpReasonCumulativeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "USER_WRAPUPREASON_CUMULATIVE_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "timeInterval" : "2019-09-03T17:45:00Z",
                "wrapUpReasonKey" : 1,
                "count" : 4,
                "userKey" : 4,
            },{
                "timeInterval" : "2019-09-03T17:45:00Z",
                "wrapUpReasonKey" : 2,
                "count" : 2,
                "userKey" : 4,
            } ]
```

```
        }
    }
}
```

4.9.2.12. QueueWrapUpReasonCumulativeEvent

Description: event triggered when QueueWrapUpReasonCumulative information is available, usually when Wrap-up reason is saved on a contact which was enqueued on the monitored queued. The monitored resource is the queueKey.

QueueWrapUpReasonCumulativeEvent Object		
Attribute name	Attribute type	Description
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

QueueWrapUpReasonCumulativeEvent Data Object		
Attribute name	Attribute type	Description
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	Attribute type	Description
timeInterval	String	Time range that specifies the start of the 15-minute period to which it refers.
wrapUpReasonKey	Integer	Database table unique key of the wrapup reason.
count	Integer	Number of objects QueueWrapUpReasonCumulativeElement.
queueKey	Integer	Database table unique key of a queue.

Message Example:

```
// QueueWrapUpReasonCumulativeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "QUEUE_WRAPUPREASON_CUMULATIVE_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "timeInterval" : "2019-09-03T17:45:00Z",
                "wrapUpReasonKey" : 1,
                "count" : 4,
                "queueKey" : 4,
            },{
                "timeInterval" : "2019-09-03T17:45:00Z",
                "wrapUpReasonKey" : 2,
```

```
                "count" : 2,
                "queueKey" : 4,
            } ]
        }
    }
}
```

4.9.2.13. AggregateWrapUpReasonCumulativeEvent

Description: event triggered when AggregateWrapUpReasonCumulative information is available, usually when Wrap-up reason is saved on a contact which was enqueued on a queue of the monitored aggregate. The monitored resource is the aggregateKey.

AggregateWrapUpReasonCumulativeEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType.
data	Object	Content of the event. See following data Object definition.

AggregateWrapUpReasonCumulativeEvent Data Object		
Attribute name	**Attribute type**	**Description**
queryId	Integer	Identification of the query for which this event is being reported.
elements	List of Elements Object	List of the elements which are being reported.

Elements Object		
Attribute name	**Attribute type**	**Description**
timeInterval	String	Time range that specifies the start of the 15-minute period to which it refers.
wrapUpReasonKey	Integer	Database table unique key of the wrapup reason.
count	Integer	Number of objects AggregateWrapUpReasonCumulativeElement.
aggregateKey	Integer	Database table unique key of a queue.

Message Example:

```
// AggregateWrapUpReasonCumulativeEvent Object
{
    "type" : "EVENT",
    "data" : {
        "realm" : "REALTIME",
        "type" : "AGGREGATE_WRAPUPREASON_CUMULATIVE_EVENT",
        "data" : {
            "queryId" : 28,
            "elements" : [ {
                "timeInterval" : "2019-09-03T17:45:00Z",
                "wrapUpReasonKey" : 1,
                "count" : 4,
                "aggregateKey" : 4,
            },{
```

```
            "timeInterval" : "2019-09-03T17:45:00Z",
            "wrapUpReasonKey" : 2,
            "count" : 2,
            "aggregateKey" : 4,
        } ]
      }
    }
}
```

4.9.2.14. OnServerConnected

Description: event triggered when connection to RealTime server is established. The application will receive this event only if it has at least one RealTime Server query (realtime or cumulative) running.

OnServerConnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerConnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
serverName	String	Name of the server which has been connected.

Message Example:

```
//OnServerConnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "REALTIME",
    "type" : "SERVER_CONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6007:10.81.3.116"
    }
  }
}
```

4.9.2.15. OnServerDisconnected

Description: event triggered when connection to RealTime server is lost. The application will receive this event only if it has at least one RealTime Server query (realtime or cumulative) running.

OnServerDisconnectedEvent Object		
Attribute name	**Attribute type**	**Description**
realm	String	Domain of the contact center for which the event is being reported. See definition of possible values at Realm.
type	String	Identification of the event. See definition of possible values at EventType
data	Object	Content of the event. See following data Object definition.

OnServerDisconnectedEvent Data Object		
Attribute name	**Attribute type**	**Description**
serverName	String	Name of the server which has been disconnected.

Message Example:

```
//OnServerDisconnectedEvent Object
{
  "type" : "EVENT",
  "data" :
  {
    "realm" : "REALTIME",
    "type" : "SERVER_DISCONNECTED_EVENT",
    "data" :
    {
      "serverName" : "6007:10.81.3.116"
    }
  }
}
```

5. Definitions

CallbackOrigin
{
ORIGIN_NONE,
ORIGIN_IVR,
ORIGIN_DESKTOP,
ORIGIN_WEBCOLLABORATION,
ORIGIN_ABANDONED,
ORIGIN_OUTBOUND,
ORIGIN_SDK,
ORIGIN_FLOW,
ORIGIN_ALL,
ORIGIN_VIRTUALAGENT
}

CallbackResultType
{
SUCCESS,
RETRY,
DELETED,
MAXRESULTTYPE
}

CallbackScheduleStatus
{
UNDEFINED,
EXPIRED,
ACTIVE,
FUTURE
}

CallbackStatus
{
CALLBACKSTATUS_NEW,
CALLBACKSTATUS_RETRY,
CALLBACKSTATUS_SUSPENDED,
CALLBACKSTATUS_SCHEDULED,
CALLBACKSTATUS_ENQUEUED,
CALLBACKSTATUS_OFFERED,
CALLBACKSTATUS_ACCEPTED,
CALLBACKSTATUS_FAILED,
CALLBACKSTATUS_CALLING,
CALLBACKSTATUS_CONNECTED,
CALLBACKSTATUS_DISCONNECTED,
CALLBACKSTATUS_COMPLETED,
CALLBACKSTATUS_EXPIRED,

CALLBACKSTATUS_MAXRETRY,
CALLBACKSTATUS_TIMEOUT,
CALLBACKSTATUS_DELETED,
CALLBACKSTATUS_RECOVERING,
CALLBACKSTATUS_UNKNOWN,
CALLBACKSTATUS_INVALID
}

CallState
{
START,
CALLING,
QUEUED,
CONNECTED,
CONSULTING,
CONFERENCING,
HOLDING,
FINISHED,
NOCALLSTATE
}

CallType
{
EXT2ACD,
INT2ACD,
EXT2INT,
INT2INT,
INT2EXT,
CONFERENCE,
NOVALUE,
UNKNOWN
}

ContactState
{
INVALIDSTATE,
PROCESSING,
QUEUED,
PENDING,
RESERVED,
HANDLED,
DEFERRED,
EXTERNALEMAILCONSULT,
MEDIASUSPENDED,
UNANSWERED,
SCHEDULED,
IVRSUSPENDED,
NETWORKSUSPENDED,
POSTPROCESSING
}

ContactType
```
{
NONE,
ROUTED_VOICE,
DIRECT_INCOMING_VOICE,
DIRECT_OUTGOING_VOICE,
DIRECT_INTERNAL_VOICE,
ROUTED_CALLBACK,
ROUTED_EMAIL,
DIRECT_OUTGOING_EMAIL,
ROUTED_WEBCHAT,
UNKNOWN_VOICE,
ROUTED_OPENMEDIA,
DIRECT_OUTGOING_OPENMEDIA,
CONTACT_TYPE_MAX
}
```

DeliveredReasons
```
{
UNDEFINED,
INITIAL_ARRIVAL,
NORMAL,
REQUEUED,
CONFERENCED
}
```

DequeueReasons
```
{
NONE,
REQUESTFROMWEBSERVER,
REQUESTFROMEMAILSERVER,
WEBCOLLABORATIONCONNECTFAILED,
SYSTEMERROR,
CALLANSWERED,
CALLABANDONED,
CALLTIMEDOUT,
WORKFLOWTRANSFER
}
```

DisconnectReasons
```
{
UNDEFINED(0),
AGENT_REPLIED(1),
AUTO_RESPONDED(2),
DISCARDED(3),
```

```
TIMED_OUT(4),
CRITICAL_SERVER_DOWN(5),
TRANSFERRED_OUT(6),
NORMAL(101),
FAILED_TO_START_WORKFLOW(102),
ABANDONED_IN_WORKFLOW(103),
ABANDONED_IN_QUEUE(104),
TIMED_OUT_IN_QUEUE(105),
ABANDONED_WHILE_PENDING(106),
BROWSER_TIMED_OUT(108),
AGENT_DELETED(110),
WORKFLOW_DISCONNECT(111),
SHUTTING_DOWN(112),
SESSION_EXPIRED(114)
}
```

DivertReasons
```
{
UNDEFINED(0),
DEFER_TAKE_BACK(1),
NO_ANSWER(2),
ROUTING_TIMED_OUT(3),
EXTERNAL_CONSULT_REPLY(4),
EXTERNAL_CONSULT_TAKE_BACK(5),
SYSTEM_ROUTED(101),
INVITATION_REJECTED(102),
INVITATION_TIMED_OUT(103),
ABANDONED_WHILE_PENDING(105),
DISCONNECTED_WHILE_PENDING(106)
}
```

ErrorCode
```
{
NO_ERROR(0),
GENERAL_ERROR(1),
ALREADY_REGISTERED_ON(2),
CLIENT_NAME_NOT_FOUND(3),
AUTH_STATEMENT_NOT_VALID(4),
NOT_READY(5),
NOT_ENABLED(6),
CLIENT_TOKEN_NOT_FOUND(7),
APPLICATION_NOT_REGISTERED(8),
WRONG_API_REQUEST(9),
PARAMETER_LENGTH_TOO_LONG(10),
WRONG_DATE_FORMAT(11),
INVALID_BUSINESS_UNIT_NAME(12),
EMPTY_PARAMETER(13),
INVALID_CHARACTERS(14),
NEGATIVE_PARAMETER(15),
```

```
PRESENCE_ACTION_SUCCEED(16),
PRESENCE_ACTION_FAILED(17),
TELEPHONY_INVALID_EXTENSION(18),
TELEPHONY_RESOURCEBUSY(19),
TELEPHONY_RESOURCEERROR(20),
TELEPHONY_OUTOFSERVICE(21),
TELEPHONY_LINEBUSY(22),
TELEPHONY_UNMONITOREDEXTENSION(23),
TELEPHONY_REQUESTTIMEOUT(24),
TELEPHONY_CSTA_CAP_NOT_SUPPORTED(25),
TELEPHONY_CAP_DISCONNECT_NOT_SUPPORTED(26),
TELEPHONY_CAP_DEFLECT_NOT_SUPPORTED(27),
TELEPHONY_INCOMPATIBLE_OBJECT(28),
TELEPHONY_VALIDATIONCALLBACKFAILED(29),
TELEPHONY_GENERIC_FRAMEWORK_ERROR(30),
TELEPHONY_FW_ERROR_INVALID_SERVER_NAME(31),
TELEPHONY_STATEERROR(32),
TELEPHONY_EXCEEDLIMIT(33),
TELEPHONY_TOOMANYAGENTS(34),
TELEPHONY_VALIDATIONFAILED(35),
TELEPHONY_NETWORKBUSY(36),
TELEPHONY_SERVERNOTREADY(37),
ADMIN_QUERYUSER_FAILED(50),
ADMIN_INVALID_BUSSINESUNIT_TO_LOGON(51),
ADMIN_INVALID_CREDENTIALS_TO_LOGON(52),
NO_LICENSE_AVAILABLE(60)
CALLBACK_ERROR(80),
CALLBACK_INVALIDEXT(81),
CALLBACK_ACCEPT_FAILED(82),
CALLBACK_COMPLETE_FAILED(83),
CALLBACK_DELETE_FAILED(84),
WEB_INTERACTION_ERROR(100),
OPENMEDIA_ERROR(120),
REALTIME_ERROR(140)
}
```

EventAction
```
{
UNKNOWN,
ADD,
UPDATE
}
```

EventCause
```
{
NULL(0),
ACTIVE_MONITOR(1),
ALTERNATE(2),
```

BUSY(3),
CALLBACK(4),
CALL_CANCELLED(5),
CALL_FORWARD_ALWAYS(6),
CALL_FORWARD_BUSY(7),
CALL_FORWARD_NO_ANSWER(8),
CALL_FORWARD(9),
CALL_NOT_ANSWERED(10),
CALL_PICKUP(11),
CAMP_ON(12),
DEST_NOT_OBTAINABLE(13),
DO_NOT_DISTURB(14),
INCOMPATIBLE_DESTINATION(15),
INVALID_ACCOUNT_CODE(16),
KEY_CONFERENCE(17),
LOCKOUT(18),
MAINTENANCE(19),
NETWORK_CONGESTION(20),
NETWORK_NOT_OBTAINABLE(21),
NEW_CALL(22),
NO_AVAILABLE_AGENTS(23),
OVERRIDE(24),
PARK(25),
OVERFLOW(26),
RECALL(27),
REDIRECTED(28),
REORDER_TONE(29),
RESOURCE_NOT_AVAILABLE(30),
SILENT_MONITOR(31),
TRANSFER(32),
TRUNK_BUSY(33),
VOICE_UNIT_INITIATOR(34),
BLOCKED(35),
CHARACTER_COUNT_REACHED(36),
CONSULTATION(37),
DISTRIBUTED(38),
DTMF_DIGIT_DETECTED(39),
DURATION_EXCEEDED(40),
END_OF_MESSAGE_DETECTED(41),
ENTERING_DISTRIBUTION(42),
FORCED_PAUSE(43),
MAKE_CALL(44),
MESSAGE_SIZE_EXCEEDED(45),
NETWORK_SIGNAL(46),
NEXT_MESSAGE(47),
NORMAL_CLEARING(48),
NO_SPEECH_DETECTED(49),
NUMBER_CHANGED(50),
CSTA_SINGLE_STEP_CONFERENCE(51),
CSTA_SINGLE_STEP_TRANSFER(52),
SPEECH_DETECTED(53),
SWITCHING_FUNCTION_TERMINATED(54),

```
TERMINATION_CHARACTER_RECEIVED(55),
TIMEOUT(56),
ACD_BUSY(57),
ACD_FORWARD(58),
ACD_SATURATED(59),
ALERT_TIME_EXPIRED(60),
AUTO_WORK(61),
CAMP_ON_TRUNKS(62),
CONFERENCE(63),
DEST_DETECTED(64),
DEST_OUT_OF_ORDER(65),
DISTRIBUTION_DELAY(66),
FORCED_TRANSITION(67),
INTRUDE(68),
INVALID_NUMBER_FORMAT(69),
JOIN_CALL(70),
KEY_OPERATION_IN_USE(71),
MAKE_PREDICTIVE_CALL(72),
MESSAGE_DURATION_EXCEEDED(73),
MULTIPLE_ALERTING(74),
MULTIPLE_QUEUING(75),
NETWORK_DIALLING(76),
NETWORK_OUT_OF_ORDER(77),
NORMAL(78),
NOT_AVAILABLE_BEARER_SERVICE(79),
NOT_SUPPORTED_BEARER_SERVICE(80),
NUMBER_UNALLOCATED(81),
QUEUE_CLEARED(82),
REMAINS_IN_QUEUE(83),
RESERVED(84),
SELECTED_TRUNK_BUSY(85),
SUSPEND(86),
UNAUTHORIZED_BEARER_SERVICE(87),
CSTA_SOFT_HOLD(95),
CSTA_HARD_HOLD(96),
CSTA_LINE_HOLD(97),
BACKGROUND_HOLD(98),
EXCLUSIVE_HOLD(99),
RECALL_FORWARDED(100),
RECALL_BUSY(101),
RECALL_NO_ANSWER(102),
RECALL_RESOURCES_NOT_AVAILABLE(103),
BUSY_OVERFLOW(104),
CALENDAR_OVERFLOW(105),
CAPACITY_OVERFLOW(106),
PATH_REPLACEMENT(107),
QUEUE_TIME_OVERFLOW(108),
UNKNOWN_OVERFLOW(109)
}
```

EventType
{
USER_HANDLING_STATE,
USER_ROUTING_STATE,
USER_MEDIA_NOTREADY,
USER_MEDIA_READY,
USER_MEDIA_STATE,
// Telephony
DELIVERED_EVENT,
DISCONNECTED_EVENT,
HOLD_EVENT,
CONSULT_EVENT,
QUEUED_EVENT,
ESTABLISHED_EVENT,
DIVERTED_EVENT,
HELD_EVENT,
RETRIEVED_EVENT,
CONFERENCED_EVENT,
FAILED_EVENT,
SERVER_CONNECTED_EVENT,
SERVER_DISCONNECTED_EVENT,
ORIGINATED_EVENT,
SERVICE_INITIATED_EVENT,
TRANSFERRED_EVENT,
PROCESS_TRANSFERRING_EVENT,
PROCESS_TRANSFERRED_EVENT,
NETWORKREACHED_EVENT,
SERVICES_ENABLED_EVENT,
// Admin
AGGREGATE_UPDATED_EVENT,
DEPARTMENT_UPDATED_EVENT,
GROUP_UPDATED_EVENT,
POSTPROCESSINGREASON_UPDATED_EVENT,
QUEUE_UPDATED_EVENT,
UNAVAILABLEREASON_UPDATED_EVENT,
WORKREASON_UPDATED_EVENT,
WRAPUPREASON_UPDATED_EVENT,
USER_UPDATED_EVENT,
AGGREGATE_DELETED_EVENT,
DEPARTMENT_DELETED_EVENT,
GROUP_DELETED_EVENT,
POSTPROCESSINGREASON_DELETED_EVENT,
QUEUE_DELETED_EVENT,
UNAVAILABLEREASON_DELETED_EVENT,
WORKREASON_DELETED_EVENT,
WRAPUPREASON_DELETED_EVENT,
USER_DELETED_EVENT,
// Routing
ASSIGN_CALL_EVENT,
UNASSIGN_CALL_EVENT,

```
ENQUEUE_CALL_EVENT,
DEQUEUE_CALL_EVENT,
ROUTING_INFORMATION_UPDATED_EVENT,
TIMEOUT_CALL_EVENT
// Callback
DELIVERED_CALLBACK_EVENT,
MAKECALLFAILED_CALLBACK_EVENT,
DIVERTED_CALLBACK_EVENT,
NEW_CALLBACKS_LIST_EVENT,
// Callback/Admin
CALLBACK_RETRYREASON_UPDATED_EVENT,
CALLBACK_RETRYREASON_DELETED_EVENT,
CALLBACK_DELETEREASON_UPDATED_EVENT,
CALLBACK_DELETEREASON_DELETED_EVENT,
// WebInteraction
DIVERTED_WEB_CHAT_EVENT,
DELIVERED_WEB_CHAT_EVENT,
ESTABLISHED_WEB_CHAT_EVENT,
CONFERENCED_WEB_CHAT_EVENT,
DISCONNECTED_WEB_CHAT_EVENT,
CONTENT_WEB_CHAT_EVENT,
CALL_ME_ANSWER_WEB_CHAT_EVENT
// OpenMedia/Admin
OPENMEDIA_DISCARDREASON_UPDATED_EVENT,
OPENMEDIA_DISCARDREASON_DELETED_EVENT,
// OpenMedia
DELIVERED_OPENMEDIA_EVENT,
DISCONNECTED_OPENMEDIA_EVENT,
DIVERTED_OPENMEDIA_EVENT,
ESTABLISHED_OPENMEDIA_EVENT,
DEFERRED_OPENMEDIA_EVENT,
RESUMED_OPENMEDIA_EVENT,
TRANSFERRED_OPENMEDIA_EVENT,
CONTENT_ADDED_OPENMEDIA_EVENT,
STREAM_RESPONSE_OPENMEDIA_EVENT
}
```

HandlingStates
```
{
NONE,
PENDING,
DIALING,
BUSY,
RINGING,
CONNECTED,
QUEUED,
ONHOLD,
CONSULTING,
```

```
PROCESSING,
POSTPROCESSING,
UNKNOWN
}
```

HoldReasons
```
{
UNDEFINED,
AGENT_DEFER,
AUTO_DEFER,
EXTERNAL_CONSULT
}
```

LCSType
```
{
NULL,
INITIATE,
ALERTING,
CONNECTED,
HOLD,
QUEUED,
FAIL
}
```

LineResourceType
```
{
AGENTEXTENSION,
IVREXTENSION,
AGENTACD,
AGENTRCG,
REQUEUE,
BASICACD,
BASICRCG,
TRANSFERACD,
BOUNCEACD,
BOUNCERCG,
NETWORKTRANSITNUMBER,
IVRACD,
IVRRCG,
IVRTRUNKID,
UNKNOWN,
UNMONEXTENSION,
UNMONTRUNK,
UNMONACD,
UNMONRCG,
TRUNKGROUP,
MONITOREDTRUNK,
IVRTRANSITNUMBER,
NORESOURCETYPE,
ROUTINGERRORNUMBER,
```

ROUTINGTRANSFERNUMBER,
SERVICENUMBER,
TRANSITIONHUNTGROUP
}

LineResourceTypes
{
AGENTEXTENSION,
IVREXTENSION,
ACDGROUP,
BASICRCG,
REQUEUE,
BASICACDGROUP,
TRANSFERACDGROUP,
LBACDGROUP,
LBRCGGROUP,
NETWORKTRANSITNUMBER,
IVRACDGROUP,
IVRRCG,
IVRTRUNKID,
AGENTRCG,
TRUNKGROUP,
TELEPHONYSOURCE,
EMAILSOURCE,
CHATSOURCE,
TELDESTINATION,
TELEXTERNALDESTINATION,
EMAILDESTINATION,
CHATDESTINATION,
CALLDIRECTORINTERACTIVEEXTENSION,
CALLDIRECTORANNOUNCEMENTEXTENSION,
IVRWFEXTENSION,
IVRTRANSITNUMBER,
QUEUE,
OPENMEDIASOURCE,
MAXRESOURCETYPES
UNKNOWN,
ROUTINGERRORNUMBER,
ROUTINGTRANSFERNUMBER,
SERVICENUMBER,
TRANSITIONHUNTGROUP
}

LineState
{
IDLE,
DIALING,
BUSY,

RINGING,
CONNECTED,
QUEUED,
ONHOLD,
CONSULTING,
OUTOFSERVICE,
UNKNOWN
}

LineType
{
ANALOG,
DIGITAL,
OTHER,
UNKNOWNTYPE
}

MediaState
{
LOGOFF,
LOGON,
AVAILABLE,
DO_NOT_DISTURB,
UNKNOWN
}

MediaType
{
NONE,
VOICE,
CALLBACK,
EMAIL,
WEB_COLLABORATION,
OPENMEDIA,
MAXMEDIUM
}

MessageType
{
EVENT,
REQUEST
}

OpenMediaCommiter
{
UNKNOWN,
CUSTOMER,

```
AGENT
}
```

OpenMediaDeferReason
```
{
UNDEFINED,
AGENTDEFER,
AUTODEFER,
EXTERNALCONSULT
}
```

OpenMediaDisconnectReason
```
{
UNDEFINED,
AGENTREPLIED,
AUTORESPONDED,
DISCARDED,
TIMEDOUT,
CRITICALSERVERDOWN,
TRANSFERREDOUT,
SENT
}
```

OpenMediaDivertReason
```
{
UNDEFINED,
DEFERTAKEBACK,
RNA,
ROUTINGSERVERTIMEOUT,
EXTERNALCONSULTREPLY,
EXTERNALCONSULTTAKEBACK
}
```

OpenMediaResumeReason
```
{
UNDEFINED,
DEFERRESUMED,
EXTERNALCONSULTRESUMED,
RECOVERY
}
```

OpenMediaTransferReason

{
UNDEFINED,
NORMAL,
MONITOR
}

OpenMediaTransferTarget

{
UNDEFINED,
RESERVEFORAGENT,
QUEUE
}

PartyTypes

{
UNKNOWN,
EXTERNAL,
INTERNAL,
AGENT,
TRUNK,
RCG,
QUEUE,
IVR
}

PresenceStates

{
IDLE,
AWAY,
BUSY,
ACTIVE,
LOGGEDOFF,
UNKNOWN
}

Realm

{
ADMINISTRATION,
PRESENCE,
TELEPHONY,
REALTIME,
STATISTIC,
CALLBACK,
ROUTING,
WEB_INTERACTION,
OPENMEDIA

}

RealTimeQueryType

{
USER_REALTIME,
QUEUE_REALTIME,
GROUP_REALTIME,
AGGREGATE_REALTIME,
CONTACT_REALTIME,
CALLBACK_REALTIME,
USER_CUMULATIVE,
QUEUE_CUMULATIVE,
GROUP_CUMULATIVE,
AGGREGATE_CUMULATIVE,
USER_WRAPUP_REASON_CUMULATIVE,
QUEUE_WRAPUP_REASON_CUMULATIVE,
AGGREGATE_WRAPUP_REASON_CUMULATIVE
}

RoutingStates
{
AVAILABLE,
UNAVAILABLE,
WORK,
LOGGEDOFF,
UNKNOWN
}

SBRCallState
{
ABANDONED,
ANSWERED,
DEQUEUED,
HOLDING,
ICAQUEUED,
NONE,
ORPHANED,
PENDING,
QUEUED,
SUSPENDED,
TIMEDOUT,
QUEUEDETERMINATION,
QUEUEDPAUSEASSIGNMENT,
NETWORKSUSPENDED
}

ServerConnectionState
{

UNKNOWN,
DISCONNECTED,
CONNECTED
}

ServerState
{
UNKNOWN,
UNAVAILABLE,
PARTIALLY_AVAILABLE,
AVAILABLE
}

UnavailableReasonType
{
UNAVAILABLE_TYPE,
WORK_TYPE,
UNKNOWN
}
  UnavailableReasonType
  {
  UNAVAILABLE_TYPE,
  WORK_TYPE,
  UNKNOWN
  }
UserType
{
ASSOCIATE_A,
SUPERVISOR,
ADMINISTRATOR,
MASTER,
SERVICE,
ASSOCIATE_E,
BASIC,
CRM,
MAXUSERTYPE
}

WebCollaborationChatCommiter
{
CUSTOMER,
AGENT,
SYSTEM
}

WebCollaborationDeliveredReason

```
{
NONE,
INITIAL_ARRIVAL,
NORMAL_ASSIGNMENT,
REQUEUE_ASSIGNMENT,
CONFERENCE
}
```

WebCollaborationDisconnectReason
```
{
UNDEFINED,
NORMAL_DISCONNECT,
FAILED_TO_START_WORKFLOW,
ABANDONED_IN_WORKFLOW,
ABANDONED_IN_QUEUE,
TIMEDOUT_IN_QUEUE,
ABANDONED_WHILE_PENDING,
TRANSFERRED_OUT_OF_HPPC,
BROWSER_TIMEOUT,
MANAGER_DELETE_AGENT,
WORKFLOW_DISCONNECT,
SHUTTING_DOWN,
SESSION_EXPIRED,
ADMIN_DOWN,
WATCHDOG_DOWN,
FEATURE_DISABLED
}
```

WebCollaborationDivertReason
```
{
UNDEFINED,
HPPCR,
INVITATION_REJECTED,
INVITATION_TIMEOUT,
UNANSWERED,
ABANDONED_WHILE_PENDING,
DISCONNECT_WHILE_PENDING
}
```

6. High Availability Scenarios

In high availability scenarios, the REST SDK application can be connected to a redundant OSCC. In such scenarios, the Application Server instance(s) must be deployed in a separate machine from the OSCC nodes. A redundant system can also have redundant Application Server instances to provide the REST SDK web service. Finally, the OSCC can also be connected to a redundant Communication Platform (e.g. OSV).

The diagram below displays the recommended architecture:
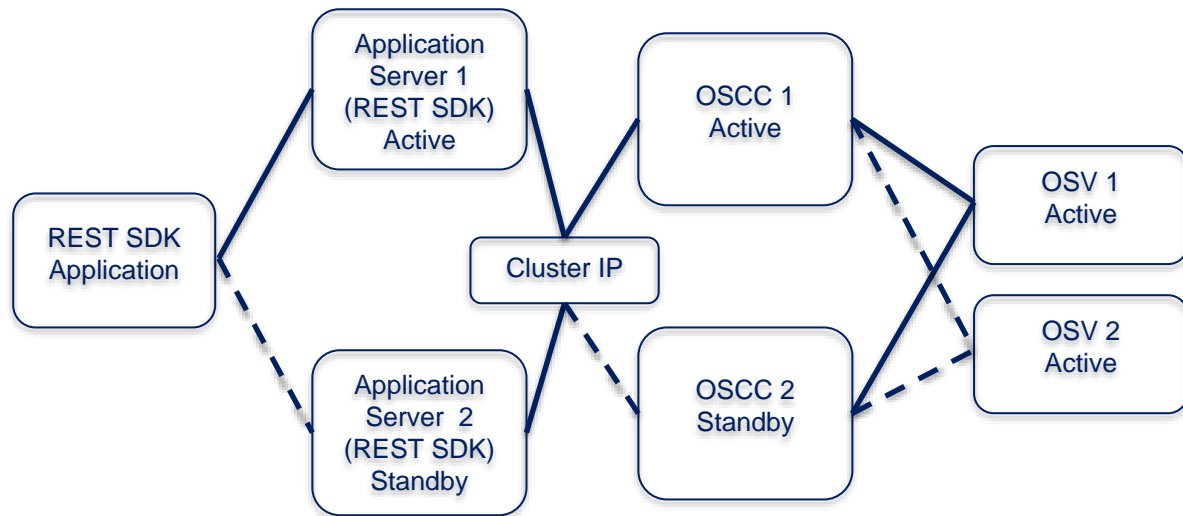
Alternative architecture

The diagram below displays an alternative architecture:
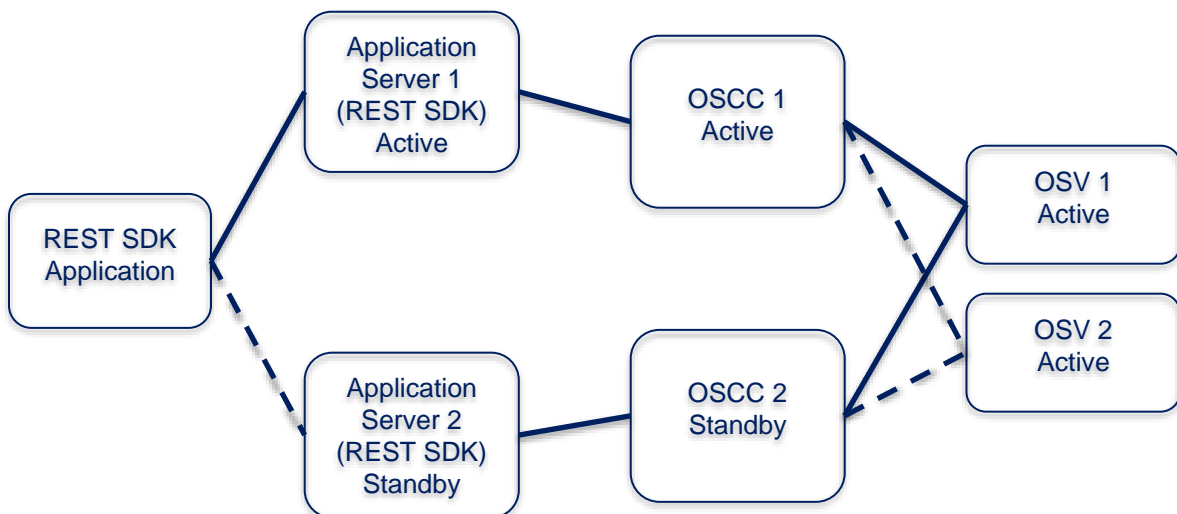
With such configuration, each Application Server will point to one of the OSCC nodes, meaning that each Application Server will be tied to one of the OSCC nodes. This configuration is not recommended

because if the Application Server connected to the active OSCC node fails, then it is not possible to enforce the OSCC to switchover to the other node.

6.1. Redundant OpenScape Voice

The OpenScape Voice communication platform provides High Availability in an Active-Active approach. The OSCC connects to OSV via CSTA and the determination of the node preference is performed via DNS SRV. This means that the OSCC is normally connected to one of the OSV nodes. If the OSV node connected to the OSCC fails, the OSCC will connect to the other OSV node. This process shall be transparent to the connection between the REST SDK Application and Application Server.

Under normal conditions, the OSCC Active and OSCC Standby nodes are pointing to OSV 1 node.
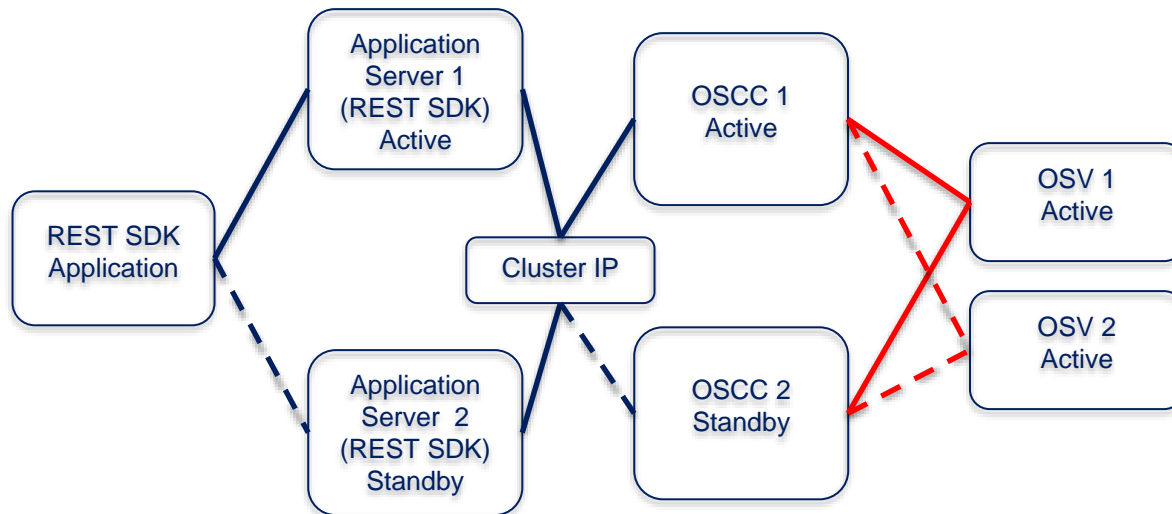
If the OSV 1 node fails, both OSCC nodes will re-connect to OSV 2.
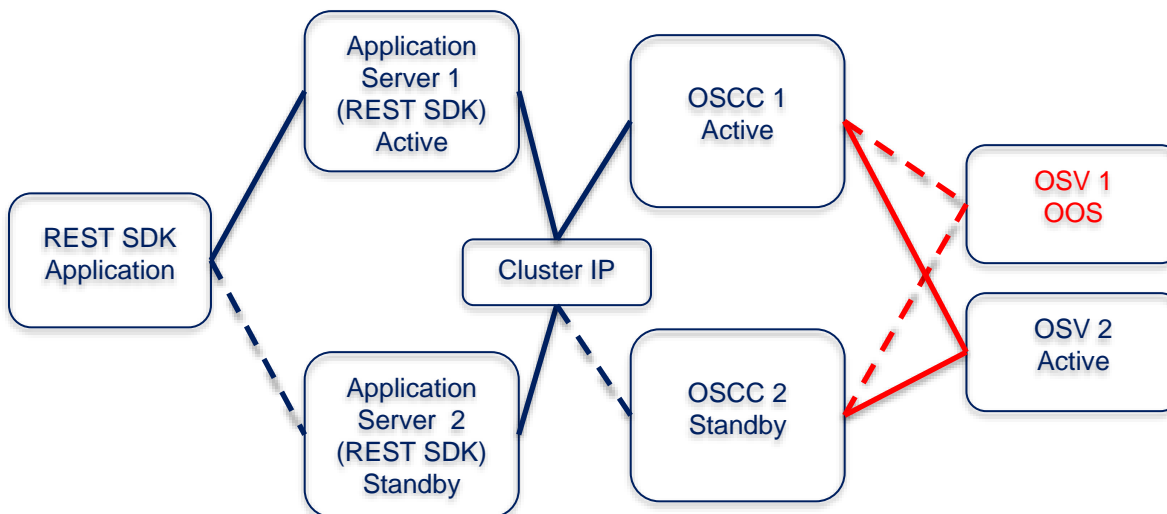
The CSTA connection between OSCC and OSV should switch from OSV 1 node to OSV 2 node in two situations:

- There is a network issue between OSCC and OSV 1 node.

- The OSV 1 node is out of service.

A switchover from OSV 1 node to OSV 2 node, has the following consequences:

- The connection between the REST SDK Application and the Application Server remains unchanged.
- The connection between the Application Server and OSCC remains unchanged.
- The calls which are in queue are disconnected by OSV – this only happens if the OSV fails and it does not happen in the case of network failure. A Dequeue Call Routing Event shall be reported for each disconnected queued call.
- The agents are logged off – this is indicated by a User Media Not Ready Presence Event for Voice which is sent when the switchover of the OSV nodes happens.
- The Real Time Statistics are not impacted.

Note 1: Currently it is not possible to get the routing status of the agents. It is recommended to define again the agent logon and routing status after a recovery situation.

Note 2: Currently it is not possible to get the call id of the calls waiting in the queue. It is recommended to getting statistical data about the queue with Real Time Statistics and wait for the calls to be handled.

6.2. Redundant OSCC

The OSCC High Availability implementation is based on the Windows Cluster feature. This feature provides a unique IP Address pointing to the active OSCC node. Each Application Server should point to the Cluster IP address, meaning that each Application Server should connect to the active OSCC node – this is the recommended architecture, since the redundancy of the Application Server is independent from the redundancy of the OSCC.

Under normal conditions, the Application Server(s) is(are) pointing to the Cluster IP address assigned to the active OSCC 1 node.
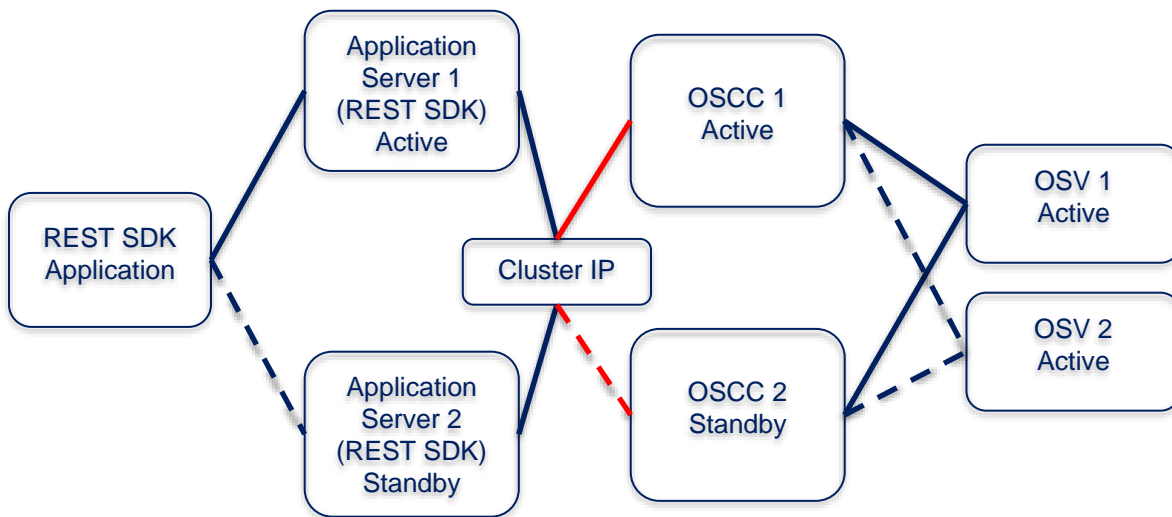
If a switchover is executed in OSCC, the Cluster IP is assigned to the new active OSCC 2 node.

When a switchover occurs in the OSCC, the following situations are verified in the system:

- The Application Server temporarily loses the connection to OSCC. The Application Server keeps trying to connect to OSCC by pointing to the IP address of the OSCC Cluster. When the switchover is completed the Application Server is automatically connected to the new active OSCC.
- The REST SDK Application remains connected to the Application Server.
- The event monitoring (started via ListenForEvents commands) is kept by the Application Server and is not affected by the OSCC switchover.
- The agents are logged off.
- During the switchover process, a SERVER_DISCONNECTED_EVENT is reported for the Telephony Server, for the Presence Server, for the Routing Server, for the Callback Server, for the Web Collaboration Server and for the OpenMedia Server. The Presence server also reports a USER_MEDIA_NOTREADY for each of the monitored media. These events shall be used by the REST SDK Application to indicate that a switchover happened.
- When the new active OSCC node gets back in service, the REST SDK application will start receiving a SERVER_CONNECTED_EVENT for each of the OSCC services.
- When a SERVER_CONNECTED_EVENT for the Presence Server is received by the REST SDK application, it shall start logging on the agents back.
- For each of the calls which were in queue during the switchover process, the REST SDK application will receive:
  o A Telephony QUEUED event.
  o A Routing ENQUEUE_CALL event and
  o A Routing ROUTING_INFORMATION_UPDATED event.

    Note: the queued calls are recovered with minimal data. Information such as the Calling Party Number are is recovered.

- The Real Time Statistics are lost and must be restarted.

    Note 1: Currently, it is not possible to get the routing status of the agents. It is recommended to define again the agent logon and routing status after a recovery situation.

    Note 2: Currently, it is not possible to get the call id of the calls waiting in the queue. It is recommended to get statistical data about the queue with the Real Time Statistics and wait for the calls to be handled.
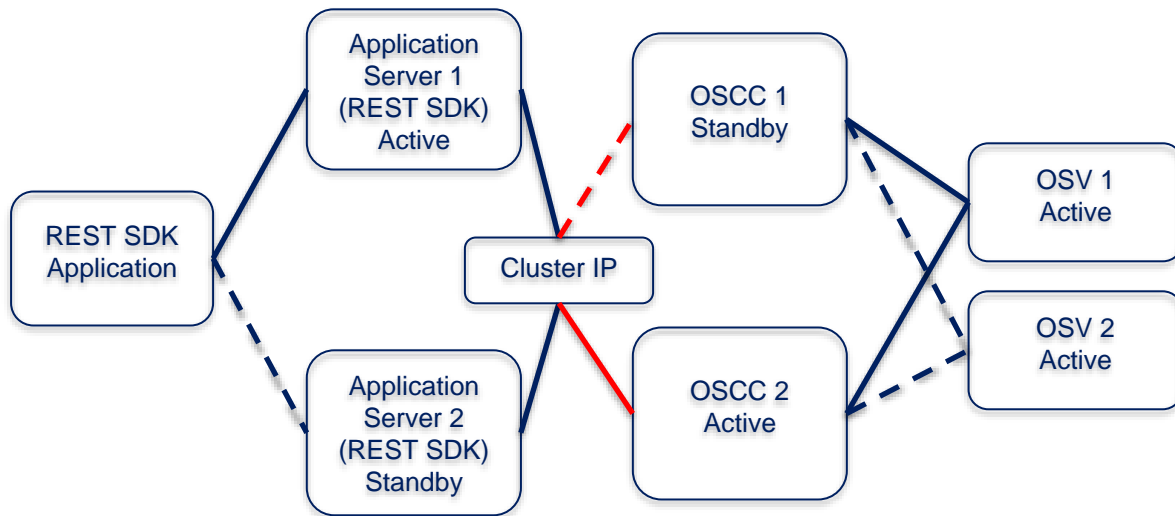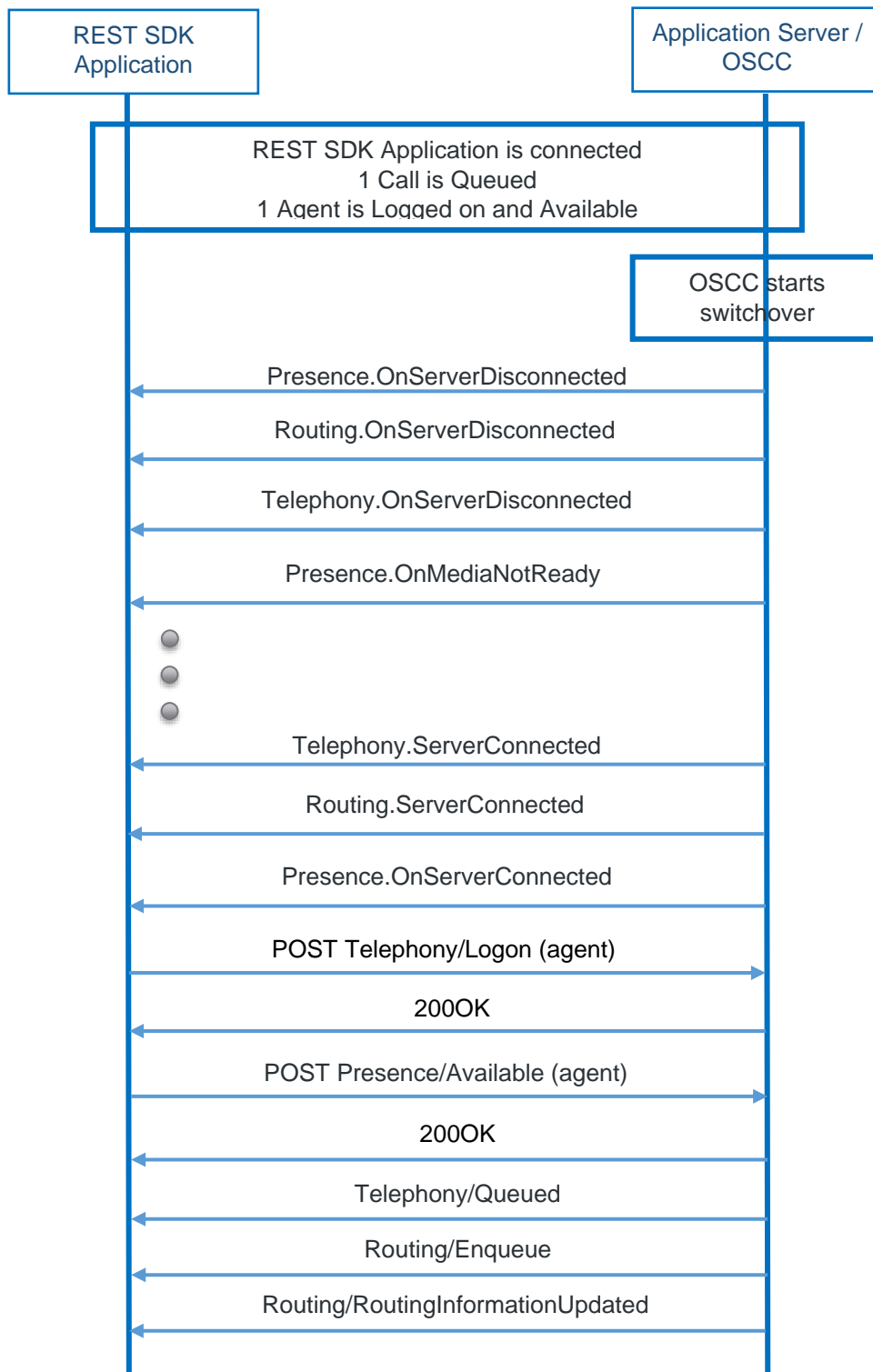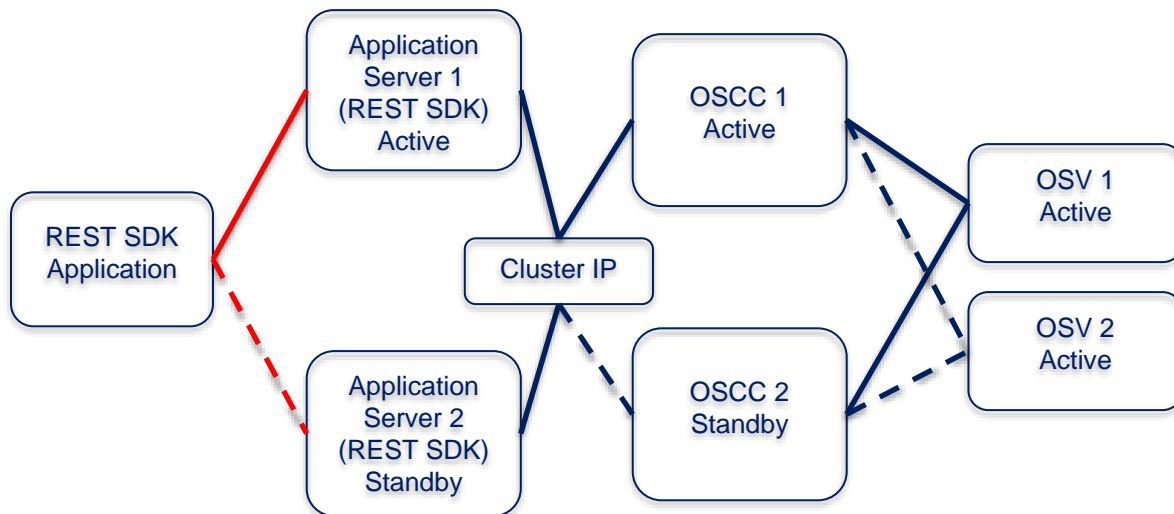
```
┌─────────────────┐                              ┌─────────────────┐
│   REST SDK      │                              │Application Server /│
│  Application    │                              │     OSCC        │
└─────────────────┘                              └─────────────────┘
        │                                                  │
        │  REST SDK Application is connected               │
        │  1 Call is Queued                                │
        │  1 Agent is Logged on and Available              │
        │                                                  │
        │                                          OSCC starts
        │                                          switchover
        │                                                  │
        │◄──── Presence.OnServerDisconnected ──────────────│
        │                                                  │
        │◄──── Routing.OnServerDisconnected ───────────────│
        │                                                  │
        │◄──── Telephony.OnServerDisconnected ─────────────│
        │                                                  │
        │◄──── Presence.OnMediaNotReady ───────────────────│
        │                                                  │
        │   ●                                              │
        │   ●                                              │
        │   ●                                              │
        │◄──── Telephony.ServerConnected ──────────────────│
        │                                                  │
        │◄──── Routing.ServerConnected ────────────────────│
        │                                                  │
        │◄──── Presence.OnServerConnected ─────────────────│
        │                                                  │
        │──── POST Telephony/Logon (agent) ───────────────►│
        │                                                  │
        │◄──── 200OK ──────────────────────────────────────│
        │                                                  │
        │──── POST Presence/Available (agent) ────────────►│
        │                                                  │
        │◄──── 200OK ──────────────────────────────────────│
        │                                                  │
        │◄──── Telephony/Queued ───────────────────────────│
        │                                                  │
        │◄──── Routing/Enqueue ────────────────────────────│
        │                                                  │
        │◄──── Routing/RoutingInformationUpdated ──────────│
        │                                                  │
```

6.3. Redundant Application Server

The Application Server can be deployed in a Hot Standby approach, meaning that only one Application Server will run at a time. In this scenario, the REST SDK Application must manage the connection to the active Application Server node. As soon as the REST SDK Application detects that the Application Server is not accessible, it shall start working with the new active Application Server node.

Under normal conditions, the REST SDK Application must be registered to both the Application Servers nodes. The REST SDK Application must choose one of the Application Server nodes to be the active node. In the example below the Application Server 1 was chosen to be the active node.

If the REST SDK Application identifies that the active Application Server 1 fails, it should start working with the Application Server 2 which becomes the active node.
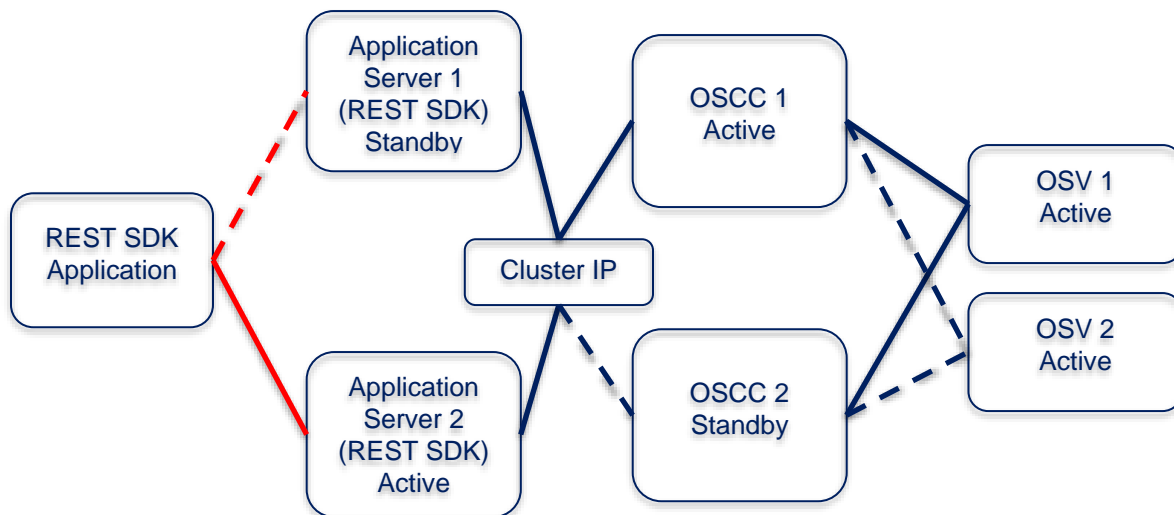
If the REST SDK Application cannot access the Application Server, the reason can be:

- There is a network problem between the REST SDK Application and the Application Server.
- The Application Server is out of service.

The problem can be detected by any not responded REST SDK request sent by the REST SDK Application.

The REST SDK may try to register to the former standby Application Server but the registration may fail if the previously used connection was not disconnected in the OSCC yet. The OSCC may take up to 180 seconds (3 minutes) to detect that the connection to the Application Server was lost. Two approaches are possible to reconnect via the former standby Application Server:

- The REST SDK Application tries to register to the same Application Id as was used before. It can take up to 3 minutes to release this application in the OSCC.
- The REST SDK Application uses a second Application Id to connect to the second Application Server. This approach requires a second REST SDK license.

Independent of the approach to reconnect the REST SDK Application to the servers, the REST SDK Application is impacted by:

- The event monitoring (started via ListenForEvents commands) is lost for all server/media and must be re-sent by the REST SDK Application.
- The agents remain logged on and the Routing State also remains the same as before the problem with the Application Server.
- The ongoing contacts are not impacted.
- The Real Time Statistics are lost and must be restarted.

Note 1: Currently, it is not possible to get the routing status of the agents. It is recommended to define again the agent logon and routing status after a recovery situation.

Note 2: Currently, it is not possible to get the call id of the calls waiting in the queue. It is recommended to get statistical data about the queue with the Real Time Statistics and wait for the calls to be handled.

6.4. Redundant REST SDK Application

The definition of a redundant REST SDK Application is out of the scope of this document.

A session token generated for an instance of the REST SDK Application shall not be used by another instance of the REST SDK Application. However, the only REST SDK command that matches the originator of a command to the session token is the Keep Alive. This means that if an instance of a REST SDK Application is registered and it fails, another instance of the REST SDK Application could re-use the session token, except for the Keep Alive messages. The REST SDK events which are sent to the REST SDK Application via the webhook must be distributed to a pre-defined IP address by for example using a Load Balancer.