



A MITEL
PRODUCT
GUIDE

MiContact Center Enterprise

Open Media Service Interface Description

Release 9.6

Document Version 1.0

September 2022

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INTRODUCTION

The MiCC Enterprise Open Media Service provides a web service interface allowing clients to connect via a SOAP interface in order to add requests to the MiCC Enterprise system. In addition, events can be retrieved for existing Open Media requests.

Open Media requests provide a gateway into the MiCC Enterprise system. The actual request can represent any type of media, such as a link to a ticketing system, an external database, or any other customer application with a unique identifier. Once the Open Media request is inserted into the MiCC Enterprise system, it will be routed to skilled agents just like other media types such as voice, e-mail or SMS sessions.

When the MiCC Agent receives the Open Media request, the configured action will be taken on the agent's desktop. For example, a URL can be launched with a tag from the Open Media request.

This document describes the interface for inserting and removing Open Media requests, as well as receiving events for ongoing Open Media sessions.

SERVICE INFORMATION, SOAP

To create a service or web reference, use the following URL:

<http://MiCC EnterpriseWebServerName:12620/OpenMediaService>

To see the WSDL for the service, use the following URL:

<http://MiCC EnterpriseWebServerName:12620/OpenMediaService?wsdl>

REQUESTS

ADDREQUEST

Inserts a new Open Media request into the MiCC Enterprise system. The response will be returned indicating success or failure to add the request.

ADDOPENMEDIAREQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
ServiceGroupID	Indicates the record ID of the service group that this request will be queued toward	Optional, if TenantID and ServiceGroupName are provided. If supplied, it will be used over the TenantID/Group Name
TenantID	Record ID of the tenant in which the service group is defined. Not required if ServiceGroupID is provided.	Required if ServiceGroupID not provided
ServiceGroupName	Name of the service group that this request will be queued toward. Not required if ServiceGroupID is provided. Maximum of 20 characters.	Required if ServiceGroupID not provided
IVRInfo	Array of IVRInformation, allowing data to be passed with the request. Up to 3 IVRInformation fields can be provided. Each field has the following information: Label Identifier for the type of data. Up to 100 characters allowed. Data Description for the data. Up to 100 characters allowed.	At least one Label or Data field must be provided with the request.
PrivateData	Additional data provided with the request. Up to 255 characters allowed.	Optional
PreferredAgentID	Record ID of the agent intended to receive the request. If provided, and the service group has Preferred Agent configured, MiCC Enterprise will attempt to route the request to this agent.	Optional
PreferredAgentLogonID	Logon ID of the agent intended to receive the request. If provided and the service group has Preferred Agent configured, MiCC Enterprise will attempt to route the request to this agent. Note that if PreferredAgentID and PreferredAgentLogonID are both provided, PreferredAgentID will take precedence.	Optional
ForceToPreferredAgent	If PreferredAgentID is provided, indicates that the request may only be sent to this agent. If the agent is not logged on, or not available within the configured amount of time for the service group, the request will	Optional

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
	be rejected.	
TypeOfSession	A numeric value enabling Media sessions of the same type to be grouped together in order for the Agent action and Close tab options below to be applied to sessions of the same type. E.g. all chat sessions could be type 1, all email sessions could be type 2 etc. The Agent action and Close tab behavior and other options can be set with the SetOption request as described below. This value must be 1 or greater.	Optional
QueueStartTime	DateTime value indicating the time that the call entered the queue. The value must be in GMT, and it must be prior to the current date and time. If the value is valid, the queue time for the session will be set to the provided value.	Optional
SessionPriority	Value from 1-100 indicating the priority assigned to this session. If the MiCC Enterprise system is configured to enable service group session priority for Open Media sessions, the SessionPriority value allows sessions to be added to the service group queue ahead of existing sessions with lower priority. Note that a higher value indicates a lower priority, so 1 is the highest priority. If both Session Priority and QueueStartTime are specified, QueueStartTime will take priority and the session will be added to the queue based on the queue time calculated from QueueSstartTime.	Optional

ADDOPENMEDIARESPONSE PARAMETERS

PARAMETER	DESCRIPTION
RequestStatus	<p>0 Success</p> <p>1 Failed; Service Group is Closed</p> <p>2 Failed; Invalid Service Group provided in request</p> <p>3 Failed; Tenant is disabled</p> <p>4 Failed; Preferred Agent is logged off</p> <p>5 Failed; General Error</p>
OpenMediaID	Unique identifier for the request. Only provided if the request is successfully added to MiCC Enterprise.
QueuePosition	Indicates the current position of the request in the service group queue. If the request is immediately sent to an agent, the value is 0.
EWT	Indicates the estimated wait time in seconds for the request.

FAULTS

FAULT	DESCRIPTION
InvalidDataException	Thrown if the lengths of the data exceed the maximum. Also thrown if too many IVRInfo are provided
NoLicenseFault	Thrown if the OpenMedia site license could not be acquired
RouterDisconnectedFault	Thrown if the OpenMedia service is not connected to the router
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

CANCELREQUEST

Cancels a previously added Open Media request from the MiCC Enterprise system. The response will be returned indicating success or failure to cancel the request.

The result of CancelRequest varies depending on the current status of the request.

If the request is currently in the Service Group queue, it will be reported as Abandoned for the Service Group.

If the request is currently allocated to an agent but not yet answered by the agent, the request will be reported as Abandoned for the Service Group and Offered to the Agent but not Answered.

If the request is currently allocated to an agent and answered by the agent, the request will be reported as Completed for the Service Group and Offered/Answered by the Agent.

CANCELOPENMEDIAREQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
OpenMediaID	Indicates the unique identifier returned in the AddOpenMediaResponse.	Required
CancelIfAllocated	If set to 1, indicates that if the request has already been allocated to an agent, it should be handled as a disconnect and removed from the agent. If set to 0, the Cancel Request will be rejected if the request is no longer in the Service Group queue and has been allocated to an agent.	Required
DoNotReport	If set to 1, the request will not generate statistics for the Service Group. This parameter only applies if the request has not been allocated to an agent; otherwise, the request must be reported.	Required

RETURN VALUE

Returns true if the request was cancelled

FAULTS

FAULT	DESCRIPTION
NoLicenseFault	Thrown if the OpenMedia site license could not be acquired
RouterDisconnectedFault	Thrown if the OpenMedia service is not connected to the router
InvalidOpenMediaIDFault	Thrown if an invalid OpenMediaID is passed in the cancel request
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator
OpenMediaRequestTerminatedFault	Thrown if the OpenMediaID passed in has already terminated or been cancelled.

DIVERTREQUEST

Diverts a previously added Open Media request to a different Open Media service group. The response will be returned indicating success or failure to divert the request.

The request will be reported as Overflowed Out from the original service group and Overflowed In to the new service group.

If the request is currently allocated to an agent, it will be removed from the agent without any confirmation by the agent.

The Call Detail Report will indicate that the request was forwarded to the new service group.

DIVERTOPENMEDIAREQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
OpenMediaID	Indicates the unique identifier returned in the AddOpenMediaResponse.	Required
ServiceGroupID	Indicates the record ID of the service group that this request will be diverted to	Optional, if TenantID and ServiceGroupName are provided. If supplied, it will be used over the TenantID/Group Name
TenantID	Record ID of the tenant in which the service group is defined. Not required if ServiceGroupID is provided.	Required if ServiceGroupID not provided
ServiceGroupName	Name of the service group that this request will be diverted to. Not required if ServiceGroupID is provided. Maximum of 20 characters.	Required if ServiceGroupID not provided

RETURN VALUE

PARAMETER	DESCRIPTION
RequestStatus	0 Success
	1 Failed; Service Group is Closed
	2 Failed; Invalid Service Group provided in request
	3 Failed; Tenant is disabled

PARAMETER	DESCRIPTION
	4 Not applicable
	5 Failed; invalid session ID
OpenMediaID	Unique identifier for the request.

FAULTS

FAULT	DESCRIPTION
NoLicenseFault	Thrown if the OpenMedia site license could not be acquired
RouterDisconnectedFault	Thrown if the OpenMedia service is not connected to the Router
InvalidDataException	Thrown if the ServiceGroupID or TenantID and ServiceGroupName parameters are not provided in the request
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

MODIFYREQUEST

Modifies the data associated with a previously added Open Media request. The response will be returned indicating success or failure to modify the request.

The Open Media session must be in the queue and not yet allocated to an agent for this request to succeed.

MODIFYOPENMEDIAREQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
OpenMediaID	Indicates the unique identifier returned in the AddOpenMediaResponse.	Required
IVRInfo	<p>Array of IVRInformation, allowing data to be passed with the request. Up to 3 IVRInformation fields can be provided.</p> <p>Each field has the following information:</p> <p>Label Identifier for the type of data. Up to 100 characters allowed.</p> <p>Data Description for the data. Up to 100 characters allowed.</p>	<p>At least one Label or Data field must be provided with the request.</p> <p>Note that if the IVR label already is associated with the Open Media session from the original request, the data will be replaced with the new data provided in the Data field. If a data field with the IVR label does not exist, the IVR label and data will be appended to the existing IVR data for the Open Media session.</p>
PrivateData	Additional data provided with the request. Up to 255 characters allowed.	Optional

RETURN VALUE

Returns true if the request was modified.

FAULTS

FAULT	DESCRIPTION
NoLicenseFault	Thrown if the OpenMedia site license could not be acquired
RouterDisconnectedFault	Thrown if the OpenMedia service is not connected to the Router
InvalidDataException	Thrown if the OpenMedia ID is invalid
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

SETOPTIONS

Sets various system options for Open Media sessions. These values override any configuration values set in MiCC Agent.

SETOPTIONS PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
TypeOfSession	<p>A numeric value enabling Media sessions of the same type to be grouped together in order for the Agent action and Close tab options below to be applied to sessions of the same type.</p> <p>If this value is provided and set to 0, the options will apply to all session types not already having a configured setting.</p>	Optional
AgentActionOptions	<p>1 = Do not execute configured agent action if selected agent already has a Tab open for the same Service Group. This setting applies to all Open Media Service groups. Note that if the TypeOfSession parameter is provided, this option will only apply to sessions of the indicated type. Open Media sessions of different types will not follow this option setting.</p> <p>2 = Do not execute configured agent action if selected agent already has a Tab open for this Type. Parameter TypeOfSession must be provided.</p> <p>3 = Re-use Tab if selected agent already has a Tab open for the same Service Group. This setting applies to all Open Media Service groups. Note that if the TypeOfSession parameter is provided, this option will only apply to sessions of the indicated type. Open Media sessions of different types will not follow this option setting.</p> <p>4 = Re-use Tab if selected agent already has a Tab open for this Type. Parameter TypeOfSession must be given</p> <p>This parameter will override configured settings for the Service Group and MiCC Agent.</p>	Optional
CloseTabOptions	<p>1 = Do not close the Tab when session is completed</p> <p>2 = Close the Tab when session is completed</p> <p>3 = Close the Tab if this is last session for the same Service Group. This setting applies to all Open Media Service</p>	Optional

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
	<p>groups. Note that if the TypeOfSession parameter is provided, this option will only apply to sessions of the indicated type. Open Media sessions of different types will not follow this option setting.</p> <p>4 = Close the Tab when last session for this Type is completed. Parameter TypeOfSession must be given</p> <p>This parameter will override configured settings for the Service Group and MiCC Agent</p>	
MaxNumberOfSessions	<p>Specifies the maximum of concurrent Open Media sessions each agent can be assigned. If parameter TypeOfSession is given then this value only applies to sessions of the given Type; otherwise, the given value applies to all Open Media Sessions unless there is already a specific configuration set for the Open Media Session type.</p>	Optional
AllowDifferentTypes	<p>1 = Don't Allow 2 = Allow</p> <p>This specifies if an agent busy with one or more sessions of a specific Type is also available to handle sessions of different Types. Note that by default, an agent is able to handle sessions of different types, unless a type specifically excludes it, or unless this option is set without the TypeOfSession parameter, in which case it applies to all Open Media sessions.</p> <p>This option will be checked for the incoming session only. If the agent is handling an Open Media session of Type 1 which does not allow different types, and then receives an Open Media session of Type 2, which does allow different types, the Open Media session of Type 2 will be sent to the agent. However, in the reverse case, where the agent is handling a session of Type 2 which allows different types and a session of Type 1 is received, not allowing different types, the Open Media session of Type 1 will not be sent to the agent.</p>	Optional
SessionLinkOptions	<p>1 = Open links in a browser tab if possible 2 = Open links in the default external browser</p> <p>This specifies if web links provided in the IVRInfo fields should be opened in a browser tab in MiCC Agent or if they should be launched in the default external browser.</p>	Optional
ResetAllOptions	<p>Set to 1 to reset all the options to the default values for the indicated TypeOfSession. Any previous options set for the TypeOfSession will be cleared.</p>	Optional

RETURN VALUE

Returns true if the options were successfully set.

FAULTS

FAULT	DESCRIPTION
NoLicenseFault	Thrown if the OpenMedia site license could not be acquired
RouterDisconnectedFault	Thrown if the OpenMedia service is not connected to the router

FAULT**DESCRIPTION**

InvalidUserFault

Thrown if authentication is enabled and the user could not be authenticated as a host administrator

InvalidDataFault

Thrown if the data in the request is out of range

STATUS REQUESTS

As each Open Media request in the MiCC Enterprise system changes state, an event will be generated and queued at the Open Media Service.

Clients may request the current status of any Open Media request, or all event updates from a particular time period.

By default, all events will be stored in the Open Media Service for 30 minutes. This value can be configured by modifying the Registry value
HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\CCOpenMedia\Parameters\DataExpiration.
The value should be set to the number of minutes that events will be queued.

GETOPENMEDIAREQUESTSTATUSBYID

Retrieves the latest status update events for a particular Open Media request.

REQUEST PARAMETERS

PARAMETER	DESCRIPTION	OPTIONAL/REQUIRED
OpenMediaID	Indicates the unique identifier returned in the AddOpenMediaResponse.	Required

GETOPENMEDIARESPONSE PARAMETERS

PARAMETER	DESCRIPTION
TimeStamp	Current date and time in UTC that the request was processed by the Open Media Service.
OpenMediaRequests	Single OpenMediaRequest status update, representing the latest status update for this Open Media request.



Note: The TimeStamp returned can be used for later requests to ensure that duplicate status events are not received.

OpenMediaRequest

Each status update will have the following parameters.

PARAMETER	DESCRIPTION
ID	Indicates the unique identifier for the Open Media request.

PARAMETER	DESCRIPTION
Status	Indicates the current status of the Open Media Request: 0 Unknown 1 Queued at the Service Group 2 Allocated to an Agent 3 Currently handled by an Agent 4 Completed 5 Failed 6 Cancelled
TimeStamp	Date and time in UTC that the status update event was received by the Open Media Service.
AgentID	Record ID of the agent that handled the request, if the status is Allocated to an Agent, Currently Handled by an Agent, or Completed. Otherwise it will be 0.
TenantID	Tenant ID of the agent that handled the request, if the AgentID value is non-zero. Otherwise, the value will be 0.
LogonID	Logon ID of the agent that handled the request, if the AgentID value is non-zero. Otherwise, the value will be empty.
ServiceGroupID	The Record ID of the service group the request is allocated to.
QueuePosition	0 if the request is not queued. If the call is queued, the queue position will be returned as follows: For historical requests such as <code>GetOpenMediaRequestHistoryByID</code> and <code>GetOpenMediaRequestsBy Time</code> , the <code>QueuePosition</code> will be the position at the time the call was queued. For requests looking at the current status such as <code>GetAllOpenMediaRequestStatus</code> and <code>GetOpenMediaRequestStatusByID</code> , the <code>QueuePosition</code> will be the current queue position in the service group.

FAULTS

FAULT	DESCRIPTION
InvalidOpenMediaIDFault	Thrown if an invalid OpenMediaID is passed in the cancel request
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

GETOPENMEDIAREQUESTHISTORYBYID

Retrieves all status update events for a particular Open Media request.

REQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL/REQUIRED
OpenMediaID	Indicates the unique identifier returned in the <code>AddOpenMediaResponse</code> .	Required

RetrieveLaterThan	DateTime parameter. All status updates received after this date and time will be returned.	Required
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GETOPENMEDIARESPONSE PARAMETERS

Failed; Invalid OpenMediaID provided, or no status events

PARAMETER	DESCRIPTION
TimeStamp	Current date and time in UTC that the request was processed by the Open Media Service.
OpenMediaRequests	Array of OpenMediaRequest status updates.

FAULTS

FAULT	DESCRIPTION
InvalidOpenMediaIDFault	Thrown if an invalid OpenMediaID is passed in the request
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

GETOPENMEDIAREQUESTSBYTIME

Retrieves all status update events in a particular time period.

REQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL / REQUIRED
RetrieveLaterThan	DateTime parameter. All status updates received after this date and time will be returned.	Required

GETOPENMEDIARESPONSE PARAMETERS

PARAMETER	DESCRIPTION
TimeStamp	Current date and time in UTC that the request was processed by the Open Media Service.
OpenMediaRequests	Array of OpenMediaRequest status updates.

FAULTS

FAULT	DESCRIPTION
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

GETALLOPENMEDIAREQUESTSTATUS

Retrieves all status update events for all items in the cache

GETOPENMEDIARESPONSE PARAMETERS

PARAMETER	DESCRIPTION
TimeStamp	Current date and time in UTC that the request was processed by the Open Media Service.
OpenMediaRequests	Array of OpenMediaRequest status updates.

FAULTS

FAULT	DESCRIPTION
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

GETSERVICEGROUPSTATUS

REQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL/REQUIRED
serviceGroupID	The service group id to retrieve the status for	Required

SERVICEGROUPSTATUS PARAMETERS

PARAMETER	DESCRIPTION
ServiceGroupID	The id of the service group
Open	Whether the group is open

FAULTS

FAULT	DESCRIPTION
InvalidDataException	Thrown if the service group id is not a valid open media service group
RouterDisconnectedFault	Thrown if the OpenMedia service is not connected to the router
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

GETALLOPENMEDIASERVICEGROUPSTATUS

REQUEST PARAMETERS

PARAMETER NAME	DESCRIPTION	OPTIONAL/REQUIRED
tenantID	The tenant id to retrieve service group status for. -1 should be used for a non-tenanted system	Required

GETALLSERVICEGROUPRESPONSE PARAMETERS

PARAMETER	DESCRIPTION
Status	An array of ServiceGroupStatus

FAULTS

FAULT	DESCRIPTION
InvalidDataException	Thrown if the tenantId is not a valid or the tenant is disabled
RouterDisconnectedFault	Thrown if the OpenMedia service is not connected to the router
InvalidUserFault	Thrown if authentication is enabled and the user could not be authenticated as a host administrator

AUTHENTICATION

Authentication for the Open Media Service can be set in the CM system properties.

SOAP

If authentication is enabled, two Soap headers must be added to each message. The headers are named LogonID and Password. The namespace is OpenMediaService. Each must contain a single string value.

The passed in LogonID/Password combination must be for a valid user who is configured as a host administrator or all requests will throw an InvalidUserFault.

The following code shows how to add the Soap headers to each message from a C# application with a generated service reference.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Web.Services.Protocols;
```

```
using System.Xml.Serialization;
```

```
namespace TestClient
```

```
{  
    [XmlAttribute("LogonID", Namespace = "OpenMediaService")]  
    public class LogonHeader : SoapHeader  
    {  
        public LogonHeader()  
        {  
        }  
  
        public LogonHeader(string val)  
        {  
            LogonID = val;  
        }  
  
        [XmlAttribute()]  
        public string LogonID { get; set; }  
    }  
  
    [XmlAttribute("Password", Namespace = "OpenMediaService")]  
    public class PasswordHeader : SoapHeader  
    {  
        public PasswordHeader()  
        {  
        }  
  
        public PasswordHeader(string val)  
        {  
            Password = val;  
        }  
  
        [XmlAttribute()]  
        public string Password { get; set; }  
    }  
  
    public class DerivedOpenMediaService : OpenMediaService.OpenMediaService  
    {  
        protected override System.Xml.XmlWriter GetWriterForMessage(  
            System.Web.Services.Protocols.SoapClientMessage message, int bufferSize)  
        {  
            if (!string.IsNullOrEmpty(Program.Form.LogonID))  
                message.Headers.Add(new LogonHeader(g_logonID));  
            if (!string.IsNullOrEmpty(Program.Form.Password))  
                message.Headers.Add(new PasswordHeader(g_password));  
        }  
    }  
}
```

```
        return base.GetWriterForMessage(message, bufferSize);
    }
}
}
```

ERROR HANDLING

If the Open Media Service loses connection to the MiCC Enterprise Router service, all incomplete Open Media requests currently in the history will be changed to Status = 5 (Failed). In addition, all Open Media requests in the MiCC Enterprise system will be removed.

If the Open Media Service restarts, all requests in the history will be cleared, and all requests in the MiCC Enterprise system will be removed, even if they are currently being handled by an agent.

In all cases, it is up to the client application to resubmit any requests in Failed state.

DATA CACHE

All open media requests will be cached for 30 minutes by default. This value can be changed by altering the registry key HKLM\System\CurrentControlSet\Services\CCOpenMedia\Parameters\DataExpiration

Open Media Requests in a terminated state (Completed, Failed, Cancelled) are removed from the cache when the data expiration time is exceeded.

Calls to retrieve status for an item that has been aged out of the cache will throw an InvalidOpenMediaIDFault.

