

GENESYS

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Genesys Interaction Recording Solution Guide

Archiving and Metadata

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Archiving and Metadata

The Genesys Interaction Recording solution uses the Recording Crypto Server and Media Lifecycle Management system to back up store recording files.

Recording Crypto Server Archive Structure

The Recording Crypto Server, by default, is scheduled to generate an archive file every day based on the retention period. Each time the archival process is run, the output file is saved to a compressed file. The compressed file contains the recording files and the metadata. The following directory structure is the result of the expanded compressed file:

- contact-center-id—The unique identifier of the contact center that is generated by Interaction Recording Web Services (or Web Services if you're using version 8.5.210.02 or earlier).
- tenant-name—The name of the tenant.
- year-month-day—The directory where the recording files are stored. There is a separate directory generated for each calendar day.
- recording-id—The unique recording identifier for each recording.
- recording.json—The recording metadata.
- mediaFiles—One or more recording files for the recording. The file name is referenced in the metadata. If encryption is enabled for this tenant, the recording is also encrypted in PKCS7 format. For an example of how to decrypt an encrypted recording file, see Decrypting Call Recordings.

Media Lifecycle Management Archive Structure

This section explains the archive structure that results when you use the Recording Lifecycle Scheduler component of Genesys Administrator Extension to create zipped and unzipped backup tasks.

Important

Multiple rules that create backups should not be created with all of the following information configured identically:

- minAge and maxAge filter specs
- · SS MM HH schedule time
- Filter type (for example, Voice)
- Location (for example, file://myArchives or blank)

Because these rules will all attempt to write to an archive file with the same file name. You can provide schedule times or location diversity to avoid this limitation.

Each zipped backup task exports the recording files to one compressed file, with the full path: <archive export directory>/<Tenant Name>-<Filter Type>-<Max Age Filter>-<YyyyMMddHHmmss>.zip

Each unzipped backup task exports the recording files to one folder, with the full path: <archive export directory>/<Tenant Name>-<Filter Type>-<Max Age Filter>-<Min Age Filter>-<yyyyMMddHHmmss>

Important

If the useFullPathInMediaFileBackup option in the application.yaml file is set to true on the node performing the backup task, unzipped backup tasks cannot point to a remotely mounted Windows directory. By default, the useFullPathInMediaFileBackup option is set to false.

[+] Show descriptions of the parameters.

- <archive export directory> is determined first by the task's parameters ["location"] setting. If missing or blank, it defaults to the server setting, backgroundScheduledMediaOperationsSettings.backupExportURI.
- <Tenant Name> is always "Environment".
- <Filter Type> is based on the task filter that exported this archive: "voice" or "screen".
- <Min Age Filter> is based on the task filter that exported this archive: 0 if was not set.
- <Max Age Filter> is based on the task filter that exported this archive: 0 if was not set.
- <yyyyMMddHHmmss> is the UTC time when the task started its execution.

useFullPathInMediaFileBackup: false

If the useFullPathInMediaFileBackup option in the application.yaml file is set to false on the node

performing the backup task (the default), the structure of the compressed file and the directory structure of the folder when using an unzipped backup is as follows:

[+] Show descriptions of the parameters.

- <Contact center id> is the contact center id for which the archiving is performed
- <Tenant Name> is always "Environment"
- <yyyy> is the year component in the startTime parameter of the recording id
- <MM> is the month component in the startTime of the recording id
- <dd> is the day component in the startTime of the recording id
- <recording id> is the recording id of the recording being archived
- meta-data. json is a file containing the recording metadata of the id in JSON format
- <MediaFiles> are one or more recording files for the recording. The file name is referenced in the metadata. If encryption is enabled for this tenant, the recording is also encrypted in PKCS7 format. For an example of how to decrypt an encrypted recording file, see Decrypting Call Recordings.
- screen is a sub-folder under the <recording id> where the recording id is that of the call recording. When the task filter is voice and executeOnScreenRecording is true, both call recordings and screen recordings may be archived. The screen recordings that are archived because of the association with the <call recording id>, goes under the screen sub-folder.

The following entries can have multiple instances under the same parent entry:

- <yyyy>
- < < MM>
- <dd>>
- <recording id>
- <MediaFiles>

useFullPathInMediaFileBackup: true

If the useFullPathInMediaFileBackup option in the **application.yaml** file is set to true on the node performing the backup task, the structure of the compressed file and the directory structure of the folder when using an unzipped backup is as follows:

```
<contact center id>
   +---<Tenant Name>
      +---<yyyy>
        +---<MM>
            +---<dd>
               +---<recording id>
                  +---meta-data.json
                  +---<path from the originalMediaDescriptor>
                  +---screen
                     +---<screen recording id>
                        +---meta-data.json
                        +---<path from the originalMediaDescriptor>
```

[+] Show descriptions of the parameters.

- <Contact center id> is the contact center id for which the archiving is performed
- <Tenant Name> is always "Environment"
- <yyyy> is the year component in the startTime parameter of the recording id
- <MM> is the month component in the startTime of the recording id
- <dd> is the day component in the startTime of the recording id
- <recording id> is the recording id of the recording being archived
- meta-data.json is a file containing the recording metadata of the id in JSON format
- <path from the originalMediaDescriptor> is the archived media file. The filename is the value of the "mediaFiles[n]["originalMediaDescriptor"]["path"]" |SON attribute:

```
"originalMediaDescriptor": {
                      "storage": "WebDAV",
                     "path":
"/TPDLFSN0J13EJF50V3EB2182R000000V 1001 1001 1003 1001 2014-11-05 18-11-44 AgentVoice1 2014 11 05 10 12 03
                      "data": {
                          "storagePath": "http://eservices:8085/recordings"
                 },
For the above example, the filename will be "TPDLFSN0J13EJF50V3EB2182R000000V 1001 1001 1003 1001 2014-11-05 18-11-
44__AgentVoice1_2014_11_05_10_12_03.mp4_aH3XSa0_S_q9RVun6EnW0A.mp4".
Note that the "/" (slash character) at the start of the path is removed from the name.
"originalMediaDescriptor":{
    "path":"http://esx36-ip21-167.gws.genesys.com/recordings/func-test-gir-sched-6331c0e2-
1303-44ff-9b9e-ae5964155e56.mp3",
    "storage": "WebDAV"
For the above example, the filename retains the path value—for example, "http://...", but will be
converted to "http /esx36-ip21-167.gws.genesys.com/recordings/func-test-gir-
sched-6331c0e2-1303-44ff-9b9e-ae5964155e56.mp3" by an extraction tool that operates on
```

Windows. This only applies to a zipped backup.

 screen is a sub-folder under the <recording id> where the recording id is that of the call recording. When the task filter is voice and executeOnScreenRecording is true, both call recordings and screen recordings may be archived. The screen recordings that are archived because of the association with the <call recording id>, goes under the screen sub-folder.

The following entries can have multiple instances under the same parent entry:

- <yyyy>
- < < MM>
- < dd>
- <recording id>
- <path from the mediaDescriptor>

Important

Genesys recommends that you do not use WinRAR to extract from a zipped archive because it strictly adheres to the Windows 260 character path limit, even if the extract to path is preceded by \\?\. Use 7-Zip instead.

For more information about Media Lifecycle Management, click here.

Call Recording Metadata

Depending on which component you are using between Voice Processor and Recording Processor Script, recording metadata is built differently. The Voice Processor builds the recording metadata from GIM, and from the metadata from MCP for each recording file. The Recording Processor builds the recording metadata from ICON, and from the metadata from MCP for each recording file. The overall structure is in JSON format with the following mandatory core properties:

- · id—The recording identifier.
- callerPhoneNumber—The caller DN (ANI).
- dialedPhoneNumber—The dialed number (DNIS).
- startTime—The start time of the voice call
- stopTime—The end time of the voice call.
- screenRecording—Indicates whether or not the call recording has one or more associated screen recordings.
- region—The physical location of the recording.
- mediaFile—A list of recording files associated with this recording.
- eventHistory—A list of call events associated with this recording.

The overall structure can also have the following optional core properties:

• callType—Identifies the call as either Unknown, Inbound, Outbound, Internal, or Consult.

mediaFile

mediaFile Properties

The following table describes the mediaFile properties.

| Property | Data Type | Description | Required |
|------------|---------------------------------------|---|----------|
| mediaUri | string | Specifies the Interaction Recording Web Services (Web Services) URI for the media file. | Yes |
| mediaPath | string | Specifies the Interaction Recording Web Services (Web Services) relative path for the media file. | Yes |
| startTime | datetime | Specifies the start time of the media file. | Yes |
| stopTime | datetime | Specifies the stop time of the media file. If MCP fails, this value will be the same as the startTime. | Yes |
| mediaID | string | Specifies the media file name for the media file that is used by clients to refer to the same media file. MCP ensures that this value is globally unique. | Yes |
| type | string | Specifies the MIME type of the media file. | Yes |
| duration | string | Specifies the time duration of the media file. | No |
| size | string | Specifies the size, in bytes, of the media file. | Yes |
| tenant | string | Specifies the tenant that the recording belongs to. | Yes |
| ivrprofile | string | Specifies the IVR Profile name that serviced the recording. | Yes |
| parameters | object—The properties are parameters. | Specifies the list of additional metadata information provided by SIP Server and the client applications. The properties are: | Yes |

| Property | Data Type | Description | Required |
|--------------|---|---|---|
| | | sipsAppName ani dnis dateTime calluuid connid agentId id recordDn record | |
| masks | array of objects—Each object contains the time and type property. | Specifies the time stamps of the pause/ resume periods if the recording is masked by a client application. | No |
| pkcs7 | string | Specifies the PKCS7 envelope (in PEM, base 64 string format) if the media file is encrypted. | No |
| certAlias | array of strings | Specifies a list of aliases to the encryption certificates if the media file is encrypted. | No (Yes if the pkcs7 property is present) |
| partitions | array of strings | Specifies a list of partition names for the media file. | Yes |
| accessgroups | array of strings | Specifies the access groups identified agent associated with the recording. | Yes |
| channels | number | Specifies whether the recording audio is capture in mono (1) or stereo (2). | Yes |

eventHistory

eventHistory Properties

The following table describes the eventHistory properties.

| Property | Data Type | Description | Required |
|------------|-----------|--|----------|
| occurredAt | datetime | Specifies the start time of the event. | Yes |
| calluuid | string | Specifies the call UUID that the event belongs to. | Yes |
| event | string | Specifies the event type: • Joined • Left • data | Yes |
| contact | object | Specifies the the contact information of the caller who joined or left the recording if the event is Joined or Left. | No |
| data | object | The attached data included in the recording if the event is data. | No |

Example Metadata

Metadata Format

The following code snippet illustrates the metadata format:

```
"parameters": {
         "agentId": "1001",
         "ani": "1000",
         "callUuid": "029UDMMJ90A0L8151CGQHG5AES000003",
         "connId": "007002684ae93003"
         "dateTime": "2015-06-24T20:19:03Z",
         "dnis": "1002",
         "id": "029UDMMJ90A0L8151CGQHG5AES000003_2015-06-24_20-19-03",
         "partitions": "salesasdfsaf",
         "recordDN": "1001",
         "rp.speechminer_auth": "user:password",
"rp.speechminer_uri": "http://sm/interactionreceiver",
"sipsAppName": "SIPS_vagrant.genesys.com"
       },
       "size": "129888",
      "startTime": "2015-06-24T20:19:03Z",
"stopTime": "2015-06-24T20:19:36Z",
"tenant": "Environment",
       "type": "audio/mp3"
    }
  ]
[+] See another example.
     "statusCode": 0,
    "recording": {
         "id": "029UDMMJ90A0L8151CGQHG5AES000003",
         "callerPhoneNumber": "1000", "dialedPhoneNumber": "1002",
         "startTime": "2015-06-24T20:18:31.000+0000",
         "stopTime": "2015-06-24T20:19:36.000+0000",
         "mediaFiles": [
              {
                   "mediaUri": "http://vagrant.genesys.com:8081/api/v2/recordings/
029UDMMJ90A0L8151CGQHG5AES000003/play/ed362c5b-4025-41ef-ac25-a7541a8d4f09.mp3"
                   "mediaPath": "/recordings/029UDMMJ90A0L8151CGQHG5AES000003/play/
ed362c5b-4025-41ef-ac25-a7541a8d4f09.mp3",
                  "callUUID": "029UDMMJ90A0L8151CG0HG5AES000003".
                   "mediaId":
"029UDMMJ90A0L8151CGQHG5AES000003 2015-06-24 20-18-30-00710158-100043FD-00000001.mp3",
                   "type": "audio/mp\overline{3}",
                  "duration": "11300",
                   "tenant": "Environment",
                   "ivrprofile": "DefaultIVRProfile",
                   "size": "44928",
                  "parameters": {
    "dnis": "1002",
                       "connId": "007002684ae93003",
                       "ani": "1000",
"dateTime": "2015-06-24T20:18:30Z",
"recordDN": "1000",
                       "agentId": "1000",
                       "rp.speechminer_uri": "http://sm/interactionreceiver",
                       "rp.speechminer_auth": "user:password",
"sipsAppName": "SIPS_vagrant.genesys.com"
                       "id": "029UDMMJ90A0L8151CGQHG5AES000003_2015-06-24_20-18-30",
                       "username": "agent1000", "partitions": "sales",
                       "callUuid": "029UDMMJ90A0L8151CGQHG5AES000003"
```

```
},
                   "partitions": ["sales"],
                  "accessgroups": [
                       "/team1"
                  ]
              },
                   "mediaUri": "http://vagrant.genesys.com:8081/api/v2/recordings/
029UDMMJ90A0L8151CGQHG5AES000003/play/47693aa9-b098-46fb-b8cf-bbc494f59d68.mp3",
                   "mediaPath": "/recordings/029UDMMJ90A0L8151CGQHG5AES000003/play/
47693aa9-b098-46fb-b8cf-bbc494f59d68.mp3",
                   "startTime": "2015-06-24T20:19:03.000+0000",
                  "stopTime": "2015-06-24T20:19:36.000+0000",
                  "callUUID": "029UDMMJ90A0L8151CGQHG5AES000003",
                  "mediaId":
"029UDMMJ90A0L8151CGQHG5AES000003 2015-06-24 20-19-03-00710158-100043FF-00000001.mp3",
                   "type": "audio/mp\overline{3}",
                   "duration": "32662"
                  "tenant": "Environment",
                  "ivrprofile": "DefaultIVRProfile",
                   "size": "129888",
                   "parameters": {
    "dnis": "1002"
                       "connId": "007002684ae93003",
                       "ani": "1000",
                       "dateTime": "2015-06-24T20:19:03Z",
                       "recordDN": "1001", 
"agentId": "1001",
                       "rp.speechminer_uri": "http://sm/interactionreceiver",
                       "rp.speechminer_auth": "user:password",
"sipsAppName": "SIPS_vagrant.genesys.com"
                       "id": "029UDMMJ90A0L8151CGQHG5AES000003 2015-06-24 20-19-03",
                       "username": "agent1001",
                       "partitions": "salesasdfsaf",
"callUuid": "029UDMMJ90A0L8151CGQHG5AES000003"
                  },
                   "partitions": ["salesasdfsaf"],
                  "accessgroups": [
                       "/team1"
              }
         ],
         "eventHistory": [
              {
                   "occurredAt": "2015-06-24T20:18:19.000+0000",
                  "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
"eventId": "2015-06-24 20:18:19.792_029UDMMJ90A0L8151CGQHG5AES000003",
                  "event": "Data",
                  "data": {
                       "added": {
                            "From:tag": "003C43D0-0F8B-158B-B223-0CFAA8C0AA77-7"
                  }
              },
{
                  "occurredAt": "2015-06-24T20:18:32.000+0000",
                  "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
"eventId": "2015-06-24 20:18:32.009_029UDMMJ90A0L8151CGQHG5AES000003",
                  "event": "Data",
"data": {
                       "added": {
                            "GSIP RECORD": "ON"
                            "GSIP REC FN": "029UDMMJ90A0L8151CGQHG5AES000003 2015-06-24 20-18-30"
```

```
}
},
     "occurredAt": "2015-06-24T20:18:42.000+0000",
     "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
"eventId": "2015-06-24 20:18:42.259_029UDMMJ90A0L8151CGQHG5AES000003",
     "event": "Data",
     "data": {
           "updated": {
                 "From:tag": "003C43D0-0F8B-158B-B223-0CFAA8C0AA77-9"
           "deleted": {
                 "GSIP RECORD": "ON"
     }
},
     "occurredAt": "2015-06-24T20:19:05.000+0000",
     "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
     "eventId": "2015-06-24 20:19:05.284 029UDMMJ90A0L8151CGQHG5AES000003",
     "event": "Data",
     "data": {
           "added": {
                 "GSIP RECORD": "ON"
           },
           "updated": {
                 "GSIP REC FN": "029UDMMJ90A0L8151CGQHG5AES000003 2015-06-24 20-19-03"
     }
},
{
     "occurredAt": "2015-06-24T20:18:04.000+0000", "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
     "contact": {
           "type": "User",
"phoneNumber": "1000",
           "userName": "agent1000",
"firstName": "Firstname1000",
"lastName": "lastname"
      "event": "Joined"
     "occurredAt": "2015-06-24T20:18:44.000+0000",
     "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
     "cattudid : "0290DFM1990A0L8151CGQ"
"contact": {
    "type": "User",
    "phoneNumber": "1001",
    "userName": "agent1001",
    "firstName": "Firstname1001",
    "lastName": "lastname"
      "event": "Joined"
},
     "occurredAt": "2015-06-24T20:18:20.000+0000",
     "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
     "contact": {
    "type": "User",
    "phoneNumber": "1002",
           "userName": "agent1002",
"firstName": "Firstname1002",
```

```
"lastName": "lastname"
                      "event": "Joined"
                },
                      "occurredAt": "2015-06-24T20:18:42.000+0000",
                      "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
                      "contact": {
    "type": "User",
    "phoneNumber": "1000".
                           "userName": "agent1000",
"firstName": "Firstname1000",
"lastName": "lastname"
                      },
                      "event": "Left"
                },
                      "occurredAt": "2015-06-24T20:19:36.000+0000",
                      "calluuid": "029UDMMJ90A0L8151CGQHG5AES000003",
                      "contact": {
                           "type": "User",
"phoneNumber": "1001",
                           "userName": "agent1001",
"firstName": "Firstname1001",
"lastName": "lastname"
                      "event": "Left"
                },
{
                      "occurredAt": "2015-06-24T20:19:36.000+0000",
                      "calluuid": "029UDMMJ90A0L8151CG0HG5AES000003",
                      "contact": {
                           "type": "User",
"phoneNumber": "1002"
                           "userName": "agent1002",
"firstName": "Firstname1002",
"lastName": "lastname"
                      },
                      "event": "Left"
                }
           "screenRecording":true,
           "region": "us"
     }
}
```

Screen Recording Metadata

The overall structure of the screen recording metadata is in JSON format with the following core properties:

- id—The recording identifier and the start time of the recording.
- callRecordingId—The associated call recording identifier, if the screen recording is associated with a call recording.
- · startTime—The start time of the screen recording.
- stopTime—The end time of the screen recording.

- mediaFile—A list of recording files associated with this recording.
- eventHistory—A list of call events associated with this recording.
- nonDelete—Indicates whether or not the screen recording is protected from deletion.
- region—The physical location of the recording.

mediaFile

mediaFile Properties

The following table describes the mediaFile properties.

| Property | Data Type | Description | Required |
|------------|---------------------------------------|---|----------|
| mediaUri | string | Specifies the Interaction Recording Web Services (Web Services) URI for the media file. | Yes |
| mediaPath | string | Specifies the Interaction Recording Web Services (Web Services) relative path for the media file. | Yes |
| playPath | string | Specifies the relative path to play back a recording file. | Yes |
| startTime | datetime | Specifies the start time of the media file. | Yes |
| stopTime | datetime | Specifies the stop time of the media file. | Yes |
| mediald | string | Specifies the media file name for the media file that is used by clients to refer to the same media file. | Yes |
| type | string | Specifies the MIME type of the media file. | Yes |
| duration | string | Specifies the time duration of the media file. | No |
| size | string | Specifies the size, in bytes, of the media file. | Yes |
| parameters | object—The properties are parameters. | Specifies the list of additional metadata information provided by SIP Server and the client applications. The properties are: | Yes |

| Property | Data Type | Description | Required |
|----------|-----------|------------------------------------|----------|
| | | • agentID | |
| | | • callUuid | |
| | | • contact | |
| | | • monitors | |
| | | muxed_medialds | |
| | | • region | |
| | | virtualHeight | |
| | | virtualWidth | |
| | | • originalVirtualHeight | |
| | | originalVirtualWidth | |

Example Metadata

Metadata Format

The following code snippet illustrates the metadata format:

```
"id": "02A1MCKSD0CDNBRP1CGQHG5AES000003_2017-03-30_17-00-18",
  "callRecordingId": "02A1MCKSD0CDNBRP1CGQHG5AES000003"
 "mediaFiles": [
      "mediaUri": http://vagrant.genesys.com:8081/api/v2/recordings/
029UDMMJ90A0L8151CGQHG5AES000003/play/47693aa9-b098-46fb-b8cf-bbc494f59d68.mp4",
      mediaPath": "/screen-recordings/02A1MCKSD0CDNBRP1CGQHG5AES000003 2017-03-30 17-00-18/
content/47693aa9-b098-46fb-b8cf-bbc494f59d68.mp4",
      "playPath": "/screen-recordings/02A1MCKSD0CDNBRP1CGQHG5AES000003_2017-03-30_17-00-18/
content/6a3082c4-6ff9-4133-84de-b6333d36505d.mp4",
      "startTime": "2017-03-30T17:00:18.000+0000",
      "stopTime": "2017-03-30T17:02:09.000+0000",
      "mediaId":
"Jz0Vt5zQS5mcnS8ibDzFsA 02A1MCKSD0CDNBRP1CGQHG5AES000003 5d1c6dc1d96e4a178d672ddd019ac753 2017 03 30 17 00 19",
      "type": "video/mp4",
      "duration": "0:01:51",
      "size": "2594464",
      "parameters": {
        "muxed_mediaIds": [
"02A1MCKSD0CDNBRP1CGQHG5AES000003 5d1c6dc1d96e4a178d672ddd019ac753 2017 03 30 17 00 19",
"02A1MCKSD0CDNBRP1CGQHG5AES000003 2017-03-30 17-00-18-0071018D-1014A2D5-00000001.mp3"
        ],
       "agentID": "1000",
"virtualHeight": "749",
```