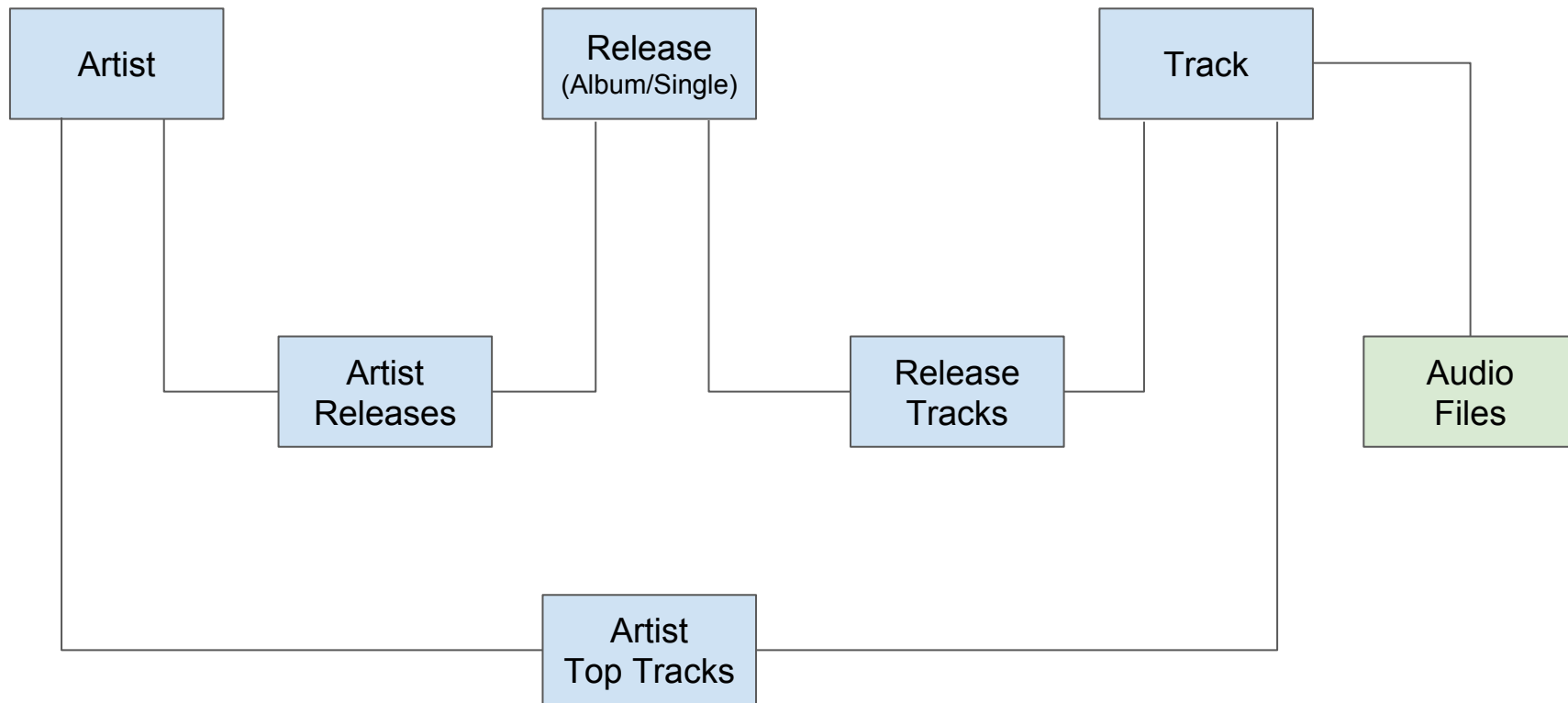# CMW Hackaton

Capitol/7digital API

Overview

- Universal Music Canada and Universal Music Group have made a catalog of their songs available for the hackathon
    - ≈ 1,500 unique artists (US and Canadian)
    - ≈ 4,500 different albums/singles - all with cover artwork
    - ≈ 18,000 tracks - all with full length audio streams

- The 7digital API's can be used to
    - Browse the catalog by Artist and then find tracks for that artist
    - Stream the full-length audio for all tracks
    - Access cover artwork image files for all albums and singles in the catalog

- Each team will be given an API key and secret to access the APIs
    - Only the API key is required to browse the catalog
    - However, in order to stream the audio you will need to sign the API call with your key and secret

Important Information

- API Keys

  - **Key = 7d4vr6cgb392**
  - **Secret = m4ntskavq56rddsa**

- You need to add the following parameter to all API calls

  - **&shopId=2020**

- When calling track and release endpoints, always use parameter

  - **&usageTypes=adsupportedstreaming**

- Terminology

  - **Release = Album or Single**

Browsing The Catalog

Artist Endpoints

Documentation	Definition	Sample Call
GET /artist/browse	Returns a list of artists from the catalog whose names match the start letter(s) supplied	http://api.7digital.com/1.2/artist/browse?letter=p&shopId=2020&oauth_consumer_key=7d4vr6cgb392
GET /artist/search	Returns a list of artists that match query string	http://api.7digital.com/1.2/artist/search?q=kiss&shopId=2020&oauth_consumer_key=7d4vr6cgb392
GET /artist/details	Returns metadata for a specific artist	http://api.7digital.com/1.2/artist/details?artistId=298&shopId=2020&oauth_consumer_key=7d4vr6cgb392
GET /artist/releases	Returns a list of streamable releases for a specific artist	http://api.7digital.com/1.2/artist/releases?artistId=298&shopId=2020&usageTypes=adsupportedstreaming&oauth_consumer_key=7d4vr6cgb392
GET /artist/toptracks	Returns a list of top tracks for a specific artist	http://api.7digital.com/1.2/artist/toptracks?artistId=298&shopId=2020&usageTypes=adsupportedstreaming&oauth_consumer_key=7d4vr6cgb392

Release & Track Endpoints

Documentation	Definition	Sample Call
GET /release/details	Returns metadata for a specific release	http://api.7digital.com/1.2/release/details?releaseId=1927424&shopId=2020&oauth_consumer_key=7d4vr6cgb392&usageTypes=adsupportedstreaming&imageSize=800
GET /release/tracks	Returns list of tracks for a specific release	http://api.7digital.com/1.2/release/tracks?releaseId=1927424&shopId=2020&oauth_consumer_key=7d4vr6cgb392&usageTypes=adsupportedstreaming
GET /track/details	Returns metadata for a specific track	http://api.7digital.com/1.2/track/details?trackId=5075620&shopId=2020&oauth_consumer_key=7d4vr6cgb392&usageTypes=adsupportedstreaming

The release endpoint responses return a link to the album artwork - example from (1st) call above

http://artwork-cdn.7static.com/static/img/sleeveart/00/019/274/0001927424_800.jpg

Sizes available - 33, 50, 100, 180, 182, 200, 350, 500 and 800 pixels

The size of images returned by any API response can be adjusted by adding imageSize parameter to the request

Catalog Metadata

Artist	artistId name sortName imageURL	7digital unique Id - needed to link releases and tracks Not always available	
Release	releaseId title version type barcode year explicitContent streamingReleaseDate licensor cLine pLine artworkURL	7digital unique Id - needed to link artists and tracks Album version title Album product type Also known as UPC Release year Indicates if release contains explicit content All content in hackathon is already released for streaming Major label name Album artwork copyright date and owner Recording copyright date and owner Always available for every release	 Live At Albert Hall, Remastered Album, Single Industry standard for identifying releases true or false UMG 2010 Def Jam Records, a Universal Music Group Company 2010 Def Jam Records, a Universal Music Group Company Image sizes available
Track	trackId title version duration explicitContent ISRC pLine type	7digital unique Id - needed to stream tracks Track version title Track duration in seconds Indicates if track contains explicit content International Standard Record Code Recording copyright date and owner Always audio	 Radio Edit, Clean Version Industry standard for identifying recordings 2010 Def Jam Records, a Universal Music Group Company
Artist / Track	One to Many	Artist can appear on many tracks, track has one artist	Data = appearsAs
Artist / Release	One to Many	Compilations have artist = Various	Data = appearsAs
Release / Track	Many to Many	Release has many tracks, tracks appear on many releases	Data = trackNumber

Streaming Audio

- To stream a track you will need to build your own API call (streaming link)

- You will need to use a 7digital trackId in order to specify the track that you want to stream

- The 7digital trackId's are returned in all the release and track endpoint responses

- Streaming links also need to be signed (Oauth 1.0) using your API Key and secret

- Using this endpoint [GET /stream/catalogue](#) -This is what a typical streaming link looks like -

  https://stream.svc.7digital.net/stream/catalogue?&shopId=2020&trackId=20745994
  &oauth_consumer_key=7d4vr6cgb392
  &oauth_nonce=302909674
  &oauth_signature_method=HMAC-SHA1
  &oauth_timestamp=1520701629&oauth_version=1.0
  &oauth_signature=gnTthfLuZWAf55MTvOesq25ONlc%3D

- Streaming links can only be used once and timeout after 60 minutes

- You can use this page to help create a signature for your call - [7digital Oauth signature reference](#)

Sample (Completed) Oauth Form

7digital

OAuth 1.0 Signature Reference Implementation

Parameters

version (optional)
`1.0`

method
`GET`

url — **Endpoint**
`https://stream.svc.7digital.net/stream/catalogue`

consumer key — **Your Key & Secret**
`7d4vr6cgb392`

consumer secret
`m4ntskavq56rddsa`

token (optional)

token secret (optional)

Click to add signature

nonce
`253299332` new `Refresh both`

timestamp
`1525436584` refresh

fields — **shopId parameter**
name `shopId`   value `2020` remove
name `trackId` value `20745994` remove — **trackId parameter**
`add`

body (optional)

Signature

query string
`oauth_consumer_key=7d4vr6cgb392&oauth_nonce=253299332&oauth_signature_method=HMAC-SHA1&oauth_timestamp=1525436584&oauth_version=1.0&shopId=2020&trackId=20745994`

base string
`GET&https%3A%2F%2Fstream.svc.7digital.net%2Fstream%2Fcatalogue&oauth_consumer_key%3D7d4vr6cgb392%26oauth_nonce%3D253299332%26oauth_signature_method%3DHMAC-SHA1%26oauth_timestamp%3D1525436584%26oauth_version%3D1.0%26shopId%3D2020%26`

hmac key
`m4ntskavq56rddsa&`

un-encoded base64 signature
`L3kOSN1BtvDqBBZOWcSW51uKvHc=`

signature
`L3kOSN1BtvDqBBZOWcSW51uKvHc%3D`

authorization header
`oauth_consumer_key="7d4vr6cgb392", oauth_nonce="253299332", oauth_timestamp="1525436584", oauth_signature_method="HMAC-SHA1", oauth_version="1.0", oauth_signature="L3kOSN1BtvDqBBZOWcSW51uKvHc%3D"`

actual url (if different)

GET https://stream.svc.7digital.net/stream/catalogue?...

output file _____ verbose ☐

headers
`add`

curl
`curl 'https://stream.svc.7digital.net/stream/catalogue?oauth_consumer_key=7d4vr6cgb392&oauth_nonce=253299332&oauth_signature_method=HMAC-SHA1&oauth_timestamp=1525436584&oauth_version=1.0&shopId=2020&trackId=20745994&oauth_signature=L3kOSN1BtvDqBBZOWcSW51uKvHc%3D'`

Sample Orchestration

User wants to play some tracks by Kiss

1. Find 7digital artistId for Kiss

   ○ GET artist/search?q=Kiss&shopId=2020
     i. Returns artist details and 7digital artistId

2. Build a list page of releases and tracks for Kiss

   ○ GET artist/release?artistId={artistId}&shopId=2020&usageTypes=adsupportedstreaming
     i. Returns release details and 7digital releaseId
   ○ GET artist/toptracks?artistId={artistId}&shopId=2020&usageTypes=adsupportedstreaming
     i. Returns a list of top tracks details and 7digital trackId

3. Find a list of tracks for a particular Kiss release if user clicks on a particular release

   ○ GET release/tracks?releaseId={releaseId}&shopId=2020&usageTypes=adsupportedstreaming
     i. Returns release track listing and 7digital trackId

4. Play specific track by Kiss

   ○ GET stream/catalogue?trackId={trackId}&shopId=2020