C&C Android 3.13.1 Change List.

New Features:

The SDK now allows checking of the Max Account Downloads and Max Asset Downloads at the time of adding an Asset to the Queue.
The "REQUIRE_PERMISSION_ON_QUEUED" Setting is governed by the backplane and comes down in the Sync.

In order to check the permission at time of addition to queue there is a new Observer Interface defined in IQueue:

```
interface IQueuedAssetPermissionObserver{
        /**
         * Callback to report on Asset's permission check when added to the queue.<br/>
         * If the interface is provided to one of the Queue's Add methods then
         * it will be called regardless of the
         *  {@link IBackplaneSettings#getRequirePermissionWhenQueued()
         *  RequirePermissionWhenQueued} Setting. <br/>
         *  If an asset was not granted permission then the Asset will have its {@link
         *  IAsset#getDownloadStatus() download status}
         *  set to the relevant error. Additional details can be retrieved from the Asset; it
         *  holds the Backplane's {@link IAsset#getLastPermissionResponse() permission
         *  response}.
         *
         * @param aQueued True if asset was added to the queue.
         * @param aDownloadPermitted True if Asset was granted download permission. False
         *  otherwise.
         * @param aAsset The asset which was granted / denied download permission.
         * @param aAssetPermissionError one of the IAssetPermission.PermissionCode values
         * @see IAsset#getLastPermissionResponse()
         * @see IAssetPermission
         * @see com.penthera.virtuososdk.client.IAssetPermission.PermissionCode
         * @category 003_queue
         */
        void onQueuedWithAssetPermission(boolean aQueued, boolean aDownloadPermitted, IAsset
aAsset, int aAssetPermissionError);
    }
```

Overloaded Add methods have also been added to the IQueue interface to allow passing in the IQueuedAssetPermissionObserver.
To get the details of the backplane response and a listing of devices which have registered a download for the asset use the `IAsset` interface and call the `getLastPermissionResponse` Method.

The `IAssetPermisson` contains an interface that details the account devices and number of Downloads registered against them (`IDownloadsPerDevice` and `IAssetDownloadsPerDevice`).

C&C Android 3.13 Change List.

New Features:

The SDK now uses Firebase Cloud Messaging (FCM) instead of Google Cloud Messaging (GCM).
The SDK now supports Amazon Device Messaging (ADM).
Please see the `Setting up Push Notifications` section in the **CCClientDevelopersGuideAndroid.pdf**
, that section provides details on what needs to be specified in the manifest. The SDK Demo application
also shows how to implement and subclass the SDK components.

Support for the "Maximum Permitted Asset Downloads per Account" (MAD) rule. This rule is governed by
the backplane. It can be read from the `com.penthera.virtuososdk.client.IBackplaneSettings` using the
method `getMaxDownloadsPerAsset`. This rule controls the maximum number of times an asset can be
downloaded across all devices associated with a user.

Support for the "Maximum Permitted Downloads per Account" (MDA) rule. This rule is governed by the
backplane. It can be read from the `com.penthera.virtuososdk.client.IBackplaneSettings` using the
method `getMaxDownloadsPerAccount`. This rule controls the maximum number of assets a user can have
downloaded across all associated devices.

The SDK now allows Segmented Assets to complete with Errored segments. You can access and modify
the number of segments which are permitted to have errors through the `ISettings` interface. Look for the
methods: `setMaxPermittedSegmentErrors` and `getMaxPermittedSegmentErrors`

The Client HTTP proxy for playing out Segmented files will by default return a HTTP OKAY (200) and a
zero length file for segments which have errored out during download. Depending on your player you may
need to return a different HTTP code for playout to continue; You can modify the code through the
`ISettings` interface. Look for the methods: `setSegmentErrorHttpCode` and `getSegmentErrorHttpCode`.

API Changes:

Class **com.penthera.virtuososdk.client.Virtuoso**
The `startup` method's signature has changed. The `GCMSenderId` parameter has been removed.

Interface **com.penthera.virtuososdk.client.IPushRegistration**
This interface is passed as a parameter into the startup method.
The `onRegisterSuccess` method has been removed.
The `onRegisterFailed` method has been removed.
The `onServiceAvailabilityResponse` method's signature has been modified. It now takes 2 integer
parameters that specify the type of push service and an error code. Please look at the SDK Demo and
java docs for full details.

Interface **com.penthera.virtuososdk.client.IEngineObserver**
There are now 2 types of setting change callbacks: One for settings provided by the backplane
`backplaneSettingChanged` and the other for Settings configurable by the client `settingChanged`. A new
set of flags `com.penthera.virtuososdk.Common.BackplaneSettingFlag` has been added for usage
with the `backplaneSettingChanged` callback.

Interface **com.penthera.virtuososdk.client.IAssetManager**
Signature of the createFileAsset method has been modified: the expected size parameter has been removed.

 Class **com.penthera.virtuososdk.Common.AssetStatus**

Three new constants have been added to describe the status of an Asset:
- **DOWNLOAD_DENIED_ACCOUNT:** Asset can not be downloaded due to the Max Downloads Per Account rule.
- **DOWNLOAD_DENIED_ASSET:** Asset can not be downloaded due to the Max Downloads Per Asset rule.
- **DOWNLOAD_BLOCKED_AWAITING_PERMISSION:** Asset can not be downloaded until permission has been verified with Backplane.