ATSC 3.0 Framework Alliance (dba RUN3TV) RUN3TV Broadcaster Application 2.3 Release Notes

Document Version: 1.1

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Release notes

This release contains the RUN3TV (TM) ATSC 3.0 application framework version 2.3 as well as a separate reference broadcaster starter kit.

The starter kit contains SIX services with each service carrying a different test application.

It conforms to ATSC 3.0 "A/344:2024-02 dated 13 February 2024" with additional support for extensions going through the specialist and ad-hoc groups within ATSC.

Application functionality

This release contains all the features of release v2.1 (released on 24 October 2023) PLUS the following:

New Features

1. DRM support in AMP player
2. Option to suspend HEAD request
3. Support for device red-listing
4. Minor Privacy menu and language updates
5. Improved Ticker to avoid overlay stuttering
6. Beta Real Time Messaging (RTM) API and support
7. Tag replacement support for all media feed URLs
8. Support for Video looping and for hiding Video controls
9. Updated API test application and associated test packs
10. Improvements to application identification in return data
11. Updated Service Desk documents describing all new features
12. Beta Event Stream in DASH for testing and Event Stream documentation
13. SIMID and Sub-App support along with example applications and JS library
14. Improved support for streaming in live to support more OTT, FAST, Program Restart models
15. Beta integration of common RUN3TV AEAT Alerts with location and ZIP CODE based filtering
16. Linking to broadcaster Alert sub-app applications
17. Minor bug fixes and improvements

Documentation

Several documents have been updated and some new 'Feature' documents have also been created as part of this release. These include documents relating to SDK APIs, Common Settings, RSS feed, Q-Bar, RSS, AEAT Feed, Event Stream (SDK), Application Management and Sub-Apps. Please refer to Confluence Helpdesk section for these documents.

Starter Kit

The starter kit has been re-configured and contains SIX distinct services. Each service offers user a different application for testing and demonstration purposes. The services can either be changed by pressing CH_UP or CH_DOWN keys using an on-screen navigator OR by using the 'U' and the 'D' keys on the keyboard. The services are configured to rotate in a cyclic fashion. Thus, pressing U key when watching Service 6 will take the user back to Service 1.

Each service displays different video content in the background. This simulates a more realistic TV-like experience when using the starter kit for demonstration purposes. In addition, **mp3, mp4** and **mpd** formats are now supported.

The SIX services are configured as follows:

1. tag:run3tv.org,2023:globalServiceID/1

This service contains a timeline based single period MPD and no other application. This service can also be used for exception handling tests.

2. tag:run3tv.org,2023:globalServiceID/2 (HTML_APP- NRT – A/V Service)

This service contains our basic HTML test application delivered via NRT on an **A/V based** service.

3. tag:run3tv.org,2023:globalServiceID/3 (OTT)

This service contains the new user experience application (Q-Bar App). The app contains multiple content rails. Thes rails are designed to demonstrate different features.

4. tag:run3tv.org,2023:globalServiceID/4 (API App - App Service)

This service contains our API tester application which is delivered via IP on an **App based** service.

Note: This service is only available in the stream (PCAP).

5. tag:run3tv.org,2023:globalServiceID/5 (API App – A/V Service)

This service contains our API tester application which is delivered via IP on an **A/V based** service.

Note: This service is only available in the stream (PCAP).

6. tag:run3tv.org,2023:globalServiceID/6 (OTT)

1. This service contains the older Common App. It has an example BAAppear image / text and 'Default Blue Menu application + background A/V.
2. Application is delivered via broadband internet. (OTT)
3. This service also contains the following:
   - Google DAI (see DASH section under FEEDS)
   - Madhive DAI (see HLS section under FEEDS)
   - Live stream support (see HLS section under FEEDS)

Note: This service contains the Common application as per release 1.11 (Service 3).

Application Access

A signed PCAP has been created for this release. This PCAP contains all broadcast channels and associated applications.

The PCAP can be downloaded from the following location:

SIGNED PCAPS (TWO VERSIONS):

https://public.a3fa.yottacloud.tv/test-streams/pcaps/v2.3.0/Release_2_3_0_Signed_STLTP.pcap

These URLs are whitelisted (restricted to registered IP Addresses).

If issues are found, please contact us to add your IP Address to the list.

NOTE: *All CE manufacturers are encouraged to test this PCAP.*

Broadcast Configuration

The PCAP stream contains SIX broadcast services. Application is delivered via NRT within the stream.

Broadcast Channel Details

Service Name	SID	Major-Minor	GSID	Service Category	IP Address	UDP Port
R3SP	5001	1-1	tag:run3tv.org,2023:globalServiceID/1	1	239.255.1.1	5001
R3NT	5002	2-1	tag:run3tv.org,2023:globalServiceID/2	1	239.255.2.1	5002
R3QB	5003	3-1	tag:run3tv.org,2023:globalServiceID/3	1	239.255.3.1	5003
R3AP	5004	4-1	tag:run3tv.org,2023:globalServiceID/4	1	239.255.4.1	5004
R3AV	5005	5-1	tag:run3tv.org,2023:globalSer	1	239.255.5.1	5005

			viceID/5			
R3CA	5006	6-1	tag:run3tv.org,2023:globalSer viceID/6	1	239.255.6.1	5006
ESG	5007	N/A	N/A	4	239.255.0.255	5007

Application Loading

Broadcast NRT

Service Name	File	AppContextId	IP address	UDP Port
R3NT	nrt-app.multipart	tv:signed.org_nrt_app	239.255.4.251	5002

Broadcast HELD

```
<HELD
    xmlns="tag:atsc.org,2016:XMLSchemas/ATSC3/AppSignaling/HELD/1.0/"
    xmlns:xsi="
http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="tag:atsc.org,2016:XMLSchemas/ATSC3/AppSignaling/HELD/1.0/
HELD-1.0-20210312.xsd">
<HTMLEntryPackage appContextId="tv:signed.org_nrt_app" bcastEntryPackageUrl="nrt-
app.multipart" bcastEntryPageUrl="run3tv-common/index.html"></HTMLEntryPackage>
</HELD>
```

Broadband

Service Name	URL	AppContextId
R3QB	**https://frwk-releases.a3fa.yottacloud.tv/framework-app/releases/v2.3.0./run3tv-common/index.html**	tv:framework.run3tv.org
R3AP	**https://atsc3-api-tester.a3fa.yottacloud.tv/2024/index.html**	tv:api-test-app.run3tv.org
R3AV	**https://atsc3-api-tester.a3fa.yottacloud.tv/2024/index.html**	tv:api-test-app.run3tv.org

R3CA	**https://frwk-releases.a3fa.yottacloud.tv/framework-app/releases/v2.3.0/run3tv-common/index.html**	tv:framework.run3tv.org

Broadband HELD (R3QB, R3AP, R3AV and R3CA)

```
<HELD xmlns="tag:atsc.org,2016:XMLSchemas/ATSC3/AppSignaling/HELD/1.0/"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="tag:atsc.org,2016:XMLSchemas/ATSC3/AppSignaling/HELD/1.0/
HELD-1.0-20210312.xsd">

<HTMLEntryPackage appContextId="tv:framework.run3tv.org" bbandEntryPageUrl="
https://frwk-releases.a3fa.yottacloud.tv/framework-app/releases/v2.3.0/run3tv-common/index.html"></HTMLEntryPackage> </HELD>
```

Installation

FRESH INSTALL

If installing a fresh copy, please follow the instructions exactly as outlined on NPM site.

UPDATING YOUR CURRENT INSTALLATION

If upgrading from 2.1 to this (2.3) release, please follow the procedure outlined below:

First, go to your working (current) 2.1 directory. Run / execute the following command:

npx @a3fa/a3fa-broadcaster-starter-kit@latest

Then execute:

npm i

and then execute:

npm run build

This concludes the update process. Run the default application in local emulator by executing the appropriate command. For windows platform, the command is as follows:

npm run win conf="./emulator/atscCmd-2023.mc.json"

After updating your existing installation and upon running the new Starter kit, go to the user experience application, (found on ServiceID/3), then go to SETTINGS / System Info section and verify that FMW version is as follows:

Framework: v2.3

Framework Testing

Several new features have been added to this release. Most of these features have now been tested on the current CE devices (listed in subsequent sections). However, we encourage all partners to test these PCAPs and validate all newly added features. This release is now available for OTA testing.

Electronic Service Guide Testing

The PCAP files for this release contain a valid ESG data service. This ESG data is timestamped at the time of recording. In order to recover and process this data successfully, the tester may need to either set the TV time manually to the time of recording (see Application Access section above), and/or set the time embedded in the stream on playout.

Using a Dektec ATSC3.0 modulator running ATSC3Express application the stream time can be set on the main window under **Time info insertion** section. The SW can also display when the capture was made by viewing the **PLP Source Selection** window and reading the **Start Time PTP** box. Screen shot example below.