



# **iTX™ 2.9 Service Pack 4**

Integrated Playout

## **Release Notes**

09 May 2017

[www.grassvalley.com](http://www.grassvalley.com)

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# Introducing iTX 2.9

iTX 2.9 is a cumulative, full-version release of the iTX software, in that it contains all the features and fixes from the initial v2.9 release and supplemental releases since. As such, it can be used for new installations, for upgrading from one major and minor release to another, or for updating the same release stream.

## Note:

iTX 2.9 introduces a 64-bit version of the File Processing Pipeline service, which is now used by the following services:

- Delivery Manager - Uses FPP for media analysis
- Missing Materials Manager - Optionally uses FPP for media analysis (watermarking and file size)
- FPP Job Service - Uses FPP for keyframe generation, proxy generation and transcoding

Before upgrading to iTX 2.9 you must ensure your appliance servers have a 64-bit compatible processor and operating system.

## Note:

As of version 2.9 of iTX onwards, the following operating systems and database are now supported:

- Microsoft SQL 2014 Service Pack 2
- Windows Server 2012 R2 Standard
- Windows 10 Professional 64-bit Edition

## Version 2.9 SP4 (build 3.29.4.720)

### New Features

#### **ITX-7065: Live Channel is supported by channels using Output Server 2**

The Live Channel functionality is now the same as for Output Server 1 and Output Server 2 channels. The Live Channel uses the Main channel configuration so no channel configuration is available for Live channels. Configuration changes must be performed in the Main channel configuration. Note that the Live channel functionality is not supported for Simulcast or Regional channels, but it is supported in Leader/Follower configurations.

### Fixes

#### **ITX-8740: Schedules disappear from Channel Control layout's Schedule Grid under certain conditions**

The contents of the schedule grid in the iTX Desktop's Channel Control layout disappeared and the channel was labeled as 'Off Air' after switching to a second channel and then back again. Despite this behavior, the channel's playout (sound, video and graphics) was not affected. This issue was resolved by fixing a problem with the Channel Health in the Engineering layout.

### **ITX-8733: Product version, System logs and TXPlay logs missing the iTX version number**

An issue existed where the iTX product version field was blank. Consequently, the iTX version was missing from the Framework System and Output Server TXPlay logs. This issue has now been fixed.

### **ITX-8541: Output Server 2 stopped operating when using the Secondary Recording or On-Demand Process**

When using the Secondary Recording or On-Demand Process, Record Monitoring jobs are created to allow monitoring of growing files during the recording process. When complete, these jobs are automatically deleted by the OPUS Service seven days later.

When running on a system with Microsoft .NET Framework 4.0 installed (and no newer version of Microsoft .NET Framework is present), Output Server 2 now accepts the deletion of these jobs and no longer stops operating. It was noted that the undesirable behavior did not happen on systems with Microsoft .NET Framework 4.5 or newer installed.

### **ITX-8428: A graph pause was experienced when trying to play a clip on an Output Server 1 channel**

ITXPlayer/Pandora produced a graph pause when media containing SMPTE 436M ancillary tracks were used frequently in the schedules. An issue related to Pandora's VANC processing has been corrected and the graph pause no longer occurs.

### **ITX-8331: Media being restored from Diva now gets re-analyzed**

Previously, media was not being re-analyzed when being restored from Diva. In a scenario where extra audio tracks were added to the media after it was initially registered with iTX, the modifications were not in place once the media was restored from Diva. This has now been fixed.

### **ITX-7993: The Channel Assignment Display component caused the iTX Desktop to become unresponsive**

When a system consisted of numerous workstations, views and channels, the Channel Assignment Display component of the iTX Desktop sometimes caused the application to become unresponsive.

Several changes were made to the Channel Assignment Display to increase the performance of this component. The functionality didn't change but the response from the component is now quicker and no longer hinders the performance of the iTX Desktop.

### **ITX-7915: Cueing a Live event causes subsequent cued items to remain in a Not Ready state**

Cueing a Live event before the media check was complete caused the status of subsequent cued items to be Not Ready, which prevented them from being taken to air. To resolve this issue, items can no longer be cued until the media check is complete.

### **ITX-7889: Unable to add shots to a previously saved project in iTX SmartClient**

In SmartClient if a project was saved before any shots were added, the project would not retain any track information and additional shots could not be added. This issue has been resolved and the project now retains the number of tracks it was created with.

### **ITX-7873: Closing the slave TXPlay1 routes the slave to air**

When closing the Slave TXPlay1, it is no longer promoted to on air if it cannot communicate with the Master.

### **ITX-7836: Unable to load BXF schedules containing SCTE 104 data in the iTX Desktop**

BXF schedules containing SCTE 104 data that were imported using the Schedule Processing service can now be successfully loaded and appended in the iTX Desktop.

### **ITX-7775: Manually triggered items that have been completed could not be copied and pasted into the iTX Desktop's Schedule Grid**

The context menu commands for pasting items in the Schedule Grid (Paste, Paste Above, Paste End) have been fixed and users are no longer prevented from moving adding item using copy and paste commands.

### **ITX-7393: LGK fails after clip on hold**

When two live events are back-to-back with different external logos and the second live event is on hold, pressing Take Next no longer causes the second external logo to fail.

### **ITX-7165: iTX Desktop was sometimes unresponsive after changing channels using the Channel Selector**

The responsiveness of the iTX Desktop when changing channels has been improved by resolving backend exceptions that occurred in some circumstances.

### **ITX-6189: The names of secondary recordings are overwritten on historical items**

In the Schedule Grid, the names of older secondary recording items are no longer being updated with the name of the next, last or current recording.

### **ITX-5477: The AssetTemplate parameter has been added to the DM Restore Rename and Segment workflow**

The AssetTemplate parameter has been added to the DM Restore Rename and Segment workflow. This parameter allows a default template to be used to specify the frame rate. If the assetTemplate is not defined, then the default behaviour is to assume FSP30DF. This effects the Masstech, pathfire and pitchblue type archives.

### **ITX-5332: Multi-layer CGs are not removed following a schedule restore**

Multi-layer CGs are now consistently removed at the correct time following a schedule restore.

### **ITX-5125: Imagestore 750 layer 4 does not work even if the number of configured layers is 4 or more**

Imagestore 750 layer 4 now works when correctly configured. The 'Num Layers' field in the Channel Config > Plugins > External Logo configuration now only allows you to select from a value of 0-4 (zero being 'not configured') and defaults to a value of 2 when first installed.

The External Logo plugin on the Channel Control layout 'Ex Logo' plugin also only allows you to select layers 1-4.

### **ITX-3530: iTX Desktop is slow when changing channels**

Some exceptions in the iTX Desktop logging related to the VANC, SCTE, Clarity and Audio Plugins have been resolved.

These exceptions happened when changing from one channel to another using the Channel Selector with the specific Plugins loaded.

## **Version 2.9 SP3 (build 3.29.3.678)**

### **Improvements**

#### **ITX-6944: Boxing not supported in open PAC subtitle files**

Boxing was previously not supported when importing open PAC files through Delivery Manager. Now any files which do not display boxing should be re-imported.

# Fixes

## **ITX-7375: Asset Fixer and Import incorrectly grouping mono audio tracks**

In the event of there being no DolbyE information, the mono tracks are now correctly grouped. If any assets need to be reprocessed, the Asset Fixer's Configuration now features a Set Logical Audio tab where the Group Mono Tracks option can be set and the Update Assets button can be used to reprocess the assets.

## **ITX-7217: BXF DUB List Transform not handling 1080i content correctly**

The BXF DUB List Transform was not handling the 1080i format correctly and was not setting the source format to 16x9.

The new Transform will be handled correctly and the source format will be set to 16x9.

## **ITX-7144: The latest configured GPI is not used when a Live Event is scheduled**

When a Live Event with a GPI configured in the Live Event Plugin was scheduled, the GPI used was not the latest configured GPI. Instead it was using the one that was configured when the Live Event was created. This means that if the Live Event Plugin Configuration was changed after the Live Event was created (in a schedule or in the content selector), this change was not reflected.

Now the Live Event uses the configuration that is set at the On Air time. Any configuration change will not affect the on air item.

## **ITX-7142: Items in a BXF file without the <Title> tag are not imported correctly into ITX**

Now if an item does not have the <Title> tag in a BXF file, it will be imported into ITX with an empty string as Title.

## **ITX-6996: Matrix and Destination fields disabled in the Live Event configuration plugin**

When clearing the matrix and/or selecting a router destination, the Matrix and Destination fields remained greyed out (disabled) and would not be enabled until you selected another channel. Now if you clear the matrix and select another matrix, these fields are available (enabled).

## **ITX-6718: Lives following a skipped sequence fails to go to air**

Lives following a skipped sequence will no longer fail to go to air. If the start time of the event is fixed and it is in the past, but not done already, it is now treated as a restored event.

## **ITX-6651: The security service incorrectly expires security tokens**

Under certain conditions, the security service was expiring security tokens causing nondeterministic errors in clients. This fix corrects the security token's expiry behavior.

## **ITX-6035: Delivery Manager partial restore from DIVA location fix for non-zero based media**

DIVA archive location information is now updated if the asset location has no existing analysis information, rather than based on a zero duration (e.g. placeholder assets); this ensures that the inpoints are correctly set when issuing a DIVA partial restore job.

Additionally, if a DIVA archive location contains no media analysis information, an attempt is made to use an alternate location (with media analysis information/correct inpoints) when issuing a partial restore request.

**ITX-5369: The iTX Desktop's event editor did not play the preview video from the correct position as specified by the in/out points**

Switching between daughter clips and then previewing the clip in the event editor now resets the daughter clip's in/out points correctly.

## **Version 2.9 SP2 (build 3.29.2.646)**

### **Fixes**

**ITX-7656: Importing a clip while it was being cached prevented it from being played out afterwards**

If a clip was being cached when a new version of the clip was dropped into an inbox for ingest, this caused the clip to believe it had been cached when in fact the caching had been cancelled. When the clip event reached the on-air point, it would fail to playout. This has now been fixed.

**ITX-6896: Live Event Audio Configuration Program numbers created correctly**

Prior to this fix, Creating or editing the Audio Configuration for a Live Event would cause every Program to have an ID of 1. This was incorrect, and resulted in only the first audio track being played out. If others were selected, the result was silence.

**ITX-6782: An item in the schedule failed to cache**

The item's caching state is now correctly set at the point that a copy job is requested within the Media Cache Service.

A new caching state "CacheRequested" has been introduced. This state is distinct from "Caching", where a progress update has actually been received from the in progress caching job.

**ITX-6747: Original schedule user data was lost**

Upon an update to existing schedule from REST client, user data is no longer lost from original schedule.

**ITX-6730: Schedule imported by Legacy Import Service has VertigoXG events set to keyer 0**

A Schedule imported by Legacy Import Service had all VertigoXG events loaded with keyer 0. Now they are all loaded with the correct keyer value.

**ITX-6691: Missing subtitles in iTX Desktop's Preview as a Channel view**

Subtitles are displayed in iTX Desktop's Preview as a Channel view when outputting to SDI.

**ITX-6683: Redundant TXPlay/TXPlay2 client connection to Media Watcher**

Version 2.8 onwards, TXPlay and TXPlay2 do not require a client connection to Media Watcher as the functionality had moved to the Media Cache service. This connection is no longer required and has been removed.

**ITX-6673: Default Cache Throttle value has been changed from 100 MB/s to 40 MB/s**

The default value for Cache Throttle is currently set to 100 MB/s (Megabytes). Having such a high value could potentially disrupt streaming while media caching. As such, the default value for Cache Throttle has been changed to 40MB/s.

Even if the caching throttle value is reduced for smooth streaming, other ITX channels (using the same Isilon) may still be still caching with 100 MB/s, which can effect the Streaming Channel.

Note: This change is for Output Server 1 new channels & Greenfield install only.

Customers who will be upgrading from previous ITX build will still be getting the default value as 100 MB/s.

### **ITX-6534: UpdateItem causes schedule restore on backup with stale data**

The Freeze information of the event was not being reset during UpdateItem.

### **ITX-6496: Unable to submit an On-Demand Process job through the REST with Schedule XML**

It is now possible to submit an On-Demand Process job through the REST interface by specifying the schedule to render as its ITXML format in a "ScheduleXml" tag. This means the "AssetName" and "AssetType" tags are not necessary and can be ignored. You must set the "RequiredAsset" tag to false in that case.

Here is an example of a REST body to achieve this:

```
<Job Operation="Create">
  <Type>On-Demand Process</Type>
  <RequiresAsset>>false</RequiresAsset>
  <Priority>25</Priority>
  <RequiredBy>2016-04-05T20:00:00Z</RequiredBy>
  <JobData>
    <OnDemandMastering.MezzanineAssetName>VOD</OnDemandMastering.MezzanineAssetName>

    <OnDemandMastering.OnDemandRecipeName>OnDemandRecipe</OnDemandMastering.OnDemandRecipeName>
    <OnDemandMastering.ScheduleXml>
      <Schedule name="scheduleName">
        ...
      </Schedule>
    </OnDemandMastering.ScheduleXml>
  </JobData>
```

### **ITX-6294: Output Server 2 failed to complete the caching of clips**

Output Server 2 cached clips up to 99% and then stopped. This problem was related to the cache file size and has since been resolved.

### **ITX-6278: TXPlay became unresponsive during media caching**

An internal fix to the media caching code has resulted in TXPlay no longer becoming unresponsive during media caching.

### **ITX-6277: Clips failed to cue due to missing media**

When a clip fails to cue due to missing media (e.g. the physical file being missing from the cache), TXPlay will show two error messages with the second 'ERROR in the Audio Channel' message showing the file path where the missing file should be.

### **ITX-6273: Missing Open subtitles in 480i59 and 576i50**

Open subtitles at SD resolutions are now rendered in case where there is a VBI line conflict between subtitles and other ancillary data such as AFD, VITC and VLI.

### **ITX-6264: OSC User Data not imported through Legacy Schedule Processor**

When constructing the schedule, the text\_data was used for the User Data. This was changed to use the user\_data value as specified in the OSC documentation.

### **ITX-6221: Ingest service fails to cue**

There was a subtle timing issue which meant that the stop record command was not sent to the Encoder, which caused the next encoding to fail.



### **ITX-6218: Logo disappears when the channel goes into Hold**

When a live event has a duration logo and the channel goes into hold, the logo is removed while the live is extended.

Now the logo is extended together with the live event.

### **ITX-6176: Embedded subtitle reference files are taking precedence over scheduled subtitles**

A scheduled subtitle secondary now always takes precedence over the embedded reference file unless all mapped services in the Subtitle Event Editor are set to 'None'. In such a case, embedded reference files will go to air depending on the 'Caption Passthrough' setting.

This applies to Output Server 2 only; Output Server 1 is unchanged and embedded reference files always take precedence.

### **ITX-6087: Skipped items appear in the wrong order in the As Run files**

Skipped items were being sorted by 'End Time'. Since skipped items have a duration of 0, they should not be sorted by duration. Skipped items now appear in the As Run file in the order in which they appeared in the schedule.

### **ITX-6060: Global ID not being extracted from DUB list**

When a dub list is imported, the Global ID was not being translated from the DUB list into the itxml.

### **ITX-5998: Particular schedule scenario involving Join In Progress items caused video jitter and stutter**

Video jitter and stutter resulted when TXPlay unnecessarily cued 10 clips if the start time of the Join In Progress item (and the items followed by Join In Progress) was earlier than the next item after the over-running Live event.

### **ITX-5961: Back-to-back live events with secondary record are taking too long**

The routing of back-to-back live events is delayed while waiting for a secondary record asset to be created. The asset is now created asynchronously so that the route does not wait on this.

### **ITX-5877: Channel did not cache until a failover was initiated**

Within the Media Cache service, Live assets sharing the same cache reference were placed in an invalid state and a schedule restore was required to recover. This problem has been resolved and the channel caches without requiring a schedule restore.

### **ITX-5871: Take Next sometimes results in the backup channel becoming out of sync**

A subtle timing issue was causing the backup channel to restore the schedule to the point just before a Take Next was performed and the old event was being put back on air.

### **ITX-5868: Output Server failover after the backup channel restarts**

Sometimes a Follower channel was being promoted to Leader after a restart due because the timeout for the connection between Leader and Follower was too short. To resolve this issue, the timeout value for the connection between the Leader and the Follower channels has been increased.

### **ITX-5685: ITXML item with StartDate and Timecode is not imported correctly**

Items start times specified with <StartDate /> and <StartTimecode /> are now correctly imported and exported.

### **ITX-5432: Wrong live event goes to air after TXPlay restart**

When TXPlay is recovering a live event to air, ensure the destination for the routing is set before issuing the route instruction.

### **ITX-5370: Rendering region of interest corrected for blank frames for SPGs**

Rendering region of interest is no longer calculated as full image height/width when blank frames are encountered within SPG sequences.

### **ITX-5282: Live logos can be erroneously taken to air using the space bar**

It is no longer possible to accidentally take a logo to air using the Live Logo control by accidentally pressing the space bar (or any other key).

This applies whether or not keyboard mapping is applied to the Live Logo control or if the space bar is assigned to another component on the same layout.

### **ITX-5083: With Cue To First Frame set, the first frame of the new clip is not displayed**

With Cue To First Frame set and the clip in cue state for 12 hours, cueing another clip resulted in the first frame of the old clip to be displayed instead of the new clip. Now the first frame of the new clip will be shown.

### **ITX-5006: PinPoint Search Result items are deleted, despite not being selected for deletion**

After performing a Select All in the PinPoint Search Results and then deselecting a few items, pressing Delete now deletes only the selected items rather than all items listed.

### **ITX-4938: Timecode of the last clip frame is not displayed**

When holding the last frame of the clip, the Timecode of the clip is now displayed.

### **ITX-4127: Playout of long clips while caching to Output Server resulted in stutter on air**

Delays in reading data for Pandora/iTXPlayer caused stuttering. To make caching more efficient, a new property was added to Configure Output Server Config form that allows you to configure the Media Cache block size. For optimal performance while streaming media, we recommend the following media cache settings:

- Cache Throttle in MB/s = 16 MB
- Cache Block Size in MB = 1 MB

### **ITX-981: The HCO Router Service produces an excessive quantity of logging data**

The iTX HCO Router Service was logging large volumes of data if the HCO card it is connected to lost communication with iControl. For example, if the iControl server was re-booted or the Ethernet cable was pulled from the frame controller card, the HCO Router Service would get stuck in a loop logging messages about data not being recognized as headers.

The HCO Router Service has been updated so that it no longer produces excessive logging if bad data is encountered on a socket stream.

### **ITX-400: LGK CUE fails if LGK response is too quick**

If the LGK response is too quick there was no time to set the event state to "cueing" and the response was discarded.

After the fix the event state is set to "cueing" before the message is sent to the LGK and therefore the response from the LGK will always be considered even if it is received quickly.

# Version 2.9 SP1 (build 3.29.1.547)

## New Features

### **ITX-6156: On-Demand assets can be delivered to a YouTube channel**

Using Delivery Manager, you can now deliver an On-Demand asset to a YouTube channel. Authorization must be carried out when configuring the endpoint to be able to deliver to YouTube.

### **ITX-5769: On-Demand layout available in the iTX Desktop**

The On-Demand layout is now available in the iTX Desktop for all standard resolutions. This layout allows you to start and monitor On-Demand jobs from a single interface page.

### **ITX-5736: iTX Services will use licenses on a local dongle instead of a Site License**

If an iTX system has a dongle plugged into the local server and a Site license, iTX services will always use the licenses from the local dongle rather than the Site license.

### **ITX-5595: Ability to perform the On-Demand Process jobs in parallel**

iTX On-Demand is now able to perform a rendering job in parallel (parallel processing) instead of in sequence. Previously, the Mastering would complete and then the proxy would take place, followed by the transcoding and finally the delivery. Now delivery and transcoding occur at the same time as the Mastering of an schedule. Proxy generation begins as soon as the mastering completes. This implementation helps to shorten the overall On-Demand Process time.

### **ITX-5592: iTX On-Demand supports multiple transcode steps**

It is now possible to configure the On-Demand recipe to transcode the mezzanine asset into multiple formats. The On-Demand Recipe Editor allows selection of multiple transcode profiles and it is also possible to submit an On-Demand job with multiple transcodes via REST interface.

The REST command for multiple transcodes has also been modified. Here is an example:

```
<TranscodeProfiles>
<Profile>CableLabs MPEG2 HD</Profile>
...
</TranscodeProfiles>
```

### **ITX-5591: iTX On-Demand supports multiple delivery endpoints**

On-Demand deliverables can now be exported to a number of different endpoints. The types of endpoints supported by the Delivery Manager include, but not limited to: FTP, Anvato, CIFS and YouTube.

### **ITX-5271: iTX 2.x Migration endpoint type added to iTX Delivery Manager**

The Delivery Manager's new iTX 2.x Migration endpoint type is used to move assets from a source system to a target system where both systems are running iTX v2.x. This is especially relevant for iTX v2.3 systems that do not support the newer asset export functionality.

# Fixes

## **ITX-6128: User data missing from the BXF As Run logs**

User data, such as Billing Reference and Unique ID, is now transferred from the imported BXF schedule to the BXF As Run log.

## **ITX-5872: The Caching Service sometimes failed to re-cache media items after the on-air sequence was modified**

When a large sequence is on air and it receives a modification, all of the items in the sequence are now properly reloaded. The Caching Service accomplishes this by freeing the cached media clips and then re-caching the items in quick succession without failures.

## **ITX-5870: Scheduled logos are added multiple times on slave channel**

In Master/Slave channel setup, schedule logos were added again on Slave channel when Master schedule is change and Slave channel syncs with Master.

## **ITX-5703: The "Take Next Seq" GPI trigger has been renamed to "Seq Start"**

The "Take Next Seq" GPI trigger which can be configured in the GPI plug-in configuration within the iTX Desktop has been renamed to "Seq Start". This change reflects its behavior which is the same as the "Sequence Start" button in the Channel Control layout. This change does not affect how the GPI trigger behaves.

## **ITX-5422: The CG application's dynamic clock text in the iTX Desktop refers to the system time instead of the channel offset time**

The CG application's dynamic clock text now correctly receives UTC offset values from the associated channel. Channel UTC offset now respected when CG clock is on air.

## **ITX-5421: Clips scheduled after a Live event remained in a Cued or Cueing state**

A grouping of three short clips scheduled after a Live event remained in a Cued or Cueing state because FPP slots were not being released.

This fix ensures that the slots are freed up once playout of the item(s) has completed. Items now correctly go from Cued > ReadytoCommit > OnAir and playout with sound and video as expected.

## **ITX-5407: iTX Desktop client stopped responding while using the Channel Control layout**

A fix allows the iTX Desktop to consistently operate when the Channel Control layout is being used.

## **ITX-5400: As Run files appended instead of overwritten**

The As Run service uses the LastWriteTime to evaluate if the As Run file is from the last month. This can be incorrect if another user or process has opened and saved the file. To avoid this error, the CreationTime is now used to check if the file is from last month.

## **ITX-5355: Manually entered sub-channel events on a live channel fails to play on air**

When an event is moved between sub-channels, the original cache information of the event was retained and prevented the event from playing on air. To correct this issue, the cache information is now erased when the event is moved between sub-channels.

### **ITX-5305: Pilat to DTSS import would not set the Start mode for Stills to Fixed**

Stills were being treated as Secondary items rather than Primary items. As such, the Pilat Start modes were not mapped to iTX as Fixed.

### **ITX-5279: Wrong date and start time for midnight in the BXF As Run**

Items scheduled to start exactly at midnight (UTC) were reported in the BXF As Run as being the previous day, not the next day. This issue has now been fixed, so that at midnight (00:00:00:00), the correct date is given.

### **ITX-5277: SmartClient fails to load 4K proxy media**

SmartClient is now able to play 4K proxy media when the proxy media is generated by the FPP Job Service.

### **ITX-5265: Source Format and Active Region warning**

The Active Region warning is only raised when the Active Region of the scheduled item is different from the clip's Active Region and none of them is pass through. If one of them is pass through, then the Source Format is used to do the comparison instead of the Active Region.

### **ITX-5151: The import of a schedule caused secondary recordings to be marked as Complete regardless of the specified default**

Secondary record mode now respects the default status upon schedule import.

### **ITX-5058: Licensing Life-cycle management added**

When a licence is removed from the system (e.g. local/central dongle unplugged) services will attempt to recover the licence after a timeout. If the original licence is not available, the original licence will be freed and an attempt to request a new licence will be made. This process continues until a licence becomes available.

### **ITX-5047: External Logo failing occasionally**

Occasionally an external logo fails to go to air. When the parent event goes to air and tries to cue the next events, the external logo is uncued and fails to recue in time.

### **ITX-5020: HCO Router causes unnecessarily large iTX logs**

Improvements were made to the HCO logging to stop too much data going to the system logs when an error occurs.

### **ITX-4773: Emergency slide appears on air due to the extended 'Cueing' state of MXF clip**

MXF clip was held in Cueing state for more than 15 seconds, which caused the Emergency slide to display on air. The cue delay was related to the MXF Partition Size setting, which was set to 1 MB when 70 MB was needed. To prevent this situation from occurring in the future, the Auto setting was added to the MXF Partition Size options. The Auto option enables the MXF loader to try both sizes; first 1 MB and if that fails then 70 MB.

### **ITX-4627: SmartClient users without Edit permissions cannot scroll multi-line metadata textboxes**

When a textbox is rendered for a user without Edit rights, the textbox is now enabled so that they can scroll but it remains read-only.

### **ITX-3554: Delivery Manager immediately deletes existing iTX location during ingest**

When ingesting new media for an asset that already has an iTX location, Delivery manager would previously delete the existing location. This could leave the asset without any media if the subsequent import failed. To resolve this issue, Delivery Manager leaves the existing iTX location in place until the new media has been successfully analyzed after which it is replaced.

# Version 2.9 (build 3.29.0.487)

## New Features

### **ITX-5854: Upgraded AJA driver and new firmware versions**

iTX 2.9 requires AJA driver 12.3.13.117.

The firmware versions required are:

- Corvid LP: 0x34
- Corvid 44: 0x0E
- Corvid 88: 0x1A

You can find the firmware for Corvid 44/88 in the AJA Drivers.12.3.13.117.zip file. Corvid LP should already ship with firmware 0x34.

### **ITX-5680: Output target branding level selection (Output Server 2 only)**

The level of branding can be set for each output target (SDI main, SDI secondary, and IP). For example, one output may set its branding level to clean so to exclude logos or voice overs, while another may set set to Complete to include all branding. See "Configuring Output Branding Levels for SDI and IP Output Targets" in the Output Server 2 Channel Configuration Guide for more information.

### **ITX-5633: Preview As Channel behavior for channels that are offline**

Preview as Channel in FPP mode allows you to preview features and settings that are unique to the channel, such as subtitles and AFD codes. When the master channel that the preview is trying to simulate is offline, the iTX Desktop is not able to replicate the channel settings and so the preview defaults back to standard asset preview.

### **ITX-5606: Added the ability to dynamically switch the ACMOD for Dolby D and Dolby D Plus outputs**

Instead of automatically upmixing audio to the configured audio program channel count, the source audio can be set to passthrough as is. This results in the Dolby D / Dolby D Plus output dynamically switching the ACMOD to match the channel count of the source audio.

### **ITX-5605: Added support for Dolby Digital Plus audio output**

Dolby Digital Plus is now fully supported as an audio output type. This includes the ability to define audio programs which contain 7.1 channels and to select Dolby Digital Plus as the type for audio output program groups.

### **ITX-5604: Branding rendering priority has been improved (Output Server 2 only)**

In Output Server 2, logos and CGs are now rendered on top of any XG Inside branding, instead of the XG Inside branding appearing on top of logos and CGs in previous versions of OS2 in iTX.

### **ITX-5603: Redesign of Output Server 2 Configuration page**

The Output Server 2 Configuration page has been redesigned to include all available output target settings, including options for SDI targets and complete audio, video and transport stream encoder configuration for IP 2022-2 output targets.

Audio channels of IP 2022-2 targets can also be grouped into programs and have their specific encoder settings configured individually.

See "Configuring Channel Playout" in the Output Server 2 Channel Configuration Guide for more information.

### **ITX-5348: Added support for configuring audio PIDs for IP outputs (Output Server 2)**

For IP outputs, each Audio Output Program Group requires a unique numerical PID. The PID column has been added to the table used to assign audio programs to audio output program groups in the Output Server 2 user interface's Configuration > Audio tab.

### **ITX-5281: Added QuickTime Animation Logo support**

QuickTime Animation media, also known as QuickTime RLE, can now be ingested as a logo format through Media Watcher. It is now an officially supported animated logo format in iTX, preserving transparency.

### **ITX-4945: Transmission mode is selectable in the Output Server 2 Subtitles configuration**

The transmission mode of a Teletext configuration can now be set on the Output Server 2 Configuration page's Subtitles tab. Select either: OP47Split (the default) or SMPTE2031Split.

### **ITX-4843: New Database Service to monitor iTX databases and run maintenance tasks**

A new Service to monitor iTX databases and run maintenance tasks has been created. This service complements the framework services and is installed as part of the Database Server installation option. This service takes over the database monitoring and task management from the G3 Server Controller which is now dedicated solely to controlling services.

Also, the following database maintenance tasks are no longer considered as best practice and have been deprecated.

- ITX Maintenance Plan (Full)
- ITX Maintenance Plan (Diff)
- System Database Backup (Diff)
- User Database Backup (Diff)

### **ITX-4808: TR-101 logging for transport streams**

TR-101 input stream quality analysis can now be logged within Output Server 2.

### **ITX-4727: Some older or obsolete services have been removed or replaced in iTX**

The following services have been removed from iTX or replaced with alternate services:

- ES On Demand
- AE Render Server
- GFX
- System Manager
- OPUS iTX Bridge Service
- OPUS Text Index 2.0 Service
- TXRoute

### **ITX-4718: Teletext and DVB Subtitles S2022-2 IP Output Configuration**

Teletext and DVB Subtitles Transcoding settings for S2022-2 IP outputs are now available on the Output Server 2 Configuration page's Subtitles tab. These new settings allow you to configure the related descriptor and packet identifier of each elementary stream item.

### **ITX-4717: Added support for MPEG and AAC types for Audio Output Program Groups**

When configured for IP output, the Audio Output Program Group now supports the new MPEG and AAC types. Additional configuration settings are available for these new types. See "Assigning Audio Programs to Audio Output Program Groups" in the Output Server 2 Channel Configuration Guide for more information.

### **ITX-4526: Database Report Feature**

It is now possible to get a report of the iTX database health. This report can be used to diagnose issues with the database, such as orphaned records and tables that need maintenance. This report can be run periodically from the Database Service to provide a record of the database status over time. These reports can be analyzed to provide the basis for preventative maintenance and/or defect repair.

### **ITX-3769: Added iTX On-Demand as video-on-demand(VOD)/over-the-top(OTT) solution**

iTX now offers the possibility to create content for VOD/OTT broadcast platforms. This allows the automated creation of mezzanine video assets, ahead of air time, faster than real time. The mezzanine asset is obtained by rendering a schedule, which can be destined for linear channel playout or crafted to contain content exclusive to a VOD platform. Mezzanine assets generation is triggered by submitting a work order containing a schedule to render and an On-Demand recipe either manually or with a REST command. On-Demand recipes are created by the user and define many parameters describing the process of rendering the mezzanine asset. These options are:

- The mezzanine asset's format
- The channel settings to apply (resolution, audio programs, etc.)
- The Nielsen watermarking insertion
- The format to which the mezzanine asset should be transcoded
- The generation of a proxy file
- The generation of metadata representing the schedule rendered
- The delivery of the created content to a Delivery Manager end point

iTX On-Demand also offers the possibility to create mezzanine assets containing live events and making the content available shortly after the end of the aired program.

### **ITX-3558: New GPI driver available to support the Densité GPI-1501 card**

When the GPI service is installed and running on the Framework Server, a new GPI-1501 driver permits iTX to support the Densité GPI-1501 card, which allows for 20 input connections and 8 bidirectional connections.

### **ITX-3360: Changes to the VizRT Graphic Configuration and iTX Desktop's VizRT Plugin**

iTX Desktop > Engineering layout > VizRT Graphic Configuration

- The Address field should now be set to the IP address or name of the machine that is running the VizRT Trio software.
- When a VizRT Page is displayed for a Duration and the Duration has passed, the new Event End Mode determines whether the page is turned off (a cut) or will continue to the next animation stop point, effectively animating the graphic off the screen.

iTX Desktop's VizRT Plugin

- A new option on the VizRT plugin in the Content Selector allows the removal of existing pages by selecting Remove or Remove All Pages.
- The Content Selector allows the action to turn a page Off, On or show for a Duration.

ITXML/BXF Support

- VizRT events can be scheduled via ITXML and BXF. This includes the ability to set the mode to be Off, On or Duration.
- BXF import for VizRT secondary events is now a format similar to that of the Vertigo secondary event. See the BXF and ITXML specifications and user guides for more information.



### **ITX-2497: Introducing the DM Asset Import layout**

iTX 2.9 introduces a new Desktop layout called DM Asset Import, which has the following features:

- Allows operators to import and rename media from Delivery Manager.
- Underlays the two existing asset panels.
- Introduces a new iTX Desktop component for asset import control called WPFAssetImportControl.cs.
- Available only in 1680x1050 resolution.

### **ITX-2213: File Processing Pipeline plugin is now a licensed feature (Output Server 2)**

The File Processing Pipeline plugin for video playback within Output Server 2 is now a licensed feature.

To use the File Processing Pipeline plugin for video playback within Output Server 2, its license credentials must be included on the iTX software key (dongle).

## **Improvements**

### **ITX-5165: Masstech Message Collisions**

It is possible for messages to the Masstech CatchBlue device to collide when polling for inventory while simultaneously importing content. The result would be an incomplete inventory poll resulting in unnecessary external asset deletion in iTX. This issue has been solved by qualifying messages sent to Masstech with an interprocess communication mechanism.

### **ITX-4544: Introducing the 64-bit edition of File Processing Pipeline**

iTX 2.9 introduces a 64-bit version of the File Processing Pipeline service, which is now used by the following services:

- Delivery Manager - Uses FPP for media analysis
- Missing Materials Manager - Optionally uses FPP for media analysis (watermarking and file size)
- FPP Job Service - Uses FPP for keyframe generation, proxy generation and transcoding

Before upgrading to iTX 2.9 you must ensure your appliance servers have a 64-bit compatible processor and operating system.

### **ITX-4515: Changes to the options on the TXPlay 2 iTX Channel Config page**

The user interface for TXPlay 2 Config has been streamlined, to make it simpler to create and configure channels. The changes include:

- The Root Name and Channel Name fields have been combined into one, dual purpose field.
- Fields that could only have one mode of configuration have been removed
- An Output Type field has been added, allowing you to choose between SDI and IP playout.
- Due to the new Output Type field, the Playout Type has been simplified, so that it no longer lists both SDI and IP playout types.

For information on using TXPlay 2, see the iTX Output Server 2 Channel Configuration guide.

### **ITX-4350: SmartClient - ShotList Export can now create Final Cut Pro XML v5.0 files**

The Export ShotList workflow in SmartClient can now export a Final Cut Pro XML v5.0 format file, which can be loaded into Grass Valley Edius v8.10 or Adobe Premiere Pro CC v9.0.2 (6) editing packages.

# Fixes

## **ITX-5874: Take Next would fail, despite the item's status being Ready to Commit**

In TXPlay, if the previous and next item to play had identical names, then the Take Next would fail. This issue has been resolved.

## **ITX-5822: Simultaneous subtitle import prevented events tab from being populated**

When importing multiple subtitle assets simultaneously, it was possible for the subtitle events to be incorrectly registered causing the Events tab in the Subtitle Asset layout to be unpopulated for the Intent being imported. Upgrading to 2.9 fixes the incorrect event registration and prevents the issue from occurring again.

## **ITX-5737: Local time offsets in exported schedules incorrect changed**

When exporting a schedule to an ITXML file in v2.8, a local time offset was applied to all duration information. If, when importing the schedule, the local time zone was different to when exporting, such durations (e.g. media duration, media in-point and out-point) of the schedule events were erroneously adjusted, causing incorrect behavior.

In v2.9, the local time offset is no longer applied on export and is ignored on import. This means that any schedules created by v2.8 can be correctly imported by v2.9.

## **ITX-5492: WAS fails to import some schedules due to SQL collation error**

Enabled Unicode support for schedule importing through WAS.

## **ITX-5403: VANC data not stored in files**

The Encode Server was not correctly setting Encode Profile values, which resulted in VANC data not stored in files. Upon playback of the encoded clip, VANCs (i.e. SCTE104) were not triggering held items.

## **ITX-5395: The 64 bit version of the iTX Desktop stopped working**

The 64 bit version of the iTX Desktop stopped working due to an unhandled exception. This issue has been resolved.

## **ITX-5231: An audio glitch occurred followed by a couple of frames of audio silence in raw audio mode at the transition between clips with Dolby audio**

For all transitions, a one frame audio fade in and out is performed to soften the junction between two clips. In raw audio mode, this should not be done. We have no way of knowing what the audio is. If the audio happens to be any kind of Dolby data, we will corrupt the encoded data, rather than providing a soft transition. For raw audio mode only, the first/last frame fade in/out should not be performed. This has been changed and resolved the audio glitch and audio silence that was occurring.

## **ITX-5215: Placing a channel on hold caused an increase in memory usage**

When a channel was on hold, a new TXMediaEvent was created every 6 seconds causing high memory usage. This issue has been resolved.

## **ITX-5137: During JIP removal procedure, time mode was changed to fixed end and caused an outage**

A JIP item has a fixed start-time and is now allowed to be converted to a Fixed item. Before, an error would be displayed if the JIP had rolled under a frozen item (such as a JIP message pinning a Live) to the point the start-time was before the start-time of the frozen item.

### **ITX-5115: The GPI End Sequence failed to take next cueing item**

If the next item after the on air sequence was in the cueing state for a small duration, then the GPI End Sequence failed to take next cueing item. This issue has been resolved.

### **ITX-5088: Playback performance issues when duplicating audio tracks to more than one pin**

Audio stutter, lip-sync problems and inaccurate subtitle playout is no longer experienced during video clip playout when duplicating audio tracks to more than one pin.

### **ITX-5084: Global Edit does not respect manual holds, which caused an outage as the live source was taken prematurely**

Manual Hold is now preserved for a live item which is replaced by a video or another Live item. Manual Hold is also preserved for video items which are replaced by a live item.

### **ITX-5050: Inpoint was not being overwritten during audio encode**

The Inpoint was not being overwritten after a scheduled audio encode. This has been resolved.

### **ITX-5049: Duplicate schedules appear when modifying chained schedules**

Duplicate schedules would appear in the LIVE channel when chaining schedules together and modifying one of the schedules in the chain.

### **ITX-5011: Media Cache did not update cached item after location change**

A Cancel Copy message generated a null reference error during a location update event if no copying was occurring. Perform a null check before trying to use this message.

### **ITX-4958: No response when the Configure Tracks button is clicked on the iTX Desktop's Channel Config page**

The Configure Tracks button on the iTX Desktop Engineering layout's Channel Config page now operates as expected.

### **ITX-4944: Unable to maintain the letter case (upper and lower case) of Schedule GUIDs**

The Preserve GUID Letter Case checkbox has been added to the Workflow Application Service Configuration. When unchecked (default), the Schedule GUID is displayed in all lower case letters and any upper case are converted to lower case. If checked, the GUID is processed without any changes to the letters (e.g. upper and lower case letters remain as is).

### **ITX-4913: All radio channels on the Output Server go to silence**

During the removal of a live source from a radio channel, there was potential for an unhandled exception to occur. This prevented the live source from being unloaded, which could lead to a memory leak. The exception has now been prevented and live sources will not be removed.

### **ITX-4908: BFX Schedule Sync Service missing a DLL file on install**

The iTX Installer reported that the Omnibus.G3.Automation.TXPlugins.TXVizRTCaptionEvent.dll file was missing. This DLL related to the BFX Schedule Sync Service is now included in the iTX Installer.

### **ITX-4890: CG Secondary Event returns to a Cueing state following a Schedule Restore**

When a Primary item was on air with a CG Secondary Event, performing a Schedule Restore changed the CG's status back to 'Cueing' on the Schedule Grid. This issue has been resolved.

### **ITX-4819: An error message appears when selecting channels in the iTX Channel Config window**

When selecting a channel on the Channel Config window in the Engineering panel, a message box would sometimes appear saying, "Error Getting Encode Profile List: Value cannot be null. Parameter name: item". This would happen each time a channel was selected and if you clicked OK to cancel the message, the message box would reappear several times. This issue has been resolved.

### **ITX-4775: Edit channel does not update restore status**

Following an upgrade to iTX build 3.26.4.437, when the status of a video clip changed from Restoring to Restored, the Schedule Grid of the Edit channel did not update to reflect this. This issue has been resolved.

### **ITX-4768: Evergreen functionality should replace media that's not on ITX as well as missing media (Output Server 2)**

For Output Server 2 channels, Evergreen functionality is now available to auto-replace scheduled media that has an asset placeholder, but no ITX location. This is configured using the 'Advanced Replace' option in the Engineering Configuration panel, found in iTX Desktop's Engineering layout. When enabled, users can enter a tolerance in Minutes to control how long iTX should wait when non-iTX media cannot be found, before auto-populating the playlist with the selected evergreen content.

### **ITX-4759: Duplicate chained schedule created when schedules are appended using Auto Schedule Update**

When a schedule was updated in TX-Edit or via the Pilat To DTSS Schedule Service whilst live on air, a duplicate chained schedule would be created. This issue has been resolved.

### **ITX-4751: Master Control Crosspoint wrongly set after a schedule restore or service restart**

The Master Control Crosspoint is now maintained correctly after a schedule restore or a service restart.

### **ITX-4745: Short clip was not played if scheduled between two master control events**

The wrong master control crosspoint was set if a short clip was scheduled between two master control events leading to the clip not being played. The crosspoints are now set correctly and the schedule plays fine.

### **ITX-4645: Scheduled aired items not showing in As Run**

Some scheduled aired items were not showing in As Run and exceptions were visible in the TXPlay logs. These exceptions are no longer raised and there are no missing items in the As Run logs.

### **ITX-4630: Skipped CG/Logo appears after a fixed item**

If a CG/Logo item was already in a committed state when it was skipped, the CG/Logo would appear on air after a fixed item. In such a case, the skipped CG/Logo item will now not be taken to air.

### **ITX-4617: Analysis of Corrupted Media Status**

A customer site reported that following an upgrade to iTX 2.6 SP4, video clips that were registered with Delivery Manager would sometimes have missing audio tracks. The physical files were restored and were present in the media folder, but Delivery Manger did not always analyze the tracks.

This issue has been resolved and as part of this fix, corrupted video and audio files will now be marked as 'Invalid' after being registered. Furthermore, corrupted video and audio files will also be flagged with a Status of 'Not Ready' when on the Schedule Grid.

#### **ITX-4430: Animated Logo crops one pixel from right**

Animated logos could be cropped one pixel from right, when trying to find region of interest. This issue has been resolved.

#### **ITX-4414: Live Asset fails unless the Live Event plugin is configured**

Following an upgrade to 2.4.10 SP9, if there was no configuration in the Live Event Plugin, a live event would fail. This issue has been resolved, so that no routing occurs and whatever is on the input source goes to air.

#### **ITX-4360: Using SmartClient to sending a shotlist to Avid fails when a shot's in an out point are after midnight**

When a shotlist contains a clip whose duration spans midnight and the in-point falls on the next day, a day is added to the in-point position so that the media file position is calculated correctly and doesn't produce a negative value. Processing the shotlist with the Avid workflow no longer causes an exception.

#### **ITX-4320: If file is not accessible for analysis stage, the asset appear as Invalid**

A customer site reported intermittent failures of the Delivery Manager Register in Place end point with clips that played out fine on the iTX 1.4 system they were migration from. During these failures, the Register in Place endpoint would attempt to analyze the media on the 1.4 media store, but would then indicate it could not find the file. The registration would complete but when the clip was viewed in the Locations tab of the iTX Desktop Asset layout, there would be no video or audio tracks listed. The end result was the clip would look fine on the Channel Control timeline, but when it went to play the audio would be missing. When this happened it would usually coincide with some sort of access issue on the 1.4 media store.

Now, when ingesting a file, if it becomes inaccessible due to a network error during the analyze stage then the asset will appear as invalid.

#### **ITX-4276: Items restored from Archive for current schedules are being purged just before they go to air (Missing Materials Manager)**

Items that had been restored from an archive for current schedules were being purged by Missing Materials Manager just before they were due to go to air. This was because previously iTX was using a cloned copy of the "Keep List", which was not guaranteed to have up-to-date information, due to the delay in purging threads (as specified by the purge criteria). For example there could be large delay (over a day), where the purge criteria would allow too many clips to be purged, only a few of which were actual iTX clips that could be considered as purge candidates.

To resolve this issue, iTX no longer uses a cloned copy of "Keep List" and instead uses the original "Keep List", which has up-to-date information.

#### **ITX-4267: Clock in a CG freezes**

A clock in a CG would no longer update and freeze after running for various amounts of time (i.e. hours or days). This issue has been resolved.

### **ITX-4257: Output Server does not send Recue command on both iTXPlayer and Output Server restarts**

If iTXPlayer or Output Server 1 were restarted while a schedule was playing out, TXPlay was not sending "Recue" command for already cued items.

To resolve this issue, both Output Server 1 and iTXPlayer have been updated:

- For Output Server restarts: Once TXPlay is notified that Output Server 1 has restarted, it will change the state of all the cued items to "Ready". As such, TXPlay will automatically send the "Cue" command again at the due time.
- For iTXPlayer restarts: Once Output Server is notified that iTXPlayer has restarted, it will inform TXPlay and TXPlay will change the status of all the cued items to "Ready". TXPlay will then automatically send the "Cue" command again at the due time.

### **ITX-4229: CGs on dual channel servers share the same temp folder, causing conflicts on playout (Output Server 1)**

On Dual Appliance Servers (Output Server 1) operating in dual channel mode, both channels would use %appdata%\TempCaptions as a temporary folder for CGs, which would cause conflicts on playout.

Now, for dual channel servers, each channel stores its temporary CGs in its own folder (%appdata%\TempCaptions\ "Channel Name").

### **ITX-4221: Using the Take selected item control while the channel was on hold caused the channel to go off air**

When using the 'Take selected item' control to take into an item further down the schedule when the channel is in hold would sometimes cause the channel to go off air. This issue was especially present if the item being taken had a V-fade, Fade/Cut or Cut/Cut transition. This issue has been resolved.

### **ITX-4125: CG crawls/tickers do not respect their scheduled duration (Output Server 2)**

An issue was discovered with CG crawls/tickers not respecting their scheduled duration. This would result in crawls ending before their scheduled duration. This issue has been resolved.

### **ITX-4092: New cut and paste functionality in the Schedule Grid**

In the Schedule Grid, it is now possible to paste primary items above other primary items, before they go to air.

In addition, the view controls in the Schedule Grid context menu have been consolidated into a sub-menu called View.

For more information, see the "Change the order of schedule events" in the iTX Desktop Operator guide.

### **ITX-4008: Secondary event triggered earlier than primary event when there is a Manual Take Delay (iTX Master Control)**

When using iTX Master Control, secondary events were triggered before the primary event when a Manual Take Delay was configured for the channel.

To resolve this issue, iTX Master Control secondary events are now taken to air at the same time as the primary event.

### **ITX-3905: iTX installer overwrites the EnhancedSCTE.xml file when an upgrade is installed**

iTX installer would overwrite the EnhancedSCTE.xml file when an upgrade was installed. This issue has been resolved, so the EnhancedSCTE.xml is no longer overwritten.

### **ITX-3825: Change Media Limits pop-up makes quick Duration edits difficult to perform**

In iTX 2.7, the Duration pop-up on the Schedule Grid was renamed Change Media Limits and enhanced with additional controls for changing In-Points, Out-Points and whether or not the item should hold points or hold duration. This interface was not user friendly if you only wanted to perform a quick Duration change.

Now, this interface defaults to focusing on the Duration field and can be collapsed to hide the additional controls introduced in iTX 2.7.

### **ITX-3786: As Run plugin assigns an incorrect date to schedule items that are not in chronological order**

If a schedule contained items that were not in chronological order, these items would be written to the As Run log for the wrong day. For example, if a secondary item was added with a Start+ duration which exceeded the start time of the next primary event and the next primary event occurred before the As Run rollover point, these items would be written to the As Run log for the wrong day. This issue has been resolved and the As Run plugin now correctly handles schedule items that are not in chronological order.

### **ITX-3768: Edit channel configuration can be modified from Engineering layout (Output Server 2)**

On Output Server 1 channels, an edit channel can have its own channel configuration, separate from its playout counterpart. On Output Server 2 channels, Edit channels inherit their channel configuration from their playout counterparts. This could cause confusion between the two systems, resulting in users expecting channel configuration changes for an OS2 Edit channel to be honored.

To resolve this issue and avoid further confusion, in iTX 2.9 when accessing the Engineering>Channel Configuration dialogue for an Output Server 2 edit channel, the user interface is replaced with the message "The EDIT Channel configuration must be done on the MAIN channel".

### **ITX-2909: Logo over a Live event was lost after restarting TXPlay 2 (Output Server 2)**

Following a TXPlay 2 restart, the Logo which was present over the Live event was lost and its Status on the timeline was 'PostScheduleRestore'. This issue has been resolved and logos now recover on a Live Event following a TXPlay 2 restart.

### **ITX-2765: The Schedule Sync service was not updating the house number in the BXF file**

The Schedule Sync service was not updating the house number in the BXF file when an asset was changed for the item in the current schedule. This issue has been resolved.

### **ITX-2469: As Run items are not written to the log when another process has locked the log file**

The SDS Standard Writer Plugin now keeps a dictionary of any files that should be written to the As Run log while the log file is subject to an exclusive lock. This includes both outgoing and incoming As Run logs over the As Run Start time.

### **ITX-2222: Take Next does not work when a schedule is dropped onto grid**

After a schedule was pasted into an empty Schedule Grid, the 'Take Next' sometimes did not work. This issue has been resolved.

### **ITX-442: Deleting a single spot from the Harris system does not pass through to iTX, but multi-segment deletes work fine**

Dropping a Harris del file in the Harris CIFS drop box for a single-spot asset causes that asset to be deleted correctly. Previously it would attempt to delete a previously-deleted asset.

# Known Issues

## ITX-7698: Changes made to an Output Server 2 channel's routing configuration require TXPlay 2 to be restarted

In the unlikely event that the failover routing configuration for a Leader / Follower channel pair needs to be changed while the channel is on air (e.g. physical failure of the destination device), TX Play 2 (NOT the Output Server or Server Controller) must be restarted for it to load the new configuration settings that you have saved via the Engineering Layout. (Engineering Layout > Channel Config > Channel Config 3 > Routing).

## ITX-2840: Cued in-point timecode incorrect on Output Server 1 channels

On testing NTSC VBI timecode insertion on lines 17 and 19 for Output Server 1, it was observed that in-point drop frame timecodes were incorrect. Typically, the timecodes were 1 to 3 frames ahead of the expected values, e.g. when the expected timecode was 01:00:00:00 the actual timecode was 00:59:59:29.

## ITX-2826: Output Server 1 channels cannot insert CGMS-A Copy Guard VBI data

When attempting to insert CGMS-A Copy Guard data On an Output Server 1 channel, the following results are reported by Tektronix WFM-7120 waveform monitors:

- 'Copy freely' is reported as 'Not detected'
- 'Copy no more' is detected as 'Cop. already', but it is intermittently reported as 'Not detected'.
- 'Copy once' is detected as 'Copy once', but it is intermittently reported as 'Not detected'.
- 'Copy Never' is detected as 'No copy', but it is intermittently reported as 'Not detected'.

# Accessing the iTX Installer

The iTX 2.9 software is distributed as an iTX Suite zip file, which must be downloaded onto the machine where you want to install the iTX software modules.

To access the iTX Installer:

1. Copy the official release version of the **iTX Suite** zip file (e.g. ITX Suite 2.9 - Build 3.29.4.720.zip) to a local drive on the machine you want to install the software on. Never attempt to run the iTX Installer from a network share.
2. Unzip the file.

If the computer security settings prevent you unzipping the file:

- a. Right-click the zip file and select **Properties** from the displayed menu commands. The Properties window appears.
  - b. Select the **General** tab in the Properties window and click **Unblock**.
  - c. Click **OK** to close the Properties window.
3. Once the file is unzipped, open the **iTX Suite v2.9** folder.

The folder contains the Setup.exe file which you use to launch the iTX Installer.

The following two subfolders are also included to support the installation, but require no immediate attention:

- **Drivers**: contains the required device drivers for the SDI video cards that are used with the iTX Output and Encode servers. You must ensure you are using the correct AJA drivers for the version of the Output Server service you have installed. For more information on installing the Output Server service see the iTX System Administrator Guide.
- **iTX Install**: contains the iTX installation and iTX system files that are required to manage and run the iTX software.

WARNING: Never use or modify the files in the iTX Install folder, except when instructed by our personnel. Always use the Setup.exe file and iTX software module user interfaces to configure and operate iTX. This minimizes the risk of unintentionally damaging the iTX system.



# Supported Devices and Software

iTX 2.9 can work with a range of devices, including those listed below.

For more details of which firmware versions are supported, contact our Technical Support Services team.

## External Playout Devices

With the appropriate plug-in licenses, iTX 2.9 supports the following devices for on-air control.

### External Logo plug-in

- Grass Valley Imagestore 300, HD and 750 models
- Grass Valley LGK-3901 card v4.10.2 card in a Densité frame

### External Subtitle plug-in

- Screen Polistream v2.4.1.2
- Softel Swift TX M-Series 2.01
- Cavena STU v3.1.17

### Clarity plug-in

- Pixel Power Clarity graphics system v7.2.7.8

### VizRT plug-in

- VizRT Viz Engine v3.8.1
- VizRT Viz Trio v 3.0.0
- MSE v2.0.1.13083

### iTX Master Control

- Grass Valley Imagestore 750 , v4.5-012
- Grass Valley Imagestore Modular 3901, v4.8
- Grass Valley iMC-Panel-100, v7.2.10.0\_ECO\_18578 - 2012\_10\_16
- Grass Valley iMC-Panel-200, v7.2.10.0\_ECO\_18578 - 2012\_10\_16
- Grass Valley iMC-Panel-300, v7.2.10.0\_ECO\_18578 - 2012\_10\_16

### Vertigo XG plug-in

- XG Inside Xmedia Suite v5.2 for Output Server 1 and Output Server 2

### Routers

iTX 2.9 can work with a range of broadcast routers via the following router controllers.

- Grass Valley NVision NV9000 and NVision 920

It can also control the following routers directly.

- Grass Valley Densité HCO

### GPI devices

iTX 2.9 supports the following GPI devices.

- Grass Valley: Densité GPI-1501 v1.0.0
- Videoframe: VNODE 8x8; VNODE 16x16; VNODE 32x32

### External content stores

iTX v2.9 can work with media files on the following types of external storage system.

Devices	Supported functionality
EMC Isilon OneFS (v7.2.1.1)	Searching, retrieving, storing, deleting and purging.

SGL FlashNet Archive (v6.4.13.003)	Searching, restoring, manual archiving and manual restoring.
Front Porch Digital DIVArchive (v6.5.3.5.0)	Restoring, partial restoring; archiving and deleting of media files.
Viz Ardome	Retrieval of media files.
Suitcase TV archive system	Restoring of media files.
Omneon Server	Retrieval of media files, using FTP.
GVG Profile	Retrieval of media files, using FTP.
Masstech MassStore (v 7.5.3)	Restoring, archiving and deleting of media files.

## Third-Party Applications

- Interra Baton automated file-based QC v5.3
- TeleStream Vantage Workflow v4.2.286 (for import, transcode and render jobs)
- iTX SmartClient can export ShotLists as Final Cut Pro v5.0 XML files, which can be opened using Grass Valley Edius v8.10 onwards.

### Note:

iTX support for the following third-party applications has now ended:

- ENPS versions 5 and 6
- MOS Protocol 2.83

## QA Environment and Platform

This release of iTX has been qualified by our Quality Assurance team using the following third-party software, hardware and operating systems.

## Operating Systems and Other Software

### iTX Framework Services

- Windows Server 2012 R2 Standard
- Microsoft Windows Server 2008 R2

### iTX Database

- Microsoft SQL 2014 Service Pack 2
- Microsoft Windows Server 2008 R2 running Microsoft SQL Server 2008 Service Pack 3 (version 10.0.5500)

### iTX Output Server

- Windows Server 2012 R2 Standard
- Microsoft Windows 7 Ultimate SP1 64 bit edition (version 6.1 build 7601) for Grass Valley Playout Appliance 1 Servers (OS1)
- Microsoft Windows Server 2008 R2 for Grass Valley Playout Appliance 2 Servers (OS2)

### iTX Desktop Client

- Windows 10 Professional 64-bit Edition
- Microsoft Windows 7 Ultimate SP1 64-bit edition (version 6.1 build 7601)
- Microsoft Windows 7 Professional SP1 64-bit Edition

## Other Hardware and Software

## Video Playout and Ingest Cards

For encode servers running the Encode Services:

- AJA Corvid LP with Drivers 7.4.0.49 FW 20-01-10
- AJA Kona 3G with Drivers 7.4.0.49 FW 04-07-11

For output servers running Output Server 1:

- AJA Corvid LP with Drivers 7.4.0.49 FW 20-01-10
- AJA Kona 3G with Drivers 7.4.0.49 FW 04-07-11

For output servers running Output Server 2:

- AJA Corvid LP with Drivers 12.3.13.117
- AJA Corvid 44 with Drivers 12.3.13.117
- AJA Corvid 88 with Drivers 12.3.13.117
- AJA Kona 3G with Drivers 12.3.13.117

## System Time Code Generation

- Adrienne Time Code Card with drivers 1.0.0.7

## Video Router and Router Controller

- Nvision NV8576+ router (software version 14.0.0.11)
- Nvision NV9000 router controller (software 6.2.0.1674)

## iTX Software Anti-Virus Qualification

This version of the iTX software install package was scanned with Symantec Endpoint Protection version 12.1.6 with Virus and Spyware Protection definitions 8th May 2017 r19 and found to contain no currently known viruses.

# Grass Valley User Documentation

Release Notes, product manuals and other user documentation is available online via the Grass Valley Documentation Library at <http://www.grassvalley.com/docs/page>

Access to Release Notes, product manuals and white papers is prohibited without authentication. There are multiple authentication paths available to verify your identity.

Broadcast customers:

- If you already have a Grass Valley Service Portal account, you can login via <http://www.grassvalley.com/support/portal>
- If you do not have a Grass Valley Service Portal account, you can request one via [http://www.grassvalley.com/support/service\\_portal\\_access\\_request](http://www.grassvalley.com/support/service_portal_access_request)

Alternately:

- If you already have a Grass Valley website account, you can login via <http://www.grassvalley.com/auth>
- If you do not have a Grass Valley website account, you can sign up via <http://www.grassvalley.com/account>

# Contact Us

For technical assistance, contact our international support center at 1-800-547-8949 (US and Canada) or +1 530 478 4148.

To obtain a local phone number for the support center nearest you, please consult the Contact Us section of Grass Valley's web site (<http://www.grassvalley.com/contact>). An online form for e-mail contact is also available from the web site.

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