

K2 Edge Version 4.1 Daylight Saving Time (DST)

Expected Behavior and Recommendations

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1 About this document

This document describes Daylight Saving Time (DST) expected behavior and recommendations for K2 Edge Version 4.1.

2 Expected Behavior

For all systems that experience a time change, the effects described below can be expected:

- Systems syncing time to a NTP-server will follow daylight saving automatically as it is served by the server. Automatic time change by the NTP-server implies that the playlist must be set properly around the time jump. An event should be started before 2am and the next event should be fixed and calculated after 3am. That is difficult and not recommended.
Note: only if configured in a timezone.
- Systems running on GMT without an offset will continue as normal.
- Free running systems will not automatically participate in daylight saving and will continue with no time change unless the system is set to a time zone, but this is not recommended (the default for K2Edge is Etc/Universal).
Note: configure in a timezone is not supported.
- Systems synced to a LTC will continue as normal unless the LTC-clock is participating in daylight saving as well.

3 Recommendations

3.1 Systems synced with LTC and running with an offset from UTC

For instance, a system in Paris runs at UTC+2 during the summer and at UTC+1 during the winter. In this situation LTC is running on UTC, so without an automatic clock change.

- When the clock moves forward, a schedule of 23 hours is loaded.
When a normal schedule is from 6am till 6am the following day, it should now be from 6am till 5am the following day.
- When the clock moves backwards, a schedule of 25 hours is loaded.
When a normal schedule is from 6am till 6am the following day, it should now be from 6am till 7am the following day

3.2 Clock jump procedure

Scenario 1 – Clock moves forward an hour

The weekend the daylight saving will be applied in the night of Saturday on Sunday; the clock will jump forwards on 01:59:59 to 03:00:00 hours.

Environment

External LTC given in UTC.

Offset according to region set in [\\IP_K2Edge\delta\nexos-init-params.txt](#)

`{timecode-offset-sec} {3600} #(UTC+1H)`

Main and backup K2 Edge servers are in sync.

A 23 hours schedule is loaded.

A 23 hours continuous schedule is available so the K2 Edge will play out as normal. The only change is that the clock of the K2 Edge servers should jump with an hour. To maintain continuous payout, this is done step by step, first the backup and later the main K2 Edge.



For automation and scheduling, Operators and Schedule Creators should take note of the following:

- The playlist should be running on both the main and backup servers and should be perfectly synced.
- Ensure that main K2Edge server is ON AIR
- On the K2 Edge backup server: change the offset in Offset according to region in [\\IP_K2Edge\delta\nexos-init-params.txt](#) `{timecode-offset-sec} {7200} #(UTC+2H)`
- On the K2 Edge backup server: once the playlist has synced, stop the schedule_sync process.
- On K2 Edge backup server: reschedule the next event with starttime = starttime + 1h
- On K2 Edge backup server: check if the SDI-outputs of the main and backup servers are in sync while playlist start times on the main and backup servers differ 1h (the main server is behind of the backup server).
- Switch the backup K2Edge server to ON AIR.
- On the K2 Edge Main server: change the offset in Offset according to region in [\\IP_K2Edge\delta\nexos-init-params.txt](#) `{timecode-offset-sec} {7200} #(UTC+2H)`
- Reboot the K2 Edge main server.
- On the K2 Edge main server: reschedule next event with starttime = starttime + 1h.
- On the K2 Edge main server: remove already played out elements that are in overrun.
- On the K2 Edge main server: check if the SDI outputs of the main and backup servers are in sync.
- Switch K2 Edge main server to ON AIR.
- Reboot the K2 Edge backup server.
- The playlist should be running on both the main and backup servers and should be perfectly synced.

Scenario 2 – Clock moves backward an hour

The weekend the daylight saving will be applied in the night of Saturday on Sunday; the clock will jump backwards on 02:59:59 to 02:00:00 hours.

Environment
 External LTC given in UTC.
 Offset according to region set in [\\IP_K2Edge\delta\nexos-init-params.txt](#)
`{timecode-offset-sec} {7200} #(UTC+2H)`
 Main and backup K2 Edge servers are in sync.
 A 25 hours of schedule is loaded.

There is 25 hours of continuous schedule so the K2Edge will playout as normal. The only change is that the clock of the K2Edge servers should jump an hour. To maintain continuous playout this is done step by step, first the backup and later the main K2Edge.



For automation and scheduling, Operators and Schedule Creators should take note of the following:

- The playlist should be running on both the main and backup servers and should be perfectly synced.
- Ensure that the main K2 Edge server is ON AIR.
- On the K2 Edge Backup server: change the offset in Offset according to region in [\\IP_K2Edge\delta\nexos-init-params.txt](#) `{timecode-offset-sec} {3600} #(UTC+1H)`
- On the K2 Edge Backup server: once the playlist has synced, stop the schedule_sync process.
- On the K2 Edge Backup server: reschedule the next event with starttime = starttime – 1h
- On the K2 Edge Backup server: remove already played out elements that are in overrun.
- On the K2 Edge Backup server: check if the SDI outputs of the main and backup servers are in sync while playlist starttimes on the main and backup servers differ 1h (the main server is ahead of the backup server).
- Switch the backup K2 Edge server to ON AIR.
- On the K2 Edge main server: change the offset in Offset according to region in [\\IP_K2Edge\delta\nexos-init-params.txt](#) `{timecode-offset-sec} {3600} #(UTC+1H)`
- Reboot the K2 Edge main server.
- On the K2 Edge main server: reschedule the next event with starttime = starttime – 1h
- On the K2 Edge main server: remove already played out elements that are in overrun.
- On the K2 Edge main server: check the SDI outputs of Main and Backup servers are in sync.
- Switch the K2 Edge main server to ON AIR.
- Reboot the K2 Edge backup server.
- The playlist should be running on both the main and backup servers and should be perfectly synced.