

Fail Soft Mode

Behaviour

Version 003B

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1. Goal of the document

The goal of this document is to explain how does work the “**Fail Soft Mode**” feature.

2. Strategy

The feature “**Fail Soft Mode**” has been implemented to restore some players which don’t keep rebooting into stable configuration. The reboot is most often the consequence of the specific playout (taken by the player):

- containing one media (most of time, or several medias) making crash the player or
- containing an unfortunate reboot programmed in calendar every minute

3. Legacy platforms and software version

The following players support **Fail Soft Mode** feature.

Platform family	Software release version
SM2	Gekkota_os SMT210 3.12.15 (or later)
	Gekkota_os SMA200 3.12.15 (or later)
	Gekkota_os SMP200 3.12.15 (or later)
DM2*	Gekkota_os DMC200 3.12.15 (or later)
DM3	Gekkota_os DMB300 3.12.15 (or later)
SM3	Gekkota_os SMA300 3.12.19 (or later)
TM3	NC
DM4	Gekkota_os DMB400 4.10.10 (or later)

**DMC200 players having Kontron electronic part whose BIOS revision is below NOW1R115 do not support Fail soft mode. For more information, please contact support@innes.pro.*

4. Principe

The player is able now to surveying unexpected player reboot. After several unexpected reboots, the player detects stability anomaly:

- 1) The player can clear the playout content and wait for new content (**Fail Soft Mode level1**)
- 2) Despite of that, in case the player does not keep rebooting again, the player is able to restore user preference (saved before the player is unstable) and wait for new content (**Fail Soft Mode level2**)

4.1. Reboot number

A variable “reboot number” counts the number of reboot inside a time Window.

- The reboot number value to reach Fail Soft Mode level 1 is N.
- The reboot number value to reach Fail Soft Mode level 2 is 2N.

N depends on platform.

Platform family	Platform	N (to reach Fail Soft Mode level1)	2N (to reach Fail Soft Mode level2)
SM2	SMT210	4	8
	SMA200	4	8
	SMP200	4	8
DM2	DMC200	4	8
DM3	DMB300	4	8
SM3	SMA300	4	8
TM3	NC	NC	NC
DM4	DMB400	6	12

- In case a reboots occurs in the time slot, the variable “reboot number” increases of 1
- In case “reboot number” is lower than N (N = 4 or N = 6) inside the time slot duration, the player is considered as to be in stable state and the “reboot number” is reset to 0

Note: firmware downloads make “reboot number” increase of 1

Note: “restart player” button of WebUI does not make “reboot number” increase of 1

4.1.1. Generation of fail soft mode

It is possible to generate a **Fail Soft Mode** by unplugging and plugging again the power supply N times (or 2N time). N is depending on the player type (explained in the table above)

ex:

1. Iteration_number = 0;
2. Unplug and plug again the power supply and let the player booting up. The device green led is blinking (**1 flash every 4 seconds**),
3. If Iteration_number = N (in the table above), then go to the step 4, else go again to the step 2 (Iteration_number + 1)
4. The system screen Fail soft mode is displayed ✓
5. Iteration_number = N;
6. Unplug and plug again the power supply and let the player booting up. The device green led is blinking (**2 flashes every 4 seconds**),
7. If Iteration_number = 2N (in the table above), then go to the step 8, else go again to the step 6 (Iteration_number + 1)
8. The system screen Fail soft mode is displayed ✓

4.2. Timer (time counter)

When the variable “reboot number” pass from 0 to 1, this reboot is considered as “1st reboot”. At this time counter is reset to 0 and starts to count elapsed time since 1st reboot).

4.3. Time windows (timeout)

The time window is depending on 2 parameters

- A default timeout value: 300 seconds (5 minutes) (default timeout if no NTP)

Platform family	Platform	Default timeout value
SM2	SMT210	300 sec (5 minutes)
	SMA200	300 sec (5 minutes)
	SMP200	300 sec (5 minutes)
DM2	DMC200	300 sec (5 minutes)
DM3	DMB300	300 sec (5 minutes)
SM3	SMA300	240 sec (4 minutes)
TM3	NC	NC
DM4	DMB400	420 sec (7 minutes)

Additional NTP timeout value depending on

- o NTP trial number & NTP delay between trial
- o Reboot number

The timeout is considered to be reached when any reboot is not noticed in the specified time window.

$$\text{Additional NTP timeout} = [\text{NTP trial number}] \times [\text{NTP Time between retry}] \times [\text{reboot number}]$$

Example for SMT210 platform: After 4 following reboots, the player becomes stable, the windows time to wait before the player enters in **SAFE STATE** is:


Total windows time (timeout) = $50 \times 10 \times 4 + 300 = 2300$ seconds

With NTP trial number = 50

With NTP delay between trial = 10

With reboot number = 4

With default timeout value = 300



SMA200

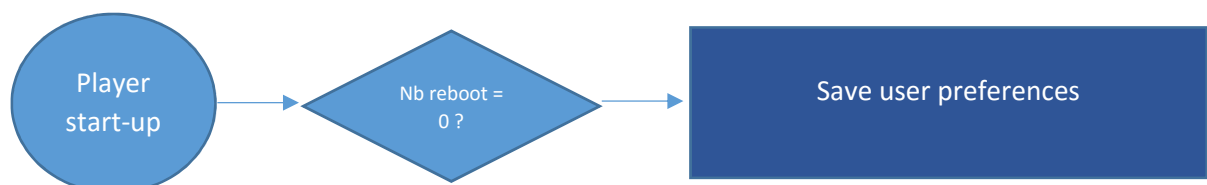
Configuration
 Administrateur
 Lan
 IP, netmask...
 WLAN
 IP, netmask, sécurité...
 WWan
 code pin, apn...
 Sortie
 taille, fréquence...
Serveurs
 média, dns, ntp...
 Licence
 Date et heure
 Régional
 langue
 Variables
 Extension

Configuration / Serveur
☐ **Serveur de distribution de contenu (PlugnCast G2, WebDAV, ...)**
☐ Génération 2
 URL :
 Battement de coeur :
☐ Génération 3
 URL :
 Battement de coeur :
 Nom d'utilisateur : Mot de passe :
☒ **Serveur de statut**
 URL :
 Battement de coeur :
 Nom d'utilisateur : Mot de passe :
Serveurs DNS :
☐ Obtenir les adresses des serveurs DNS automatiquement
☒ Utiliser l'adresse de serveur DNS suivante :
 Serveur DNS préféré :
 Serveur DNS auxiliaire :
☒ **Serveur de temps NTP**
 Serveur NTP :

Nombre d'essais maximum :
 Attente maximale par essai : secondes

4.4. User preferences saving

User preferences are saved at each player start-up if reboot number is equal to zero.



4.5. State machine

