INNES

# 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 2XN.

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*

## 4.2. 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

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

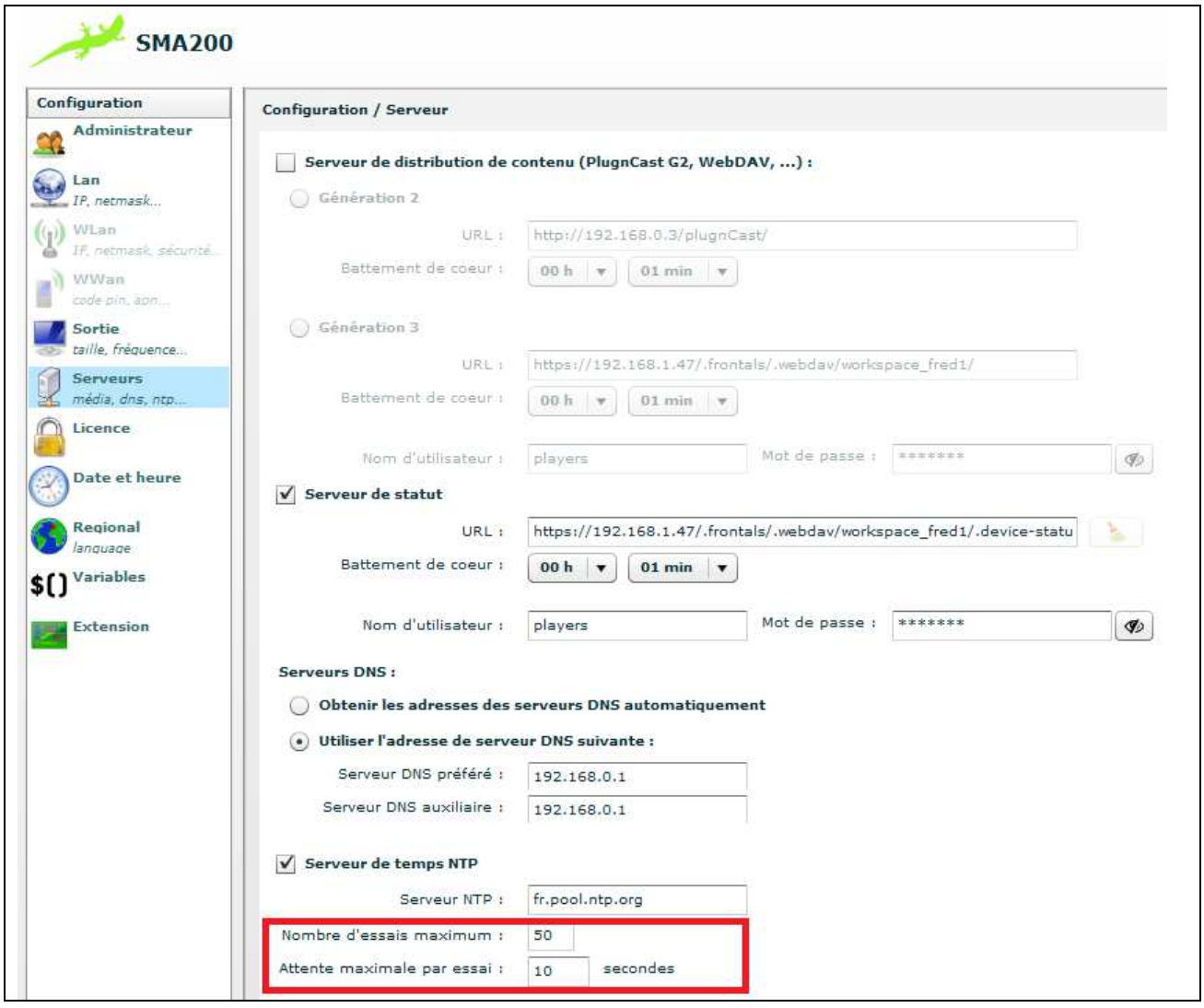
The timeout is considered to be reached when any reboot is not noticed in the specified time window.

```
Additional NTP timeout = [NTP trial number] x [NTP Time between retry] x
[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:

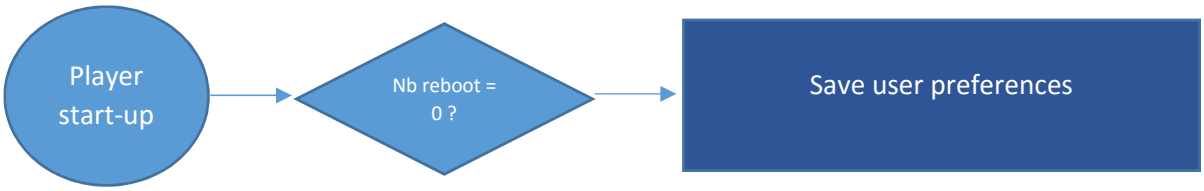
*Total windows time (timeout) = 50 x 10 x 4 + 300 = 2300 seconds*

*With NTP trial number = 50*
*With NTP delay between trial = 10*
*With reboot number = 4*
*With default timeout value = 300*




## 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