DCC Guidance Note

DCC Retry and Timeout Configuration – UIT and Production

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1.1 DCC Retry and Timeout Configuration

This Guidance Note provides the current settings for DCC Retry and Timeout configuration in the UIT and Production environments.

This information should be read in conjunction with the DCC Guidance Note for Use of DUIS Retry and Timeout Guidance, which contains details of how this configuration is used.

1.2 Default Configuration

The default setting for DCC Retry and Timeout configuration is as shown below. These values will be used for all Service Reference Variants where a specific override is not in place. All time values are in seconds.

SRV	Device Type	Retry Interval	Retry Timeout	Retries	Notes
All	All (GSME)	40:40:40 (1840)	320 (3780)	3 (1)	

Note that all SRVs which are sent as Future Dated or DSP Scheduled are subject to a 24 hour Target Response Time and therefore the retry parameters (default or specific overrides) are applied every 2 hours for up to 24 hours and only at the end of the 24 hour period does the DSP finally time out.

In addition, for Requests sent to the GSME the Retry Interval and Timeout are extended by 30 minutes for each delivery attempt to allow time for the GSME to wake up. With the default configuration above, this means that a single retry will be applied after 30 minutes and 40 seconds and the Request will time out after a further 30 minutes have expired. If more than one retry is required to a GSME then an SRV specific configuration will be required to extend the Retry Timeout to allow for multiple 30 minute retry intervals.

Finally, for Requests sent to Arqiva there is a delivery retry pattern which means the DSP will retry up to 3 times at 40 second intervals if it is unable to deliver the Request to the Arqiva central system. This delivery retry is common to all Requests sent to Arqiva and is controlled via a single configurable item. The SRV specific Retry Intervals defined in this document only apply once a Request has been successfully delivered to the Arqiva system, which means that overall Retry Timeout values must account for the circumstances where this delivery may take up to 120 seconds before it is successful.

1.3 SRV Specific Configuration

The SRV specific configuration for DCC Retry and Timeout configuration in the UIT and Production environments is shown in the table below. All time values are in seconds.

Note that some SRVs are subject to a 24 hour Target Response Time in all modes of operation (including On Demand). These SRVs are shown below with a Retry Timeout of 86400 seconds.

Please also note that timeout values shown here are required to support the worst case or largest possible message scenarios. Normal or "average" message scenarios may complete *successfully* well within these timeouts. However all *failure* conditions will always run to completion of the full timeout values, regardless of message size.

SRV	Device Type	Retry Interval	Retry Timeout	Retries	Notes
The following overrides are required to help with management of I&C functions and Firmware Upgrade					
8.11	CHF	120	320	1	Note that this is the Retry Interval and Timeout for delivery of the 8.11 Request to the CHF. It is *not* the timeout for the target device to join to the CHF.
8.7.1	All	0	300	0	See later for GSME settings.
8.7.2	ESME	0	300	0	
11.3	All (GSME)	0 (0)	10800 (10800)	0 (0)	Sufficient time must be allowed for the device to activate the new firmware. There is only one timeout value which is used for all devices and therefore this timeout must cover the worst case scenario.
The following overrides are required to support large GBT command messages from the DSP to the Device. *Note that there are other SRVs which may in some circumstances result in commands with more than 1 GBT block but these are still relatively small and are handled within the default timeout configuration.*					
1.1.1	ESME	40:40:40 (Tef) 180:180:180 (Arq)	900	3	Timings must support the largest possible Tariff
1.1.2	ESME	40:40:40 (Tef) 180:180:180 (Arq)	900	3	Timings must support the largest possible Tariff
6.15.1	All (GSME)	40:40:40 (Tef) 60:60:60 (Arq) (1840)	1200 (5580)	3 (1)	
6.15.2	All (GSME)	40:40:40 (Tef) 60:60:60 (Arq) (1840)	1200 (5580)	3 (1)	
6.21	All	40:40:40 (Tef) 60:60:60 (Arq)	600	3	See later for GSME settings.

SRV	Device Type	Retry Interval	Retry Timeout	Retries	Notes
6.23	All (GSME)	40:40:40 (Tef) 60:60:60 (Arq) (1840)	1200 (5580)	3 (1)	
8.5	All (GSME)	40:40:40 (Tef) 60:60:60 (Arq) (1840)	600 (3780)	3 (1)	
The following overrides are required to support large GBT response messages from the Device to the DSP. Note that there are other SRVs which may in some circumstances result in responses with more than 1 GBT block but these are still relatively small and are handled within the default timeout configuration.					
4.6.1	GSME	1840	3900	1	
4.6.1	GPF	40:40:40	600	3	
4.6.1	ESME	40:40:40	600	3	
4.8.1	GSME	1840	3960	1	
4.8.1	GPF	40:40:40	1500	3	
4.8.1	ESME	40:40:40	5600	3	
4.8.2	ESME	40:40:40	900	3	
4.8.3	ESME	40:40:40	1400	3	
4.10	ESME	40:40:40	2600	3	
The following overrides are required to handle SRVs which have a 24 hour TRT in all modes of operation					
1.2.1	ESME	40:40:40	86400	3	Repeated every 2 hours
1.2.1	GSME	1840	86400	1	Repeated every 2 hours
1.2.2	ESME	40:40:40	86400	3	Repeated every 2 hours
3.4	All (GSME)	40:40:40 (1840)	86400	3 (1)	Repeated every 2 hours

SRV	Device Type	Retry Interval	Retry Timeout	Retries	Notes
4.12.1	ESME	40:40:40	86400	3	Repeated every 2 hours
4.12.2	ESME	40:40:40	86400	3	Repeated every 2 hours
4.15	ESME	40:40:40	86400	3	Repeated every 2 hours
6.6	GSME	1840	86400	1	Repeated every 2 hours
6.7	GSME	1840	86400	1	Repeated every 2 hours
					SRV 6.14.1 is now processed using the default On Demand configuration
					SRV 6.14.2 is now processed using the default On Demand configuration
6.17	All (GSME)	40:40:40 (1840)	86400	3 (1)	Repeated every 2 hours
6.18.1	ESME	40:40:40	86400	3	Repeated every 2 hours
6.18.2	ESME	40:40:40	86400	3	Repeated every 2 hours
					SRV 7.9 is now processed using the default On Demand configuration
7.12	ESME	40:40:40	86400	3	Repeated every 2 hours
The following overrides are required to handle SRVs which may be used in parallel during installation and need extended Retry Intervals to ensure the requests can be delivered to the Arqiva solution. These extended Retry Intervals therefore only apply to the retry processing for sending a message to Arqiva, although the extended Retry Timeout must apply to both Arqiva and Telefonica Note that some SRVs needing extended retries are already covered above for extension to the 24 Hour SLA but are repeated here to confirm the extended retry behaviour for Arqiva.					
1.5	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
2.1	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only

SRV	Device Type	Retry Interval	Retry Timeout	Retries	Notes
3.2	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
3.4	All (GSME)	180:180:180 (1840)	86400	3 (1)	Arqiva retry interval only
3.5	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
4.3	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
6.4.1	ESME	180:180:180	600	3	Arqiva retry interval only
6.4.2	ESME	180:180:180	600	3	Arqiva retry interval only
6.6	GSME	1840	86400	1	*There is no longer any Arqiva specific retry but this SRV is retained here for continuity of the list of SRVs used in parallel.*
6.8	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
6.12	ESME	180:180:180	600	3	Arqiva retry interval only
6.17	All (GSME)	180:180:180 (1840)	86400	3 (1)	Arqiva retry interval only
6.20.1	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
6.22	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
6.25	ESME	180:180:180	600	3	Arqiva retry interval only
7.12	ESME	180:180:180	86400	3	Arqiva retry interval only
11.2	All (GSME)	180:180:180 (1840)	600 (3780)	3 (1)	Arqiva retry interval only
The following override is required to handle SRV 6.21 during the installation process of the GSME to ensure a shorter timeout during this processing.					
6.21	GSME	600	1200	1	

SRV	Device Type	Retry Interval	Retry Timeout	Retries	Notes
The following overrides are required to handle SRVs which may be used during installation and need to be retried more frequently to the GSME to ensure timely redelivery during this processing. At this moment these more frequent Retry Intervals only apply to the retry processing for sending a message to Telefonica, although the extended Retry Timeout must apply to both Telefonica and Arqiva. Note that some SRVs needing I&C retries are already covered above for other reasons but are repeated here to confirm the more frequent retry behaviour for Telefonica.					
1.1.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
1.5	GSME	300:300:300:1840	3780	4	Telefonica retry only
1.6	GSME	300:300:300:1840	3780	4	Telefonica retry only
2.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
2.3	GSME	300:300:300:1840	3780	4	Telefonica retry only
2.5	GSME	300:300:300:1840	3780	4	Telefonica retry only
3.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
3.5	GSME	300:300:300:1840	3780	4	Telefonica retry only
4.1.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
4.3	GSME	300:300:300:1840	3780	4	Telefonica retry only
4.4.2	GSME	300:300:300:1840	3780	4	Telefonica retry only
6.2.9	GSME	300:300:300:1840	3780	4	Telefonica retry only
6.8	GSME	300:300:300:1840	3780	4	Telefonica retry only
6.20.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
6.22	GSME	300:300:300:1840	3780	4	Telefonica retry only

SRV	Device Type	Retry Interval	Retry Timeout	Retries	Notes
6.24.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
8.1.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
8.7.1	GSME	300:300:300:1840	3780	4	Telefonica retry only
8.7.2	GSME	300:300:300:1840	3780	4	Telefonica retry only