

TestFest-22 Result Analysis

BCAST v1.0

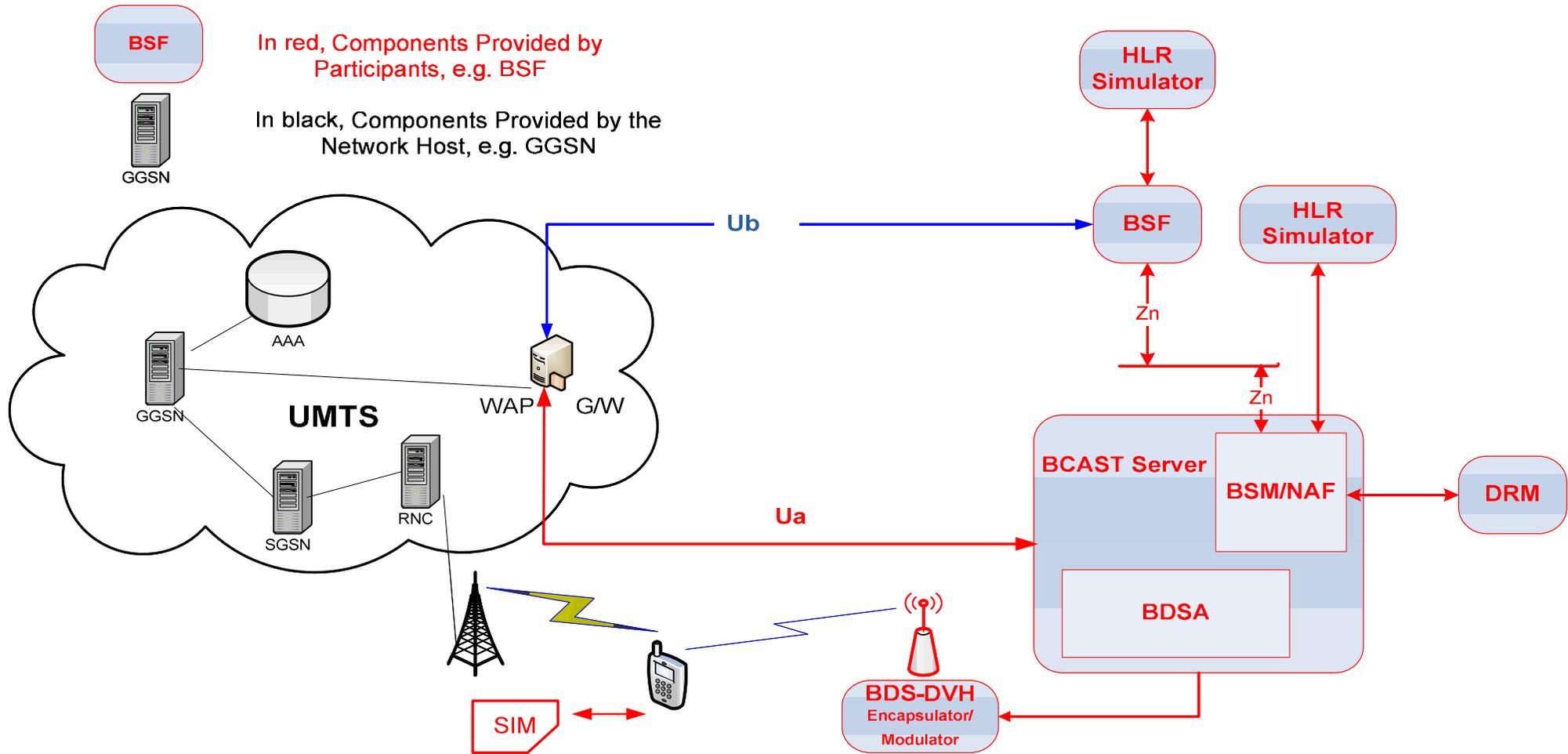
Formal Test – Candidate Enabler

OMA BCAS T

IIT, Montreal, Canada

TF-22 - 18^h to 25th January 2008

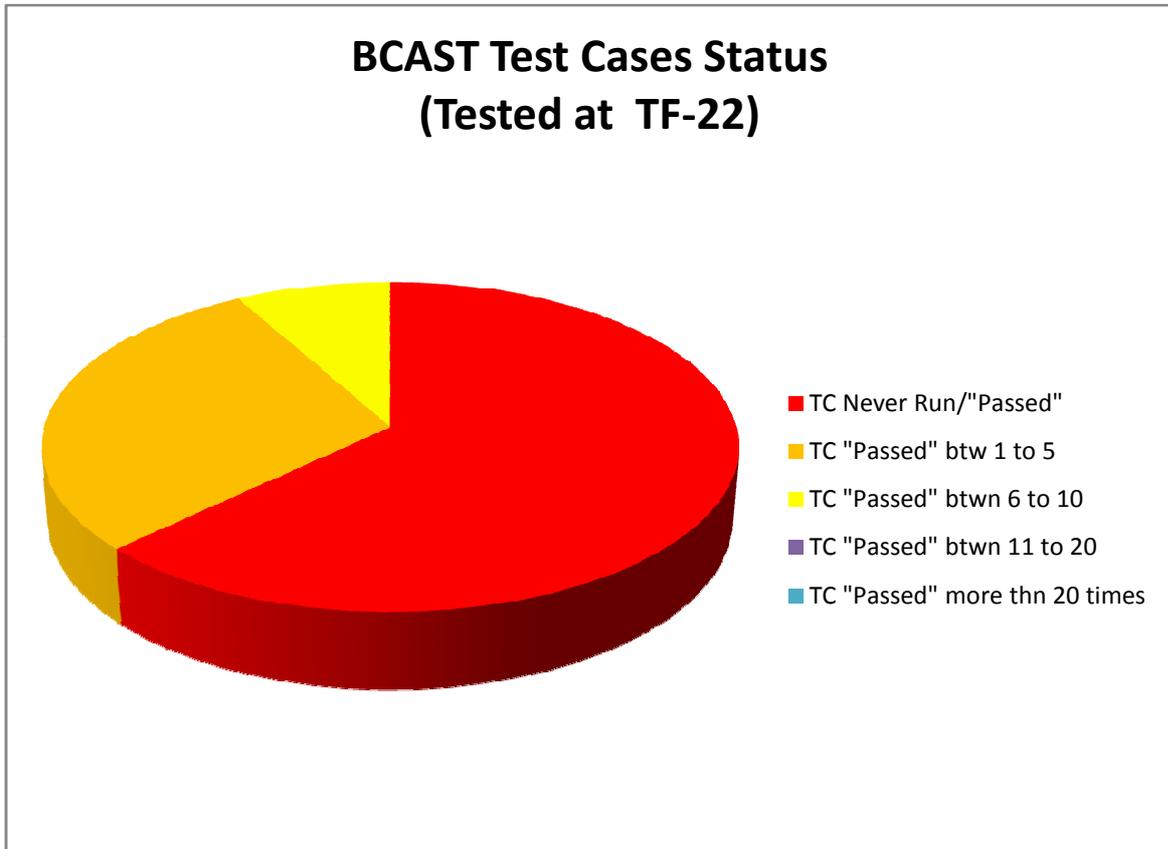
Components & Interfaces



Status of BCAST Test Cases per BCAST Functions (TF-22)

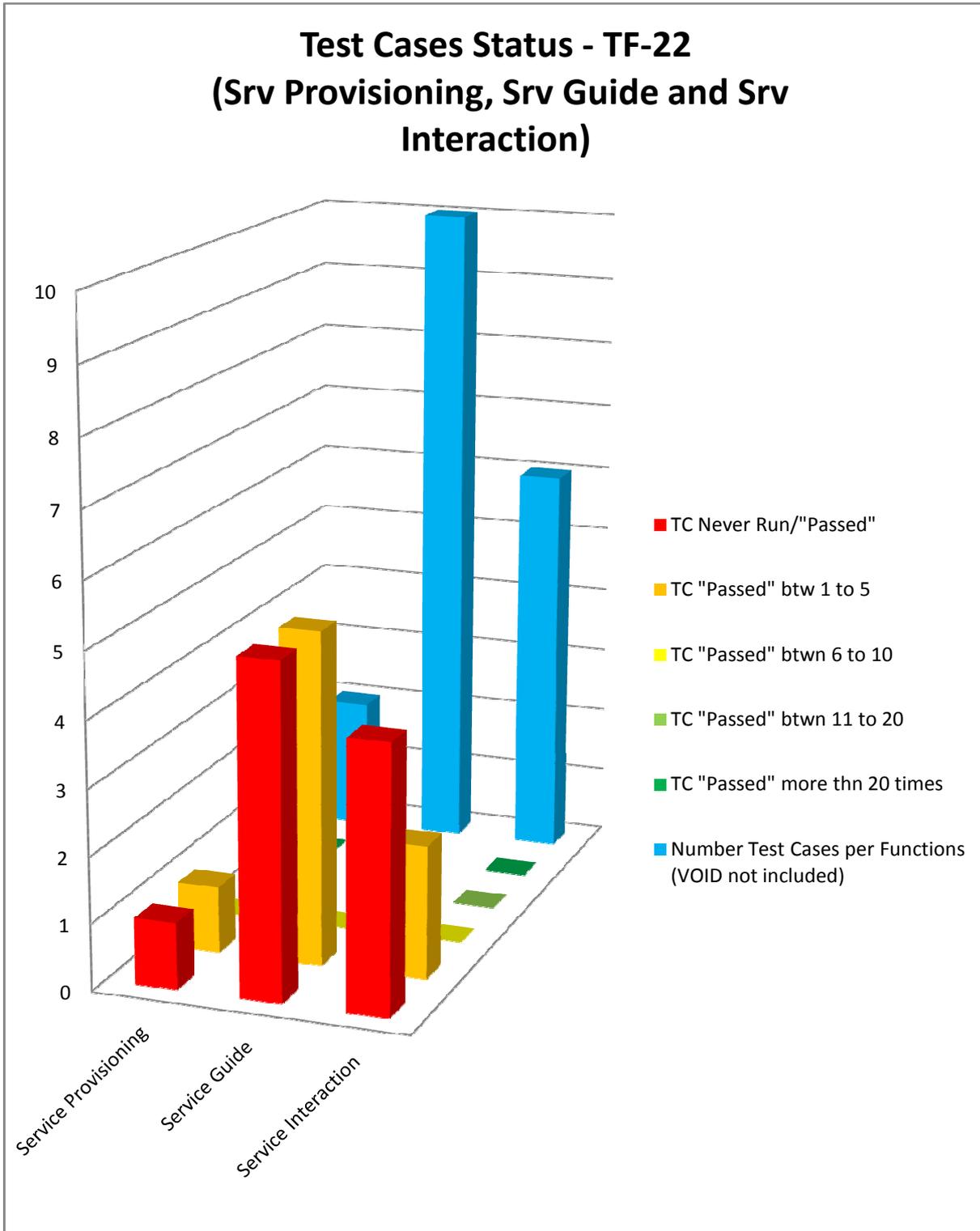
BCAST ETS is divided in Test Groups. Each Group represents one of the BCAST Functions. The below diagram classifies the current **62** BCAST Test Cases in five groups:

- Test Cases that have never been Run or "Passed"
- Test Cases that have been Tested and "Passed" between 1 to 5 times
- Test Cases that have been Tested and "Passed" between 6 to 10 times
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- Test Cases that have been Tested and "Passed" more than 20 times



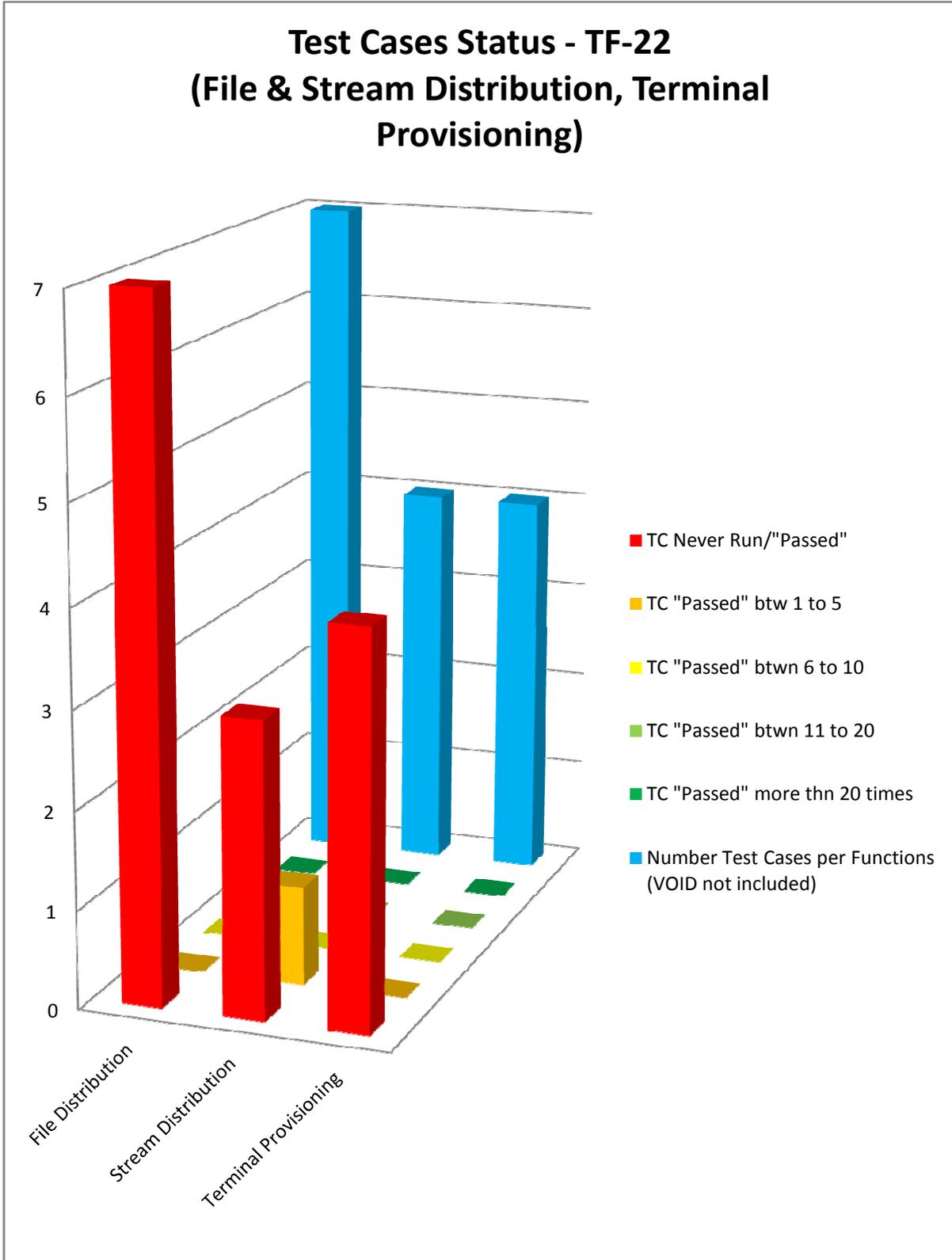
Same analysis for the following BCAST functions:

- Service Provisioning
- Service Guide, and
- Service Interaction

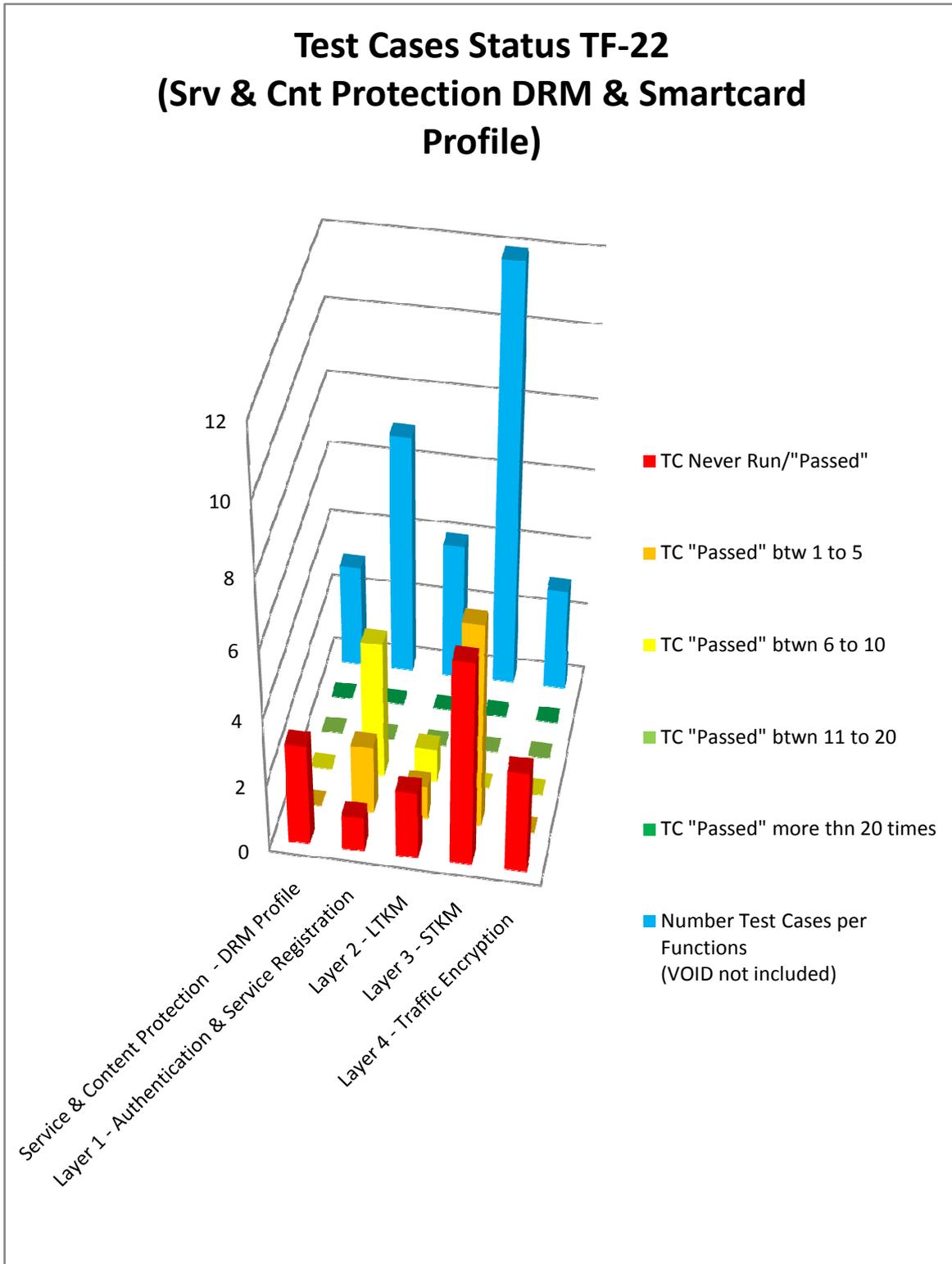


Same analysis for:

- File & Stream Distribution
- Terminal Provisioning



Same analysis for Service & Content Protection DRM and Smartcard Profile.

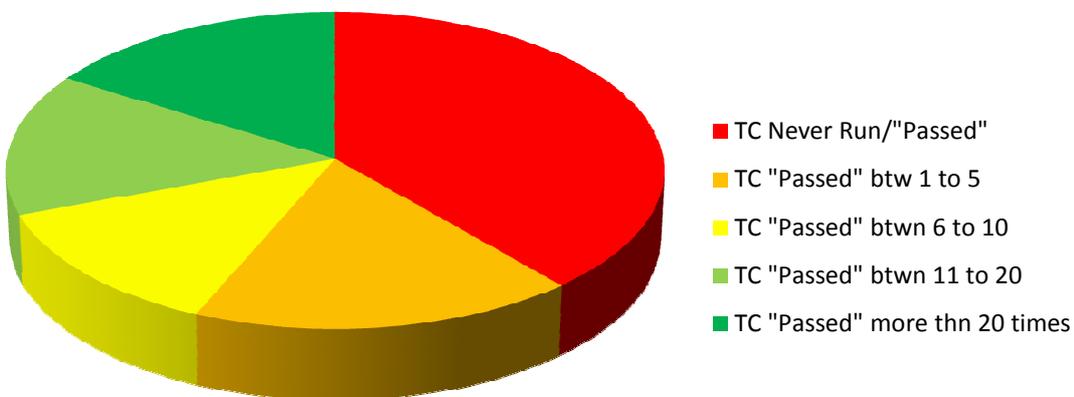


Status of BCAST Test Cases per BCAST Functions

BCAST ETS is divided in Test Groups. Each Group represents one of the BCAST Functions. The below diagram classifies the current **62** BCAST Test Cases in five groups:

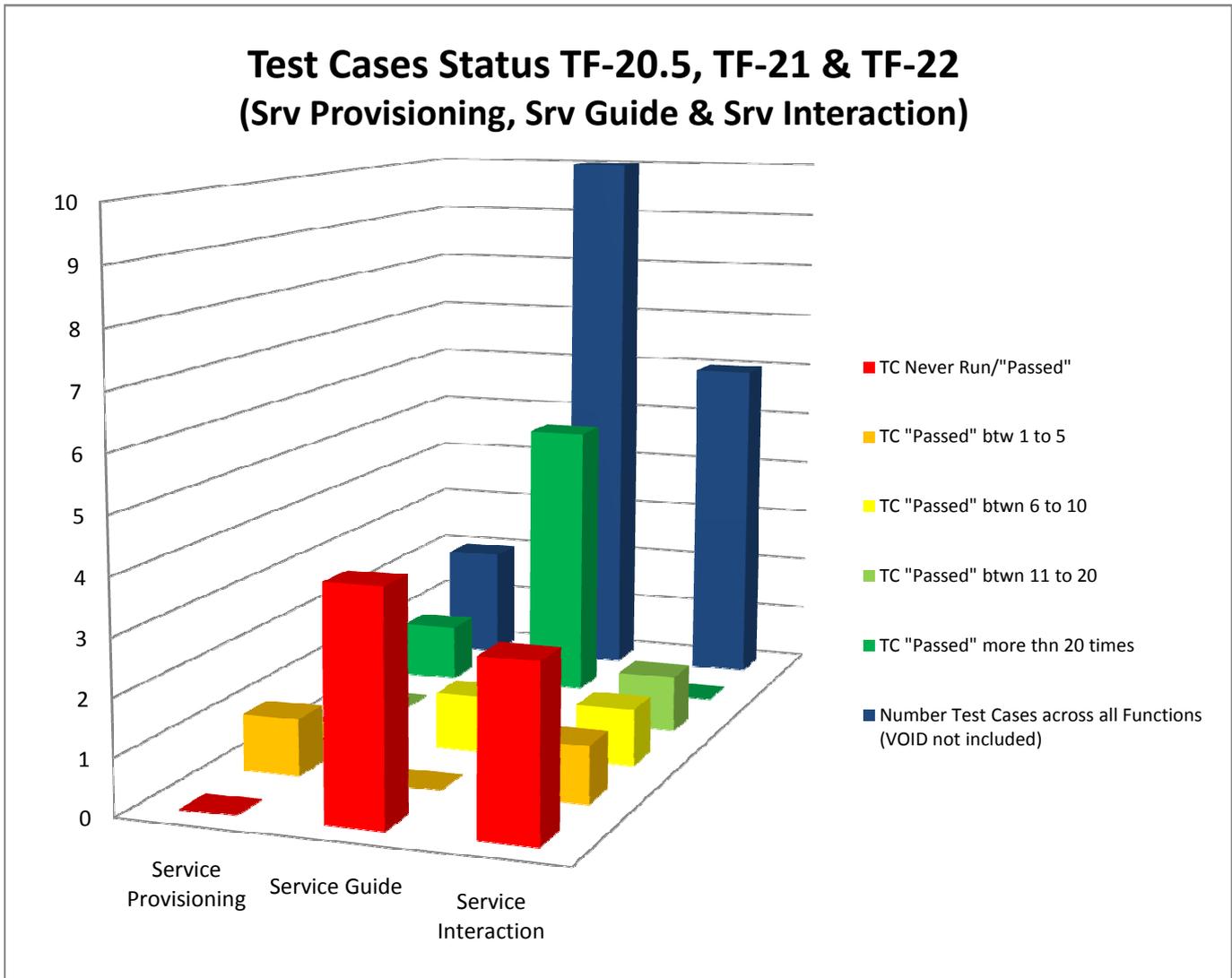
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BCAST Test Cases Status (Cumulative Results TF-20.5, 21 & 22)



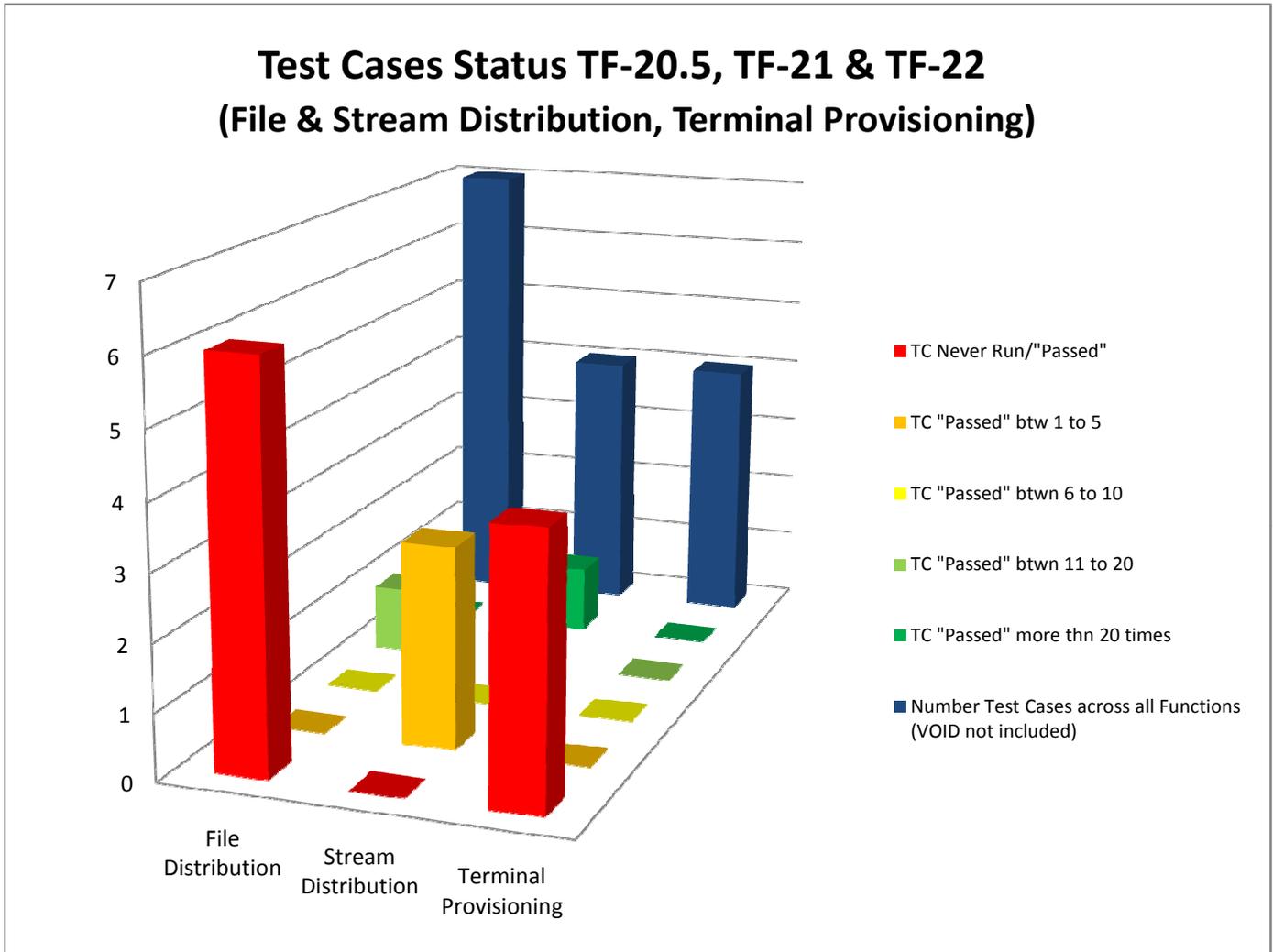
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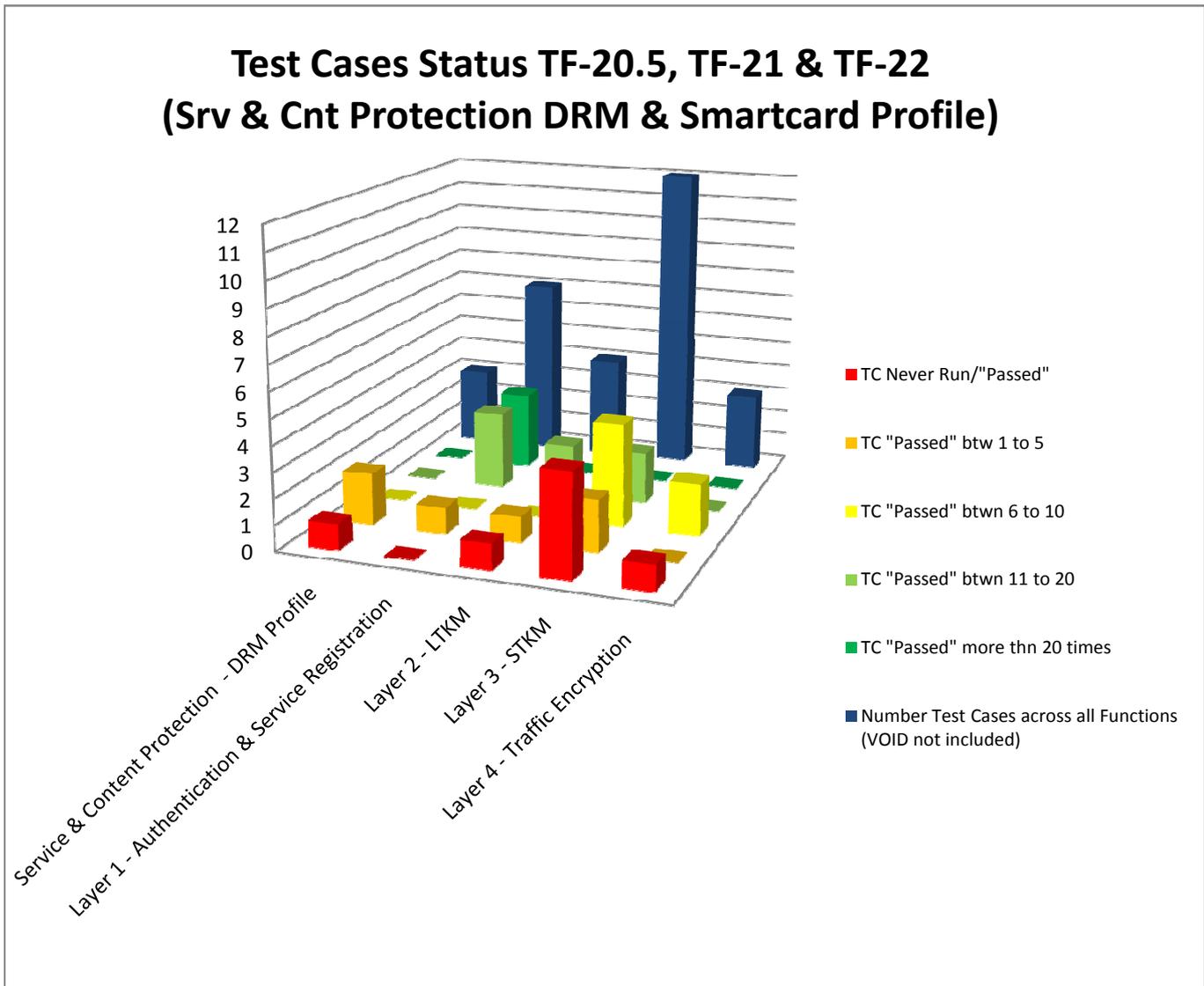


Same analysis for:

- File & Stream Distribution
- Terminal Provisioning



Same analysis for Service & Content Protection DRM and Smartcard Profile.



BCAST TestFest Participation

	Clients	Smartcards	BCAST Servers	GBA-BSF	PR
TF-22	5	2	4	1	2
TF-21	5	1	5	2	2
TF-20.5	11	3	8	3	6

BCAST Client Supported Functions

	Service Guide	Stream Distribution	File Distribution	Srv & Cnt DRM	Srv & Cnt Smartcard	Service Provisioning	Notification	Service Interaction	Terminal provisioning
TF-22	3	3	3	2	4	2	1	3	0
TF-21	4	3	4	2	5	3	0	3	0
TF-20.5	9	7	7	2	7	5	0	3	0

BCAST Servers Supported Functions

	Service Guide	Stream Distribution	File Distribution	Srv & Cnt DRM	Srv & Cnt Smartcard	Service Provisioning	Notification	Service Interaction	Terminal provisioning
TF-22	2	2	1	1	3	2	0	2	0
TF-21	4	3	2	1	3	2	0	2	0
TF-20.5	5	4	3	3	5	2	0	0	0

Status of BCAST Test Cases per BCAST Functions

Cumulative Results for TF-20.5, TF-21 & TF-22

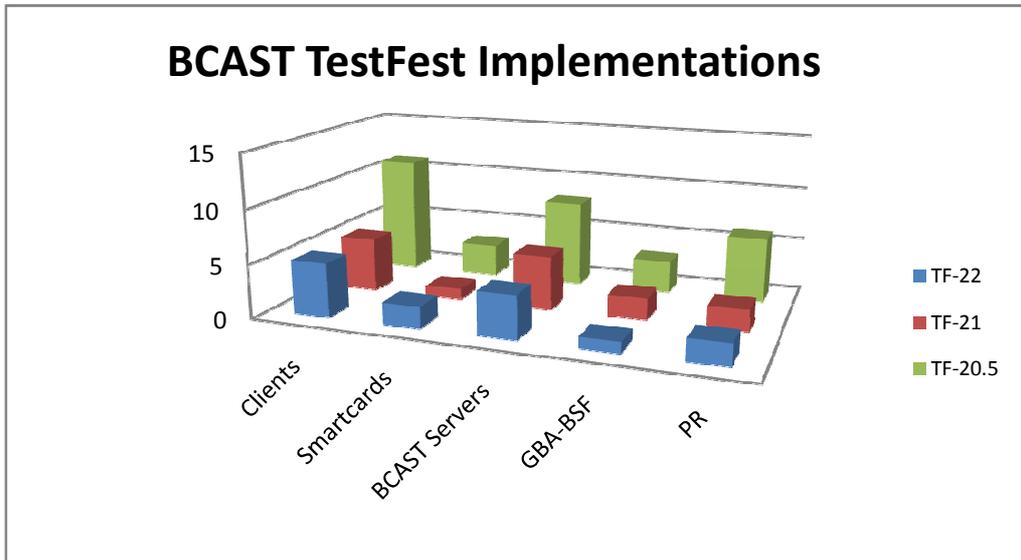
	TC Never Run/"Passed"	TC "Passed" btw 1 to 5	TC "Passed" btwn 6 to 10	TC "Passed" btwn 11 to 20	TC "Passed" more thn 20 times	Number Test Cases across all Functions (VOID not included)
Service Provisioning	0	1	0	0	1	2
Service Guide	4	0	1	0	5	10
File Distribution	6	0	0	1	0	7
Stream Distribution	0	3	0	0	1	4
Service Interaction	3	1	1	1	0	6
Service & Content Protection - DRM Profile Layer 1 - Authentication & Service Registration	1	2	0	0	0	3
Layer 2 - LTKM	0	1	0	3	3	7
Layer 3 - STKM	1	1	0	2	0	4
Layer 4 - Traffic Encryption Terminal Provisioning	4	2	4	2	0	12
Layer 4 - Traffic Encryption Terminal Provisioning	1	0	2	0	0	3
Terminal Provisioning	4	0	0	0	0	4
Total Number TC (Tested at TF-20.5, 21 & 22)	24	11	8	9	10	62

Status of BCAST Test Cases per BCAST Functions

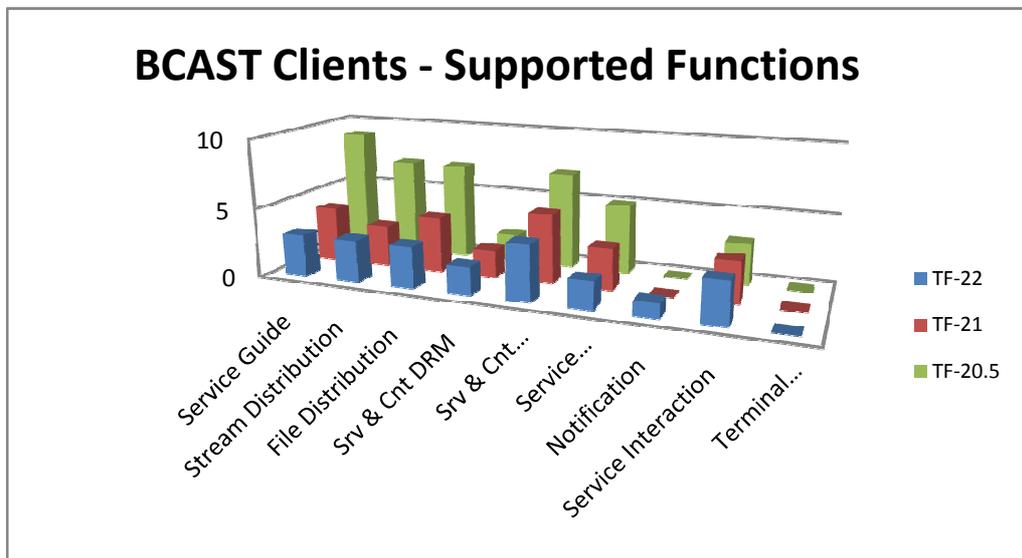
TestFest-22 Results

	TC Never Run/"Passed"	TC "Passed" btw 1 to 5	TC "Passed" btwn 6 to 10	TC "Passed" btwn 11 to 20	TC "Passed" more thn 20 times	Number Test Cases per Functions (VOID not included)
Service Provisioning	1	1	0	0	0	2
Service Guide	5	5	0	0	0	10
File Distribution	7	0	0	0	0	7
Stream Distribution	3	1	0	0	0	4
Service Interaction	4	2	0	0	0	6
Service & Content Protection - DRM Profile	3	0	0	0	0	3
Layer 1 - Authentication & Service Registration	1	2	4	0	0	7
Layer 2 - LTKM	2	1	1	0	0	4
Layer 3 - STKM	6	6	0	0	0	12
Layer 4 - Traffic Encrvption	3	0	0	0	0	3
Terminal Provisioning	4	0	0	0	0	4
Total Number TC (Tested at TF-22)	39	18	5	0	0	62

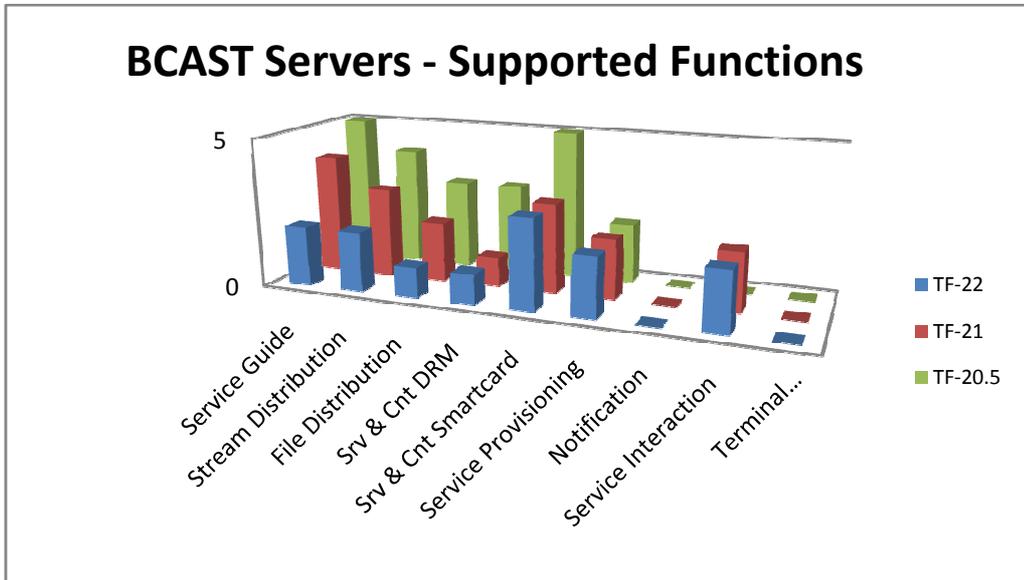
BCAST TestFest Participation



BCAST Clients - Supported Functions



BCAST Servers - Supported Functions



BCAST v1.0 Issues Raised during TF-22

Issues	Comment
More stable BCAST Specs	Servers and Clients were supporting different versions of BCAST implementations creating a conflict during Testing. Request to OMA BCAST to address this problem
TS BCAST Srv & Cnt Protection 20071103	contains a reference to 3GPP Rel 6. This reference has been updated in 3GPP but not in OMA specs. Request to OMA BCAST to address this problem
BCAST TC#410 (R-UIM)	This is a valid Test Case for (U)SIM. Request to OMA IOP BRO to create a new Test Case to be used by (U)SIM cards
Server Pre-conditions Problems	Some BCAST Servers do not comply with Test Case Pre-conditions slowing the progress of the Event. Request to OMA IOP BRO to review this problem
Pre-Test Cases Issues	The increment in the number and difficulty of Pre-Test Cases is affecting formal testing time. Participants postpone Formal Test until pass ALL Pre-Test Cases. Request to OMA IOP BRO to reduce number and complexity of Pre-Test Cases at least until implementations became more mature
Lack of debugging Tools	Lack of debugging Tools to assist Fault Identification is slowing fault identification & resolution Request to OMA IOP BRO to mandate tools to assist fault resolution, e.g. Spy tool between smartcard and Client

BCAST v1.0 Issues Raised during TF-22

Issues	Comment
Fault Identification	In general Participants find harder to identify the source of technical problems, e.g. Problems related to BCAST Smartcard Profile. The next two slides propose some improvements.
BCAST Configuration Parameters	<p>Lack of common criteria among Participants on the format or value of some BCAST configuration parameters. This has been a source of problems due to mismatch values or use of different formats leading to test failures or slowing the test. The parameters below were agreed during TF-22.</p> <p>Request to OMA IOP BCAST to review this issue, see below</p>

BCAST Configuration Parameters

NAF

BSF Server IP Address	IPAddress of BSF
Registration	<a href="http://<IPAddressNAF>/keymanagement?requesttype=register">http://<IPAddressNAF>/keymanagement?requesttype=register <a href="http://<IPAddressNAF>/keymanagement?requesttype=deregister">http://<IPAddressNAF>/keymanagement?requesttype=deregister <a href="http://<IPAddressNAF>/keymanagement?requesttype=msk-request">http://<IPAddressNAF>/keymanagement?requesttype=msk-request
UDP Port	4359
NAFID	<IPAddressNAF>
ServiceID	cannot be fix at the moment
IDI of the LTKM	Must be the IP Address of the NAF, i.e. <IPAddressNAF>

BCAST v1.0 Issues Raised during TF-22

Issues	Comment
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SG

Service Guide Rights Issuer URL	Must be the IP Adress of the NAF, i.e. <IPAddressNAF>
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Note: Although the specs mentions using FQDN of the NAF, for simplicity we use the IP Address

BCAST v1.0 Issues Raised during TF-22

Issues	Comment
Fix Values during Pre-Test Day	Simplify BCAST Smartcard Profile Pre-Test by fixing Authentication Vectors during Pre-Test. See example below

HLR/HSS Simulation - MILENAGE (standard)

	INPUT Values
RAND	00 11 22 33 44 55 66 77 88 99 AA BB CC DD EE FF
SQN	00 00 00 00 00 00
AMF	00 00
	EXPECTED Values
XRES	700EB2300B2C4798
CK	B379874B3D183D2A21291D439E7761E1
IK	F4706F66629CF7DDF881D80025BF1255
AUTN	DE656C8B0BCE0000803CE765D94CAF16

BCAST v1.0 Pre-Test Results TF-22

	Passed	Failed	Out of Time	Inconclusive	No applicable
Service Provisioning					
BCAST-1.0-DIST-int-101	1	0	1	0	1
Service Guide					
BCAST-1.0-DIST-int-103	2	0	1	0	0
BCAST-1.0-DIST-int-104	1	0	1	0	2
File Distribution					
BCAST-1.0-DIST-int-202	1	0	1	0	1
Stream Distribution					
BCAST-1.0-DIST-int-208	3	0	1	0	0
Service Interaction					
BCAST-1.0-DIST-int-301	2	0	1	1	0
Service & Content Protection DRM Profile					
BCAST-1.0-DIST-int-401	0	0	2	0	0
BCAST-1.0-DIST-int-402	0	0	1	0	1
BCAST-1.0-DIST-int-403	0	0	2	0	0
Layer 1 - Authentication & Service Registration					
BCAST-1.0-DIST-int-404	7	0	2	0	0
BCAST-1.0-DIST-int-410	6	0	3	0	0
Layer 3 STKM					
BCAST-1.0-DIST-int-430	0	0	4	1	4

Cumulative Results

TF-20.5+TF21+TF-22

TESTFEST-22

TESTFEST-21

TESTFEST-20.5

Service Provisioning

TC-101-Service bootstrap and single content

TC-102-Web-based Service Provisioning

Service Guide

TC-103-Service Guide update (same fragment id, higher version number) – Broadcast Channel

TC-104-Service Guide update (same fragment id, higher version number) – Interaction Channel

TC-105-Service Guide Update (new fragment id) – Broadcast Channel

TC-106-Service Guide Update (new fragment id) – Interaction Channel

TC-107-GZIP compression of Service Guide Delivery Unit

TC-108-Content hierarchy

TC-109-PreviewData and Service – Broadcast Channel

TC-110-PreviewData and Service – Interaction Channel

TC-111-Select language specific access parameters

TC-112-Subscription of Service

File Distribution

TC-201-Support of ALC protocol and delivery of meta-data in the Service Guide

TC-202-Support of in-band delivery of meta-data and FLUTE

TC-203-Support the delivery using HTTP over Interaction Channel

TC-204-Support of FEC RAPTOR

TC-205-Support of the post-delivery repair of files

TC-206-Support of reception report

Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
34	1	7	0	3	1	0	1	0	0	2	0	4	0	3	31	1	2	0	
4	0	7	0	4	0	0	1	0	1	1	0	5	0	3	3	0	1	0	
Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
34	2	4	0	0	4	0	0	0	0	8	0	0	0	0	22	2	4	0	
0	0	1	0	12	0	0	0	0	4	0	0	0	0	8	0	0	1	0	
37	2	4	0	0	4	0	0	0	0	8	0	0	0	0	25	2	4	0	
0	0	1	0	12	0	0	0	0	4	0	0	0	0	8	0	0	1	0	
42	0	2	0	0	4	0	0	0	0	8	0	0	0	0	30	0	2	0	
39	1	2	1	0	4	0	0	0	0	7	0	0	1	0	28	1	2	0	
36	0	2	0	0	4	0	0	0	0	8	0	0	0	0	24	0	2	0	
0	0	1	0	12	0	0	0	0	4	0	0	0	0	8	0	0	1	0	
6	0	5	0	10	0	0	0	0	2	0	0	0	0	8	6	0	5	0	
0	0	1	0	5	0	0	0	0	1	0	0	0	0	4	0	0	1	0	
Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
0	0	1	2	7	0	0	0	0	3	0	0	0	2	4	0	0	1	0	
19	0	2	0	6	0	0	0	0	3	2	0	0	0	3	17	0	2	0	
0	0	1	0	8	0	0	0	0	3	0	0	0	0	5	0	0	1	0	
0	0	1	0	8	0	0	0	0	3	0	0	0	0	5	0	0	1	0	
0	0	1	0	8	0	0	0	0	3	0	0	0	0	5	0	0	1	0	
0	0	1	0	8	0	0	0	0	3	0	0	0	0	5	0	0	1	0	

Cumulative Results

TC-207-Support of Flute Session Setup and Control with RTSP

Stream Distribution

TC-208-Support of RTP for stream distribution over the broadcast channel

TC-209-Support of RTP for stream distribution over the interactive channel using SDP

TC-210-Support of RTP for stream distribution over the interactive channel using HTTP with out-of-band signalling

TC-211-Support of streaming associated procedure

Service Interaction

TC-301-XHTML MP Interactivity – Broadcast Channel

TC-302-XHTML MP Interactivity – Interaction Channel

TC-303-SMS interactivity – Broadcast Channel

TC-304-SMS interactivity – Interaction Channel

TC-305-MMS Interactivity – Broadcast Channel

TC-306-MMS Interactivity – Interaction Channel

Service & Content Protection - DRM Profile

TC-401-Delivery of IPsec protected stream

TC-402-Delivery of SRTP protected stream

TC-403-Delivery of ISMACrypt protected stream

Service & Content Protection - Smartcard Profile

Layer 1 Authentication and Service Registration

TC-404-GBA-U Bootstrapping USIM /BSM with success

TC-405-GBA-U Bootstrapping USIM / BSM with synchronization error

TC-406-GBA_U: Expired Bootstrapping data

TF-20.5+TF21+TF-22					TESTFEST-22					TESTFEST-21					TESTFEST-20.5				
0	0	1	0	8	0	0	0	0	3	0	0	0	0	5	0	0	1	0	
Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
32	1	2	0	0	4	0	0	0	0	4	0	0	0	0	24	1	2	0	
3	0	1	0	8	0	0	0	0	4	0	0	0	0	4	3	0	1	0	
1	0	1	0	8	0	0	0	0	4	0	0	0	0	4	1	0	1	0	
1	0	1	0	8	0	0	0	0	4	0	0	0	0	4	1	0	1	0	
Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
10	1	1	0	1	3	1	0	0	0	6	0	0	0	1	1	0	1	0	
0	0	1	0	10	0	0	0	0	4	0	0	0	0	6	0	0	1	0	
17	0	1	0	2	3	0	0	0	1	6	0	0	0	1	8	0	1	0	
0	0	1	0	10	0	0	0	0	4	0	0	0	0	6	0	0	1	0	
1	0	1	0	11	0	0	0	0	4	0	0	0	0	7	1	0	1	0	
0	0	1	0	10	0	0	0	0	4	0	0	0	0	6	0	0	1	0	
Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
0	1	7	0	2	0	1	0	0	0	0	0	0	0	2	0	0	7	0	
5	0	9	0	3	0	0	0	0	1	0	0	0	0	2	5	0	9	0	
4	2	11	0	0	0	1	0	0	0	0	0	2	0	0	4	1	9	0	
Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
30	0	18	0	0	9	0	1	0	0	6	0	3	0	0	15	0	14	0	
11	0	28	0	9	3	0	2	0	5	0	0	5	0	4	8	0	21	0	
23	1	23	0	1	6	1	2	0	1	2	0	7	0	0	15	0	14	0	

Cumulative Results

	TF-20.5+TF21+TF-22					TESTFEST-22					TESTFEST-21					TESTFEST-20.5				
TC-407-GBA_U: Different Key K on Client and Server	23	0	25	0	0	7	0	3	0	0	1	0	8	0	0	15	0	14	0	
TC-408-Deregistration	19	0	20	0	0	7	0	3	0	0	5	0	4	0	0	7	0	13	0	
TC-409-Deregistration with Bootstrapping	11	1	26	0	1	5	1	3	0	1	3	0	6	0	0	3	0	17	0	
TC-410-Subscriber Key Establishment for (R-)UIM/CSIM	4	0	4	0	10	0	0	0	0	9	4	0	4	0	1	0	0	0	0	
	Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
Layer 2 LTKM																				
TC-411-LTKM (without EXT BCAST: MBMS like) reception at the smartcard	11	0	23	7	0	5	0	4	1	0	3	0	6	0	0	3	0	13	6	
TC-412-LTKM request from the terminal, LTKM reception at the terminal / smartcard	13	0	22	6	0	7	0	3	0	0	3	0	6	0	0	3	0	13	6	
TC-413-BSM solicited pull procedure	1	0	34	0	5	0	0	8	0	2	0	0	6	0	3	1	0	20	0	
TC-414-BSM solicited pull procedure initiation over SMS Bearer	0	0	29	0	8	0	0	5	0	5	0	0	6	0	3	0	0	18	0	
TC-415-VOID- LTKM with OMA BCAST extension and security policy extension	6	0	17	7	0	0	0	0	0	0	2	0	6	1	0	4	0	11	6	
TC-416- VOID- Set of service purse associated with service: Key domain ID =MCC1 MNC1 and SEK/PEK ID key	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-417-VOID- LTKM with OMA BCAST extension and security policy extension 0x00 and the purse flag set to 1: test	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-418-VOID- LTKM with OMA BCAST extension and security policy extension 0x01 and the purse flag set to 1: test	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-419-VOID- LTKM with OMA BCAST extension and security policy extension 0x01 and the purse flag set to 1: test	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-420-VOID- Set of user purse associated with the SMK	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-421-VOID- LTKM with OMA BCAST extension and security policy extension 0x02 and the purse flag set to 1: test	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-422-VOID- LTKM with OMA BCAST extension and security policy extension 0x03 and the purse flag set to 1: test	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-423-VOID- LTKM with OMA BCAST extension and security policy extension 0x03 and the purse flag set to 1: test	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-424-VOID- LTKM with OMA BCAST extension and security policy extension 0x06 and the purse flag set to 0 and number_play_back: test of play_back counter setting and	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-425-VOID- LTKM with OMA BCAST extension and security policy extension 0x07 and the purse flag set to 0 and number_play_back: test of play_back counter setting and	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	

Cumulative Results

	TF-20.5+TF21+TF-22					TESTFEST-22					TESTFEST-21					TESTFEST-20.5				
TC-426-VOID- LTKM with OMA BCAST extension and security policy extension 0x08 and the purse flag set to 0 and number_play_back: test of play_back counter setting with no	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-427- VOID- LTKM with OMA BCAST extension and security policy extension 0x09 and the purse flag set to 0 and number_play_back: test of play_back counter setting with no	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-428-VOID- LTKM with OMA BCAST extension and security policy extension 0x06 and the purse flag set to 0 and	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
TC-429- VOID- LTKM with OMA BCAST extension and security policy extension 0x07 and the purse flag set to 0 and	0	0	27	1	0	0	0	0	0	0	0	0	9	0	0	0	0	18	1	
Layer 3 STKM	Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
<i>TC-430-Correct STKM parsing by Smartcard (BCAST)</i>	11	0	23	0	0	2	0	8	0	0	2	0	7	0	0	7	0	8	0	
<i>TC-431-Correct STKM parsing by Smartcard (MBMS)</i>	13	0	26	1	0	2	0	8	0	0	2	0	7	0	0	9	0	11	1	
<i>TC-432-Incorrect STKM generation – inexistent SEK/PEK (wrong key domain ID)</i>	8	0	31	1	0	2	0	8	0	0	1	0	8	0	0	5	0	15	1	
<i>TC-433-Incorrect STKM generation – inexistent SEK/PEK (wrong SEK ID)</i>	9	0	30	1	0	2	0	8	0	0	2	0	7	0	0	5	0	15	1	
<i>TC-434-LTKM with invalid validity data</i>	8	0	32	1	0	2	0	8	0	0	2	0	7	0	0	4	0	17	1	
TC-435-VOID- Incorrect STKM generation – invalid TS range or SEK/PEK has been invalidated	1	0	29	1	0	0	0	0	0	0	0	0	9	0	0	1	0	20	1	
TC-436-VOID- STKM error: The SEK/PEK is invalid (Seq >Seq) the SmartCard returns the status word ‘6985’	0	0	29	1	0	0	0	0	0	0	0	0	9	0	0	0	0	20	1	
TC-437-VOID- STKM error: The TS present in the STKM is such TS < Seq (Tslow) the SmartCard returns the status	0	0	29	1	0	0	0	0	0	0	0	0	9	0	0	0	0	20	1	
TC-438-VOID- STKM error: The TS present in the STKM is such Sequ (Tshigh) < TS the SmartCard returns the status	0	0	29	1	0	0	0	0	0	0	0	0	9	0	0	0	0	20	1	
<i>TC-439-Key deletion from server</i>	0	0	36	1	1	0	0	10	0	0	0	0	8	0	1	0	0	18	1	
Replayed STKM reception; test of Pay-per-time and pay-per-view	Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
TC-440-VOID- Precondition 1 – no security_policy_extension in LTKM, pass criteria: error	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	
TC-441-VOID- Precondition 2 – security_policy_extension in LTKM: 0x00, pass criteria: error	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	
TC-442-VOID- Precondition 3 – security_policy_extension in LTKM: 0x01, pass criteria: STKM accepted, no error	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	

Cumulative Results

	TF-20.5+TF21+TF-22					TESTFEST-22					TESTFEST-21					TESTFEST-20.5				
TC-443-VOID- Precondition 4 – security_policy_extension in LTKM: 0x02, pass criteria: error	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	
TC-444-VOID- Precondition 5 – security_policy_extension in LTKM: 0x03, pass criteria: STKM accepted, no error	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	
TC-445-Precondition 6 – security_policy_extension in LTKM: 0x04, pass criteria: error	0	0	36	1	1	0	0	10	0	0	0	0	8	0	1	0	0	18	1	
TC-446-Precondition 7 – security_policy_extension in LTKM: 0x05, pass criteria: STKM accepted, no error	0	0	36	1	1	0	0	10	0	0	0	0	8	0	1	0	0	18	1	
TC-447-VOID- Precondition 8 – security_policy_extension in LTKM: 0x06 and play-counter not equal to 0, pass criteria:	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	
TC-448-VOID- Precondition 9 – security_policy_extension in LTKM: 0x06 and play-counter equal to 0, pass criteria:	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	
TC-449-VOID- Precondition 10 – security_policy_extension in LTKM: 0x07, and play-counter	0	0	26	1	1	0	0	0	0	0	0	0	8	0	1	0	0	18	1	
TC-450-VOID- Precondition 11 – security_policy_extension in LTKM: 0x07, and play-counter equal to 0 pass criteria:	0	0	25	1	1	0	0	0	0	0	0	0	8	0	1	0	0	17	1	
TC-451-VOID- Precondition 12 – security_policy_extension in LTKM: 0x08, and play-counter not equal to 0 pass criteria:	0	0	25	1	1	0	0	0	0	0	0	0	8	0	1	0	0	17	1	
TC-452-VOID- Precondition 13 – security_policy_extension in LTKM: 0x08, and play-counter equal to 0 pass criteria:	0	0	25	1	1	0	0	0	0	0	0	0	8	0	1	0	0	17	1	
TC-453-VOID- Precondition 14 – security_policy_extension in LTKM: 0x09, and play-counter not equal to 0 pass criteria:	0	0	25	1	1	0	0	0	0	0	0	0	8	0	1	0	0	17	1	
TC-454-VOID- Precondition 15 – security_policy_extension in LTKM: 0x09, and play-counter equal to 0 pass criteria:	0	0	25	1	1	0	0	0	0	0	0	0	8	0	1	0	0	17	1	
TC-455-STKM reception within the same cryptoperiod – terminal filtering	2	0	33	1	1	2	0	8	0	0	0	0	8	0	1	0	0	17	1	
TC-456-STKM reception with parental control without PIN defined in the card	0	0	34	1	1	0	0	10	0	0	0	0	8	0	1	0	0	16	1	
TC-457-VOID- STKM reception with parental control and with PIN defined in the card	0	0	24	1	1	0	0	0	0	0	0	0	8	0	1	0	0	16	1	
TC-458-Multiple streams protected with same STKM stream	8	0	30	1	2	0	0	8	0	2	3	0	6	0	0	5	0	16	1	
TC-459-Multiple streams protected with different STKM streams	1	0	36	1	2	0	0	8	0	2	1	0	8	0	0	0	0	20	1	
Layer 4: Traffic Encryption layer	Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA
TC-460-Delivery of IPSec protected stream	0	0	33	0	5	0	0	8	0	2	0	0	6	0	3	0	0	19	0	
TC-461-Delivery of SRTP protected stream	6	0	31	0	4	0	0	8	0	2	1	0	6	0	2	5	0	17	0	

Cumulative Results

TC-462-Delivery of ISMACrypt protected stream

Terminal Provisioning

TC-501-Receiving terminal provisioning messages using TP-7

TC-502-Update terminal provisioning messages using TP-7

TC-503-Declaring Terminal Provisioning as a Service within Service Guide

TC-504-Declaring Terminal Provisioning as an Access of a Service within Service Guide

	TF-20.5+TF21+TF-22					TESTFEST-22					TESTFEST-21					TESTFEST-20.5					
	Passed	Failed	OT	Incon	NA	TF-22- Passed	Failed	OT	Incon	NA	TF-21- Passed	Failed	OT	Incon	NA	TF-20.5- Passed	Failed	OT	Incon	NA	
	7	0	31	0	3	0	0	8	0	2	2	0	6	0	1	5	0	17	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

List of BCAST Test Cases

Test Case	Description	Status
BCAST-1.0-DIST-int-415	Test that an LTKM with EXT BCAST field can be successfully received over UDP at the terminal / smartcard and a verification message is sent.	Void
BCAST-1.0-DIST-int-416	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-417	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-418	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-419	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-420	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-421	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-422	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-423	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-424	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-425	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-426	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-427	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-428	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-429	Test that the BSM receives a verification message when a BSM pushes an LTKM message to the terminal/Smartcard. (See BCAST-1.0-DIST-int-415)	Void
BCAST-1.0-DIST-int-435	Test that an STKM cannot processed by the smartcard and the TEK isn't returned.	Void
BCAST-1.0-DIST-int-436	Test that an STKM cannot be processed by the smartcard when the SEK/PEK has been invalidated and that the TEK isn't returned.	Void
BCAST-1.0-DIST-int-437	Test that an STKM cannot processed by the smartcard and the TEK isn't returned.	Void
BCAST-1.0-DIST-int-438	Test that an STKM cannot processed by the smartcard and the TEK isn't returned.	Void
BCAST-1.0-DIST-int-440	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-441	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-442	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-443	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-444	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void

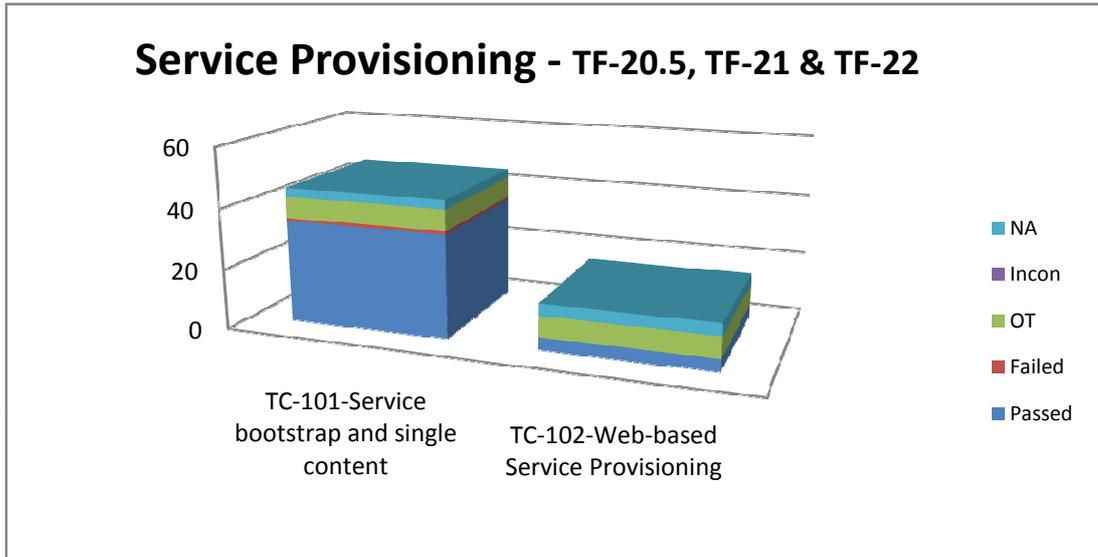
List of BCAST Test Cases

Test Case	Description	Status
BCAST-1.0-DIST-int-447	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-448	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-449	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-450	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-451	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-452	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-453	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-454	BSM / BSDA deliberately sends an STKM already sent to the terminal / smartcard (32-bit counter timestamp field has previously been used). Repeat STKM is not detected by the terminal and sent to the Smartcard. Depending on LTKM security_policy_extension value, smartcard accepts or rejects the STKM (replay allowed or not)	Void
BCAST-1.0-DIST-int-457	BSM / BSDA sends several STKMs to the terminal / smartcard with different parental rating-value	Void

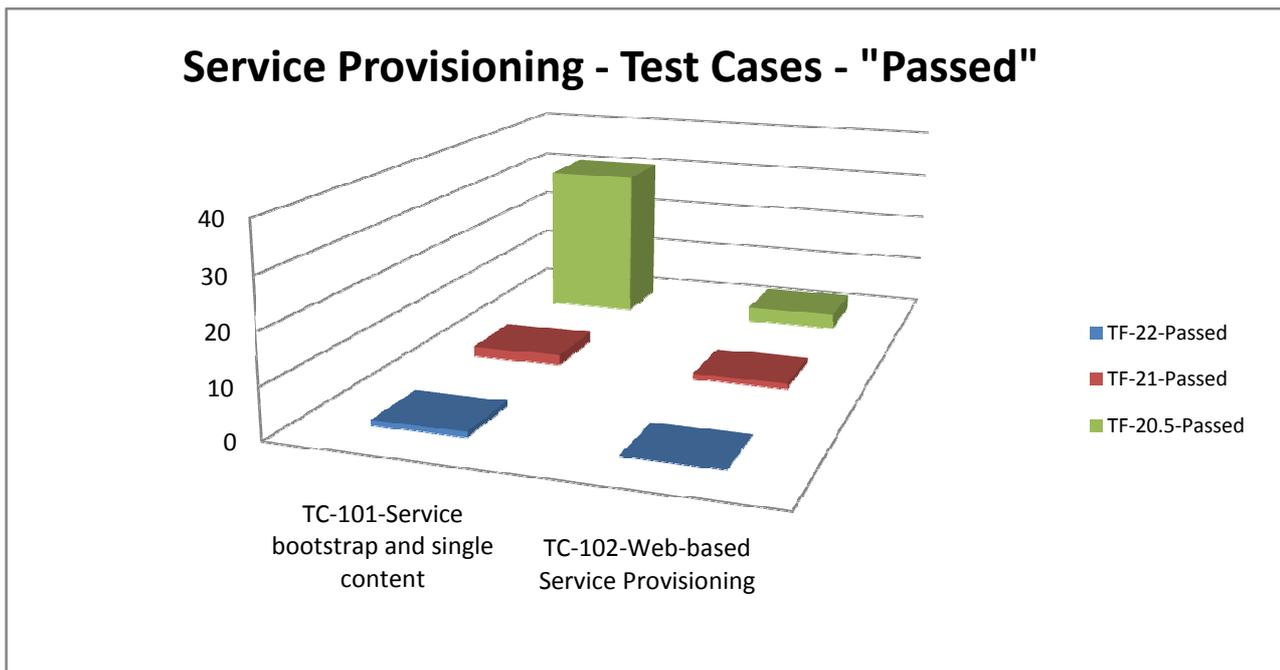
Service Provisioning

The graph indicates how many times each of the Service Provisioning Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



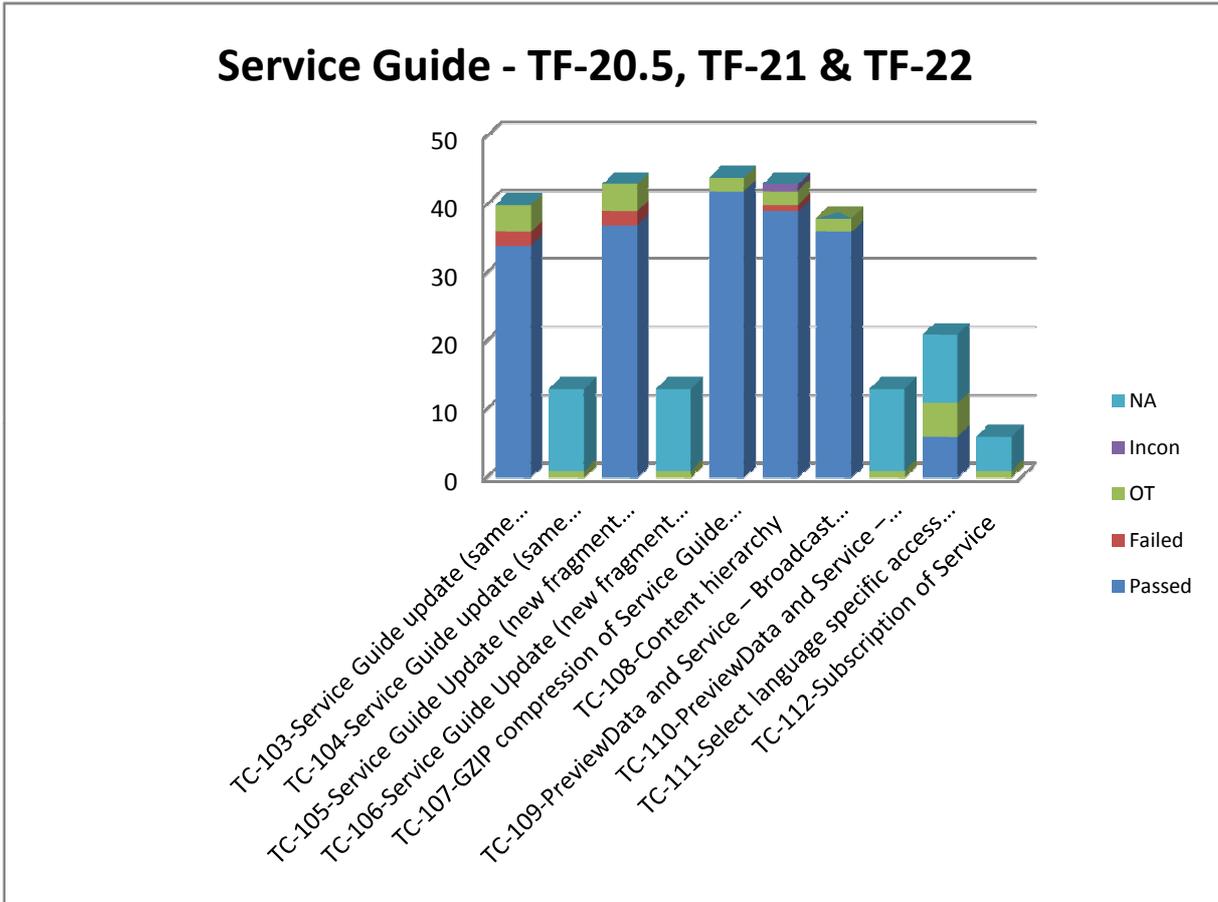
The below graph indicates the number of times each Test Case was marked as "Passed" The information relates to each TestFest in which BCAST v1.0 was tested



Service Guide

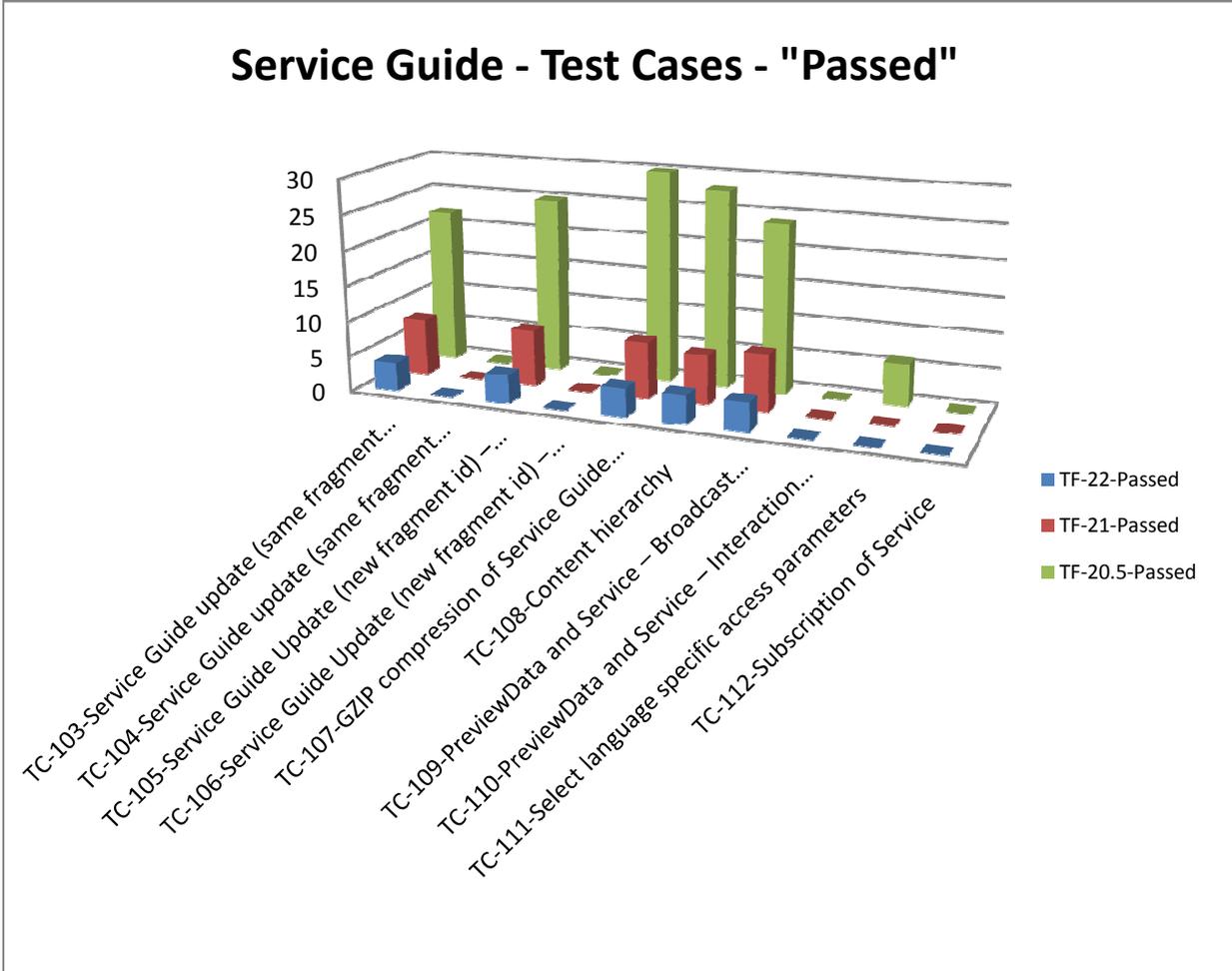
The graph indicates how many times each of the Service Guide Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Service Guide

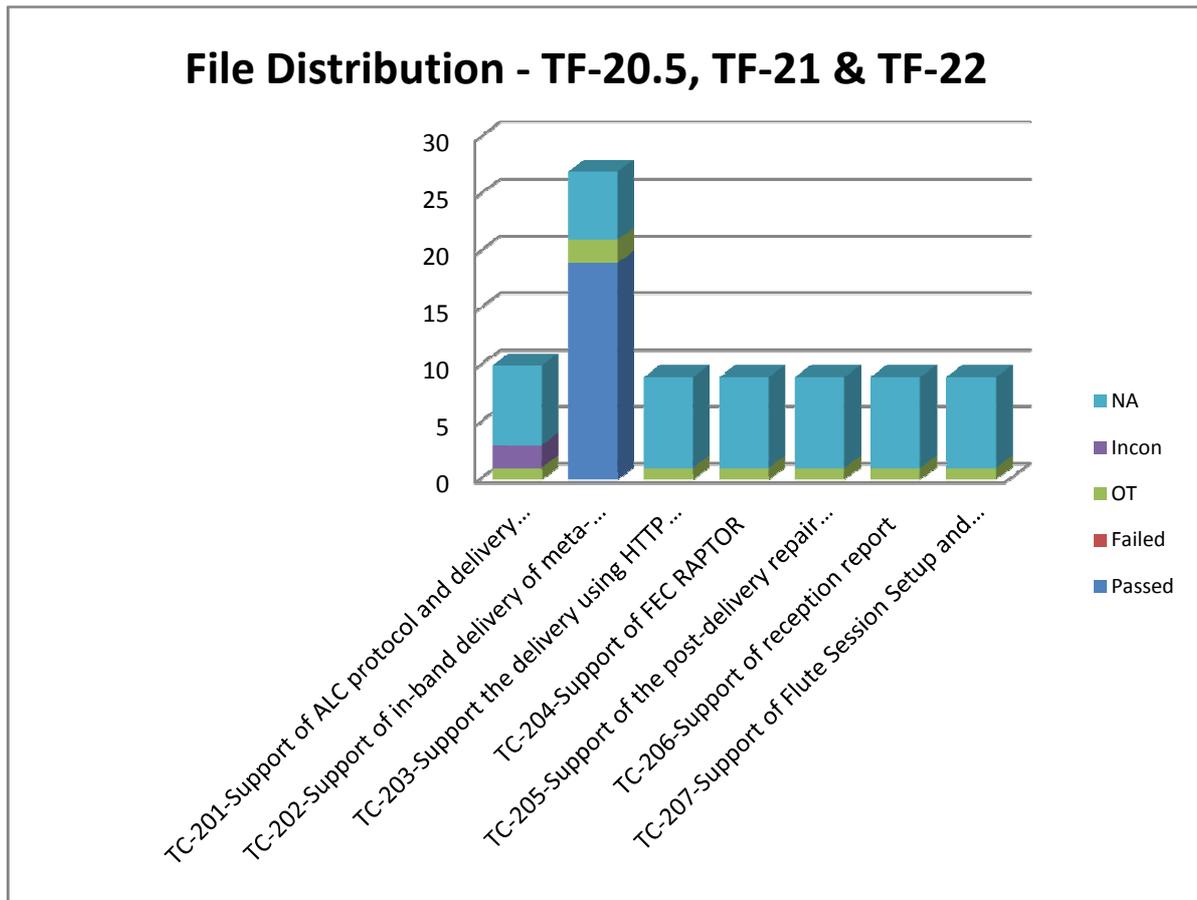
The below graph indicates the number of times each Test Case was marked as "Passed"
 The information relates to each TestFest in which BCAST v1.0 was tested



File & Stream Distribution

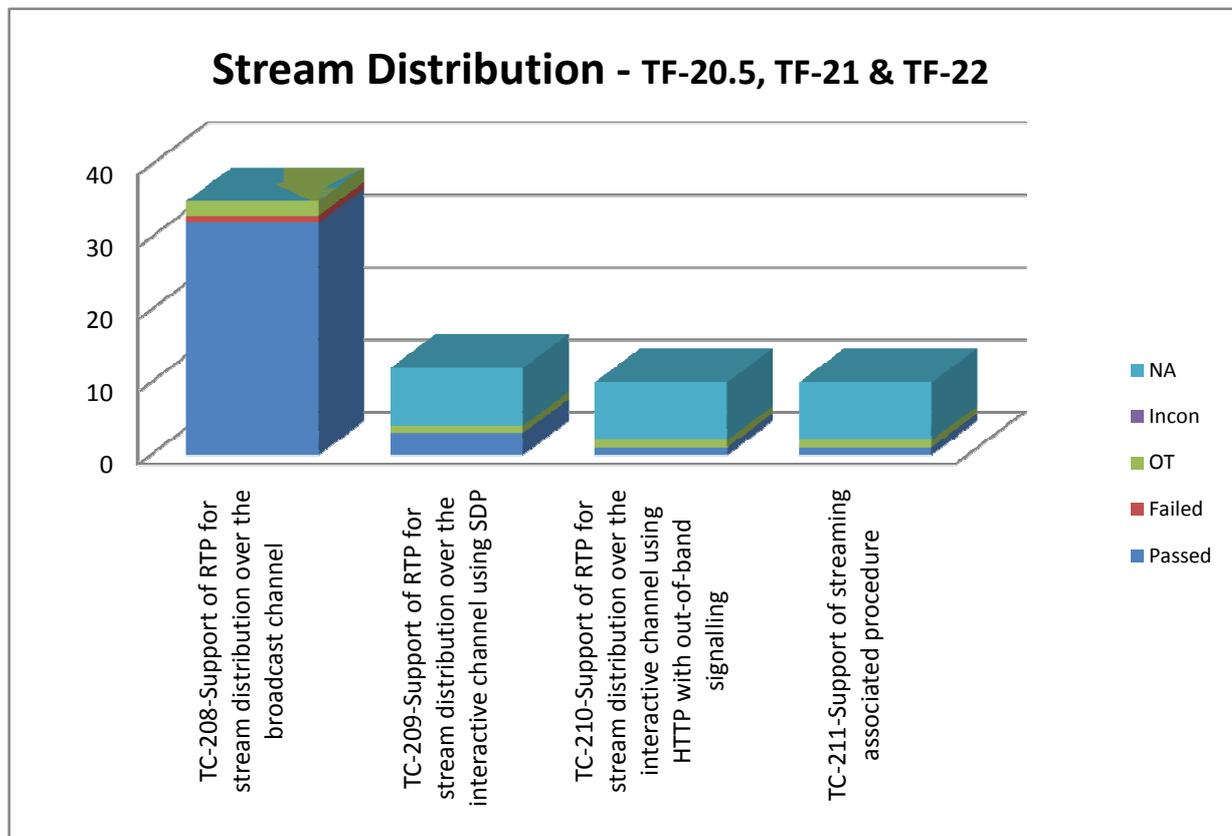
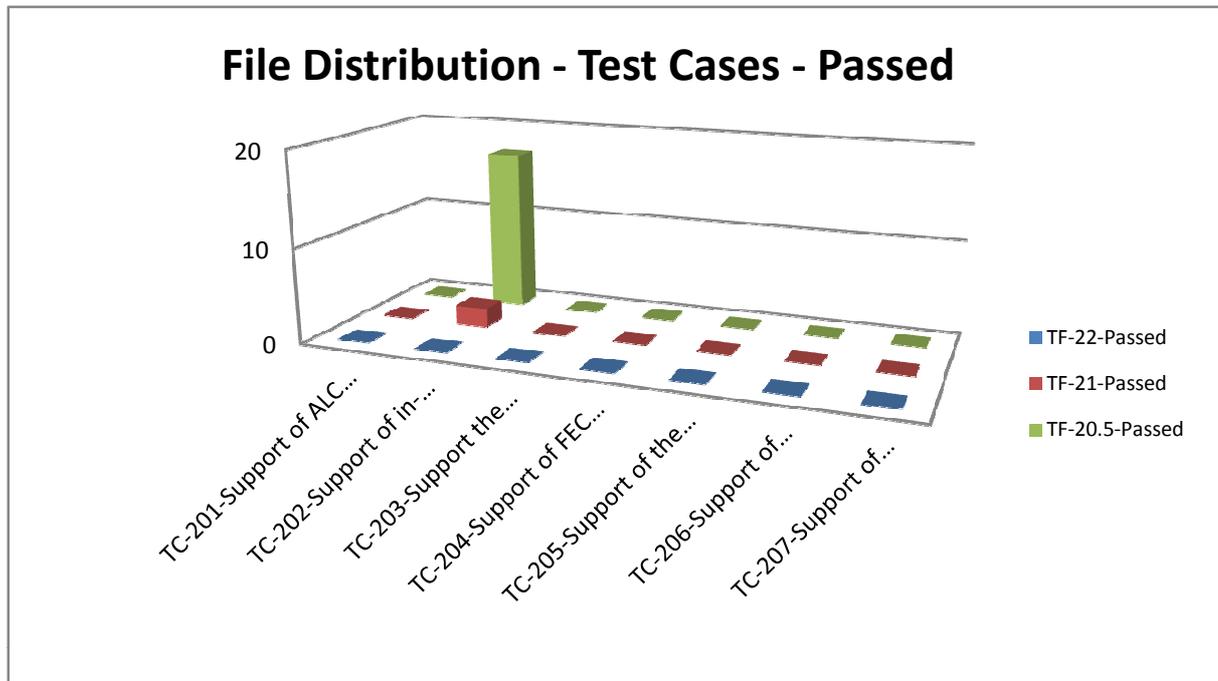
The graph indicates how many times each of the File and Stream Distribution Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable

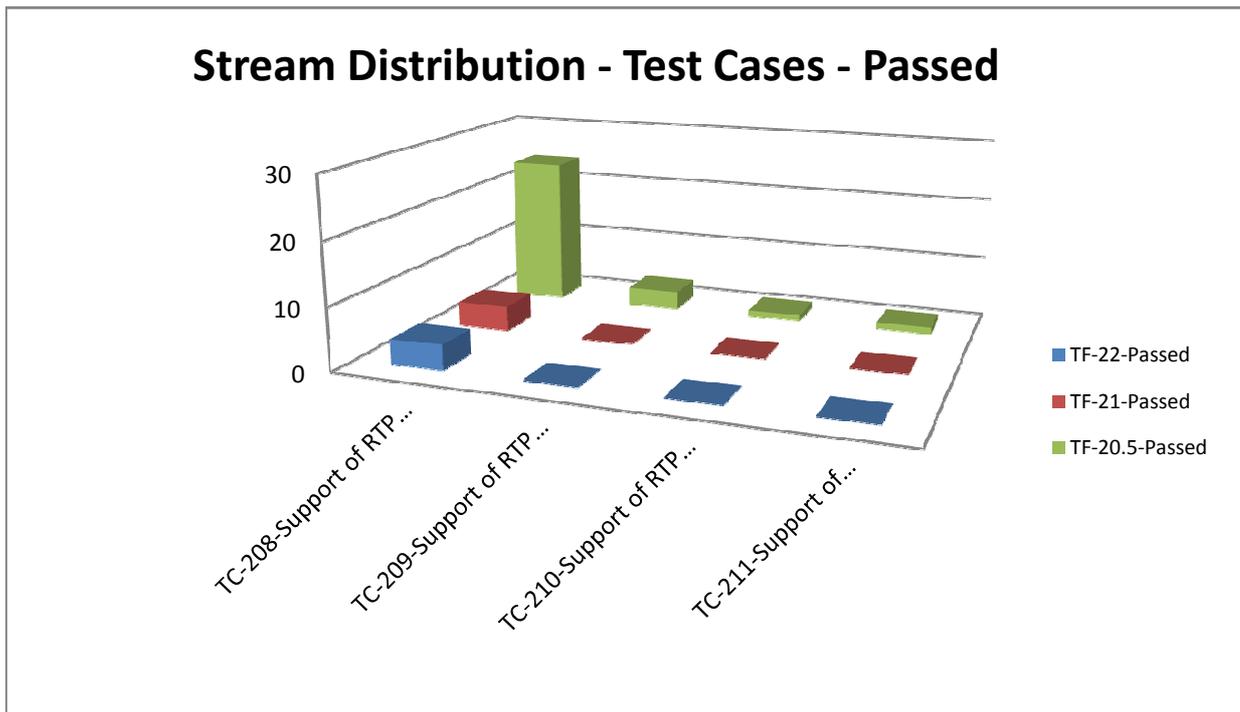


File & Stream Distribution

The below graph indicates the number of times each Test Case was marked as "Passed"
 The information relates to each TestFest in which BCAS T v1.0 was tested



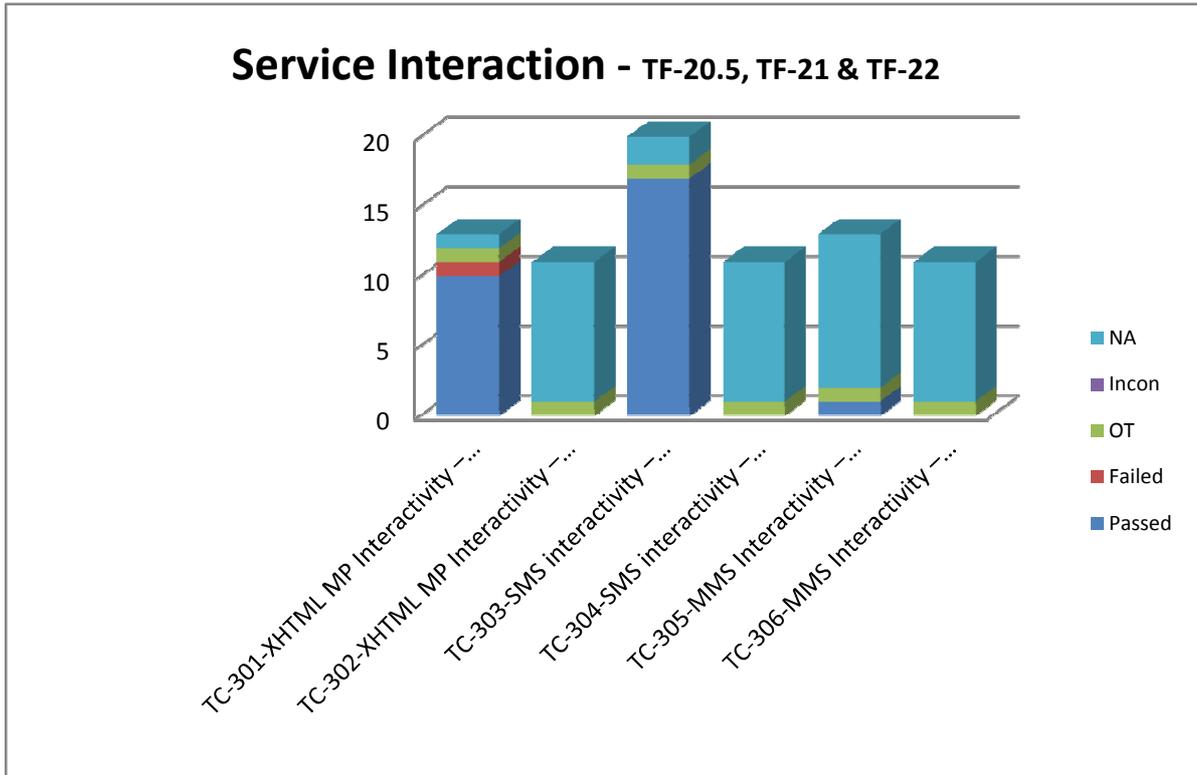
File & Stream Distribution



Service Interaction

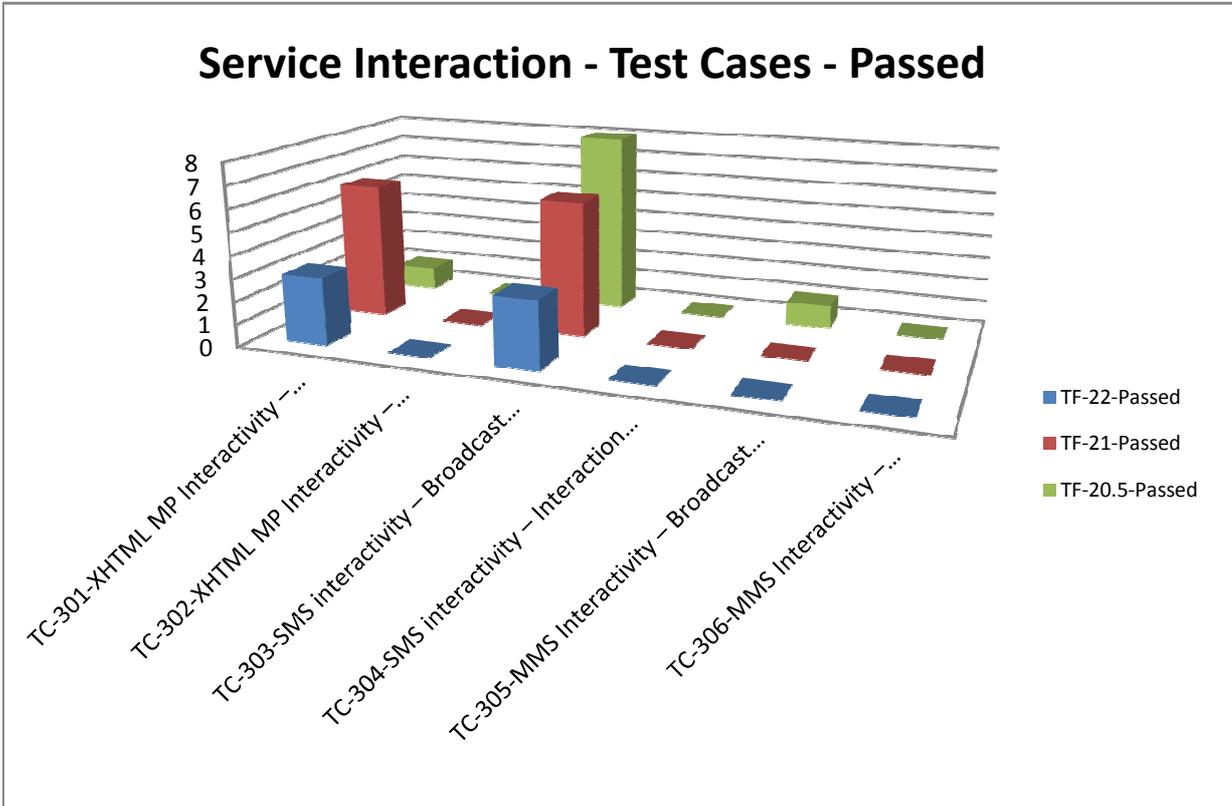
The graph indicates how many times each of the Service Interaction Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Service Interaction

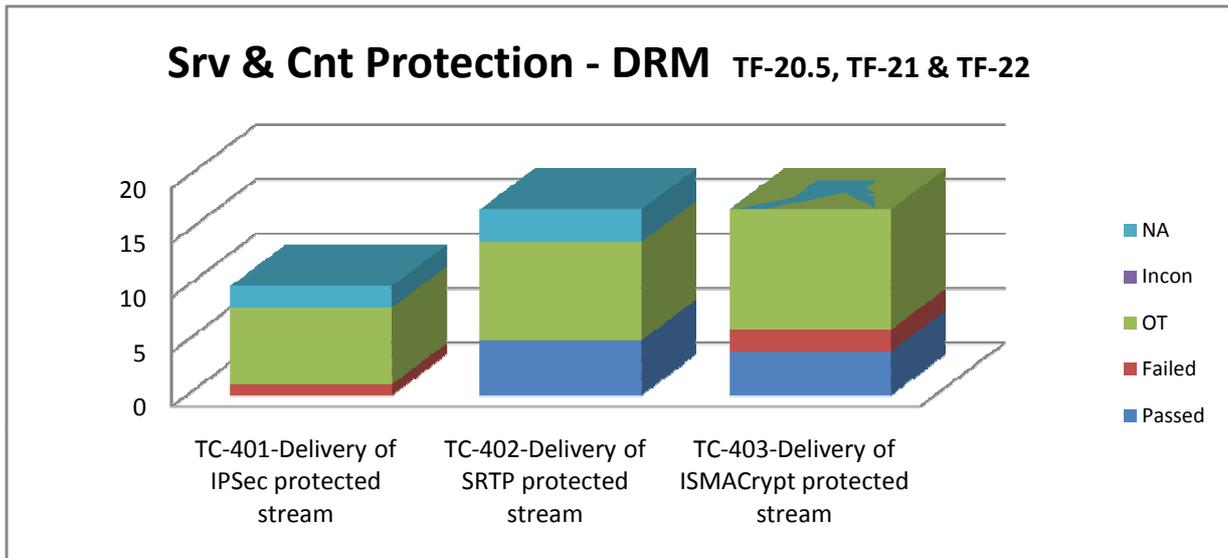
The below graph indicates the number of times each Test Case was marked as "Passed"
 The information relates to each TestFest in which BCAST v1.0 was tested



Service and Content Protection - DRM Profile

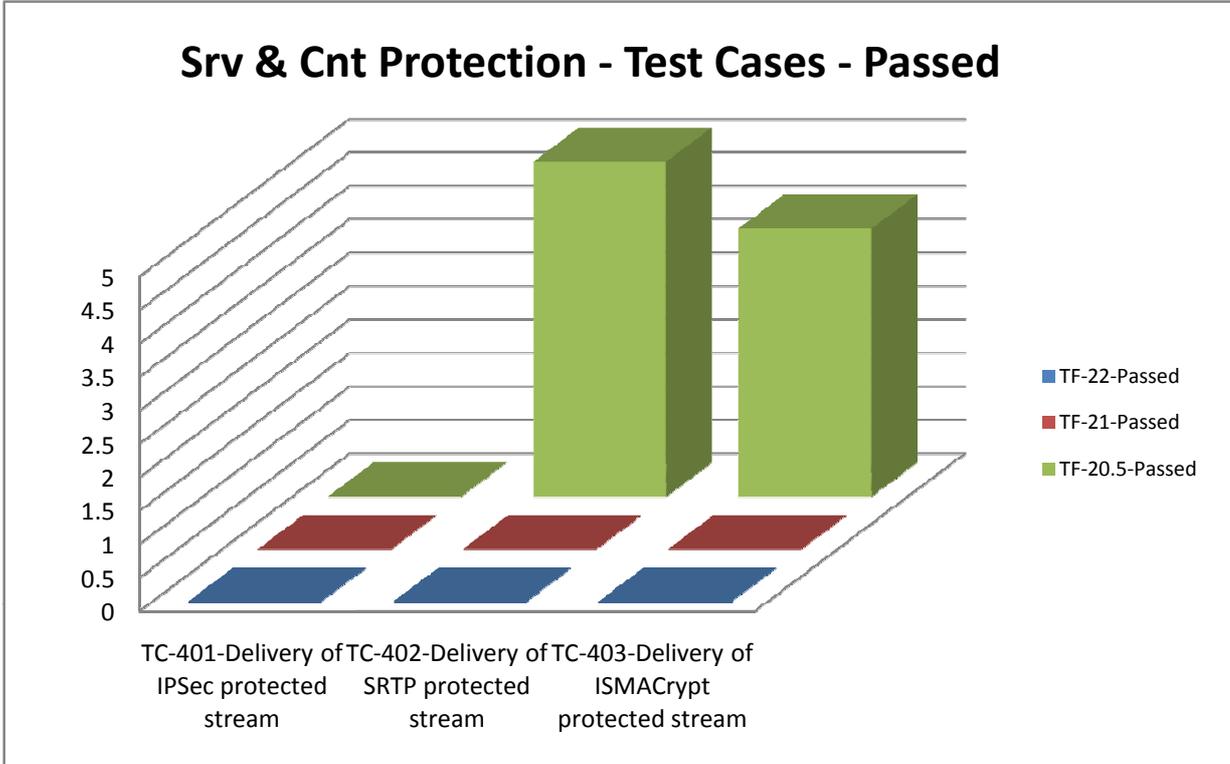
The graph indicates how many times each of the Service & Content Protection - DRM Profile Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Service and Content Protection - DRM Profile

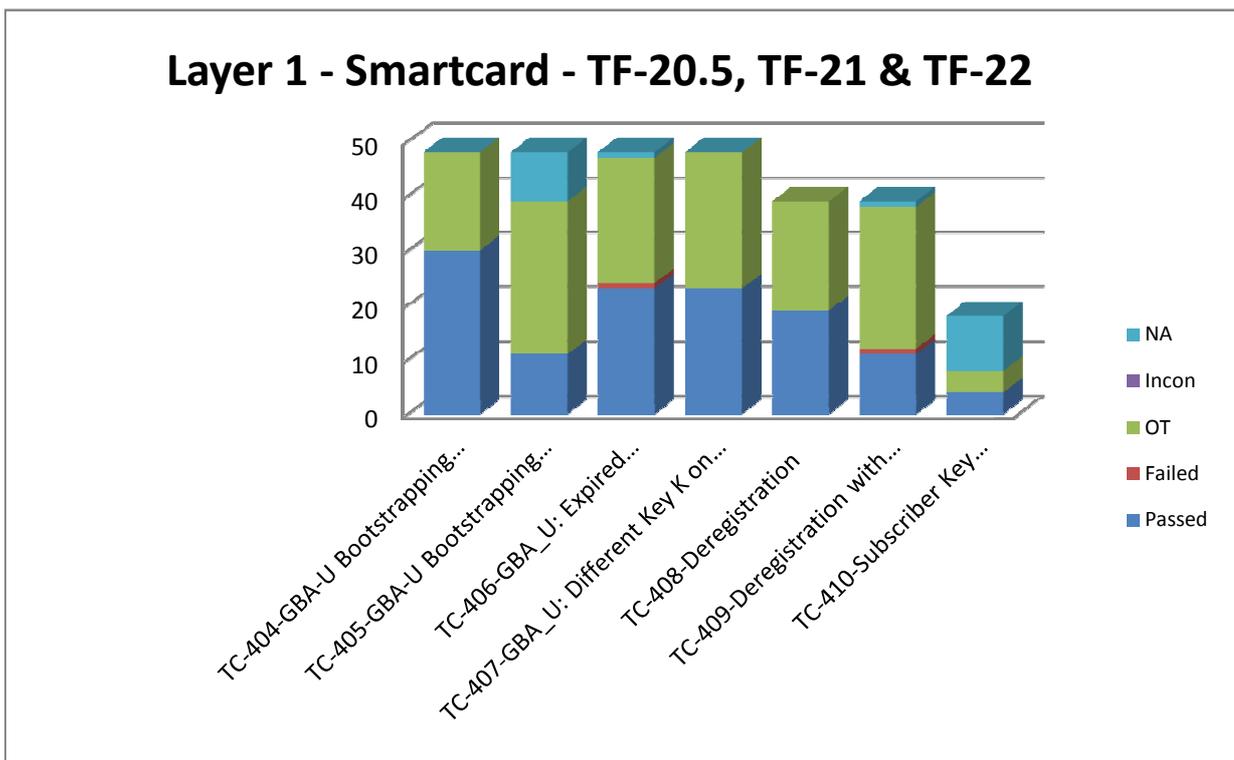
The below graph indicates the number of times each Test Case was marked as "Passed"
The information relates to each TestFest in which BCAST v1.0 was tested



Service & Content Protection - Smartcard Profile (Layer 1 - Authentication & Registration)

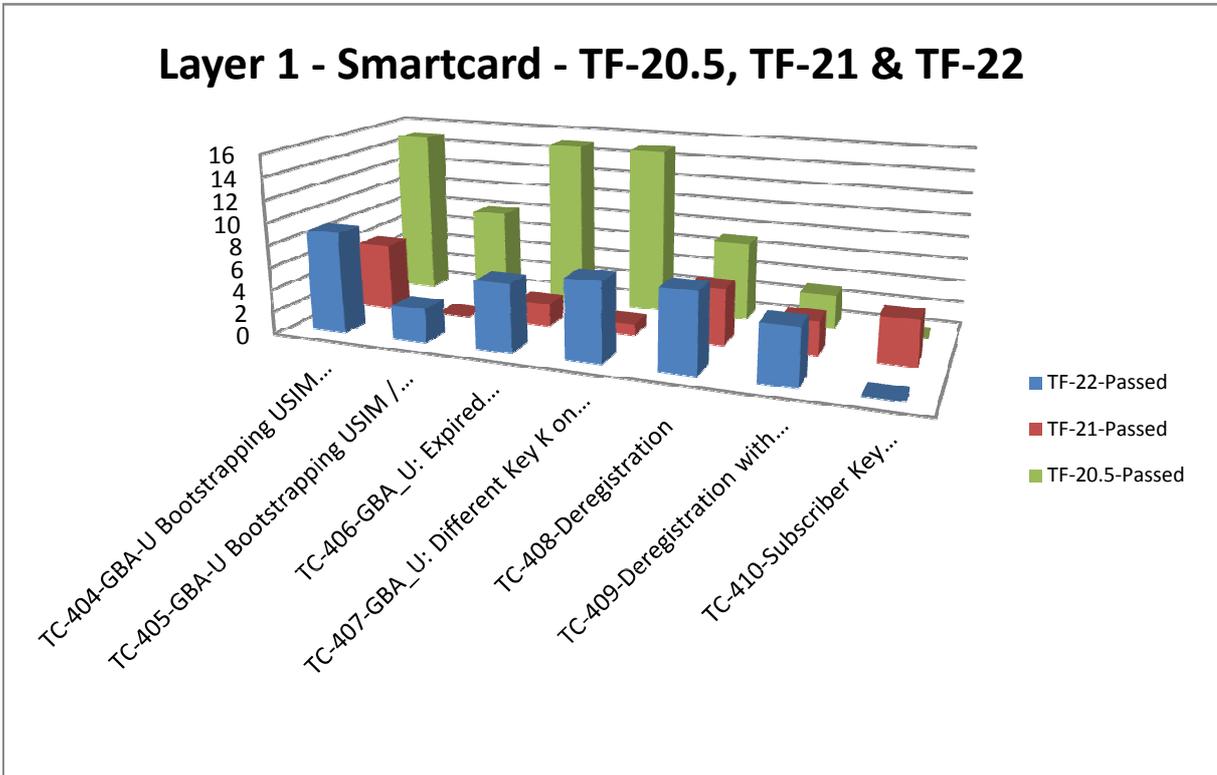
The graph indicates how many times each of the Service & Content Protection - SmartCard Profile Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Service & Content Protection - Smartcard Profile (Layer 1 - Authentication & Registration)

The below graph indicates the number of times each Test Case was marked as "Passed"
The information relates to each TestFest in which BCAS T v1.0 was tested

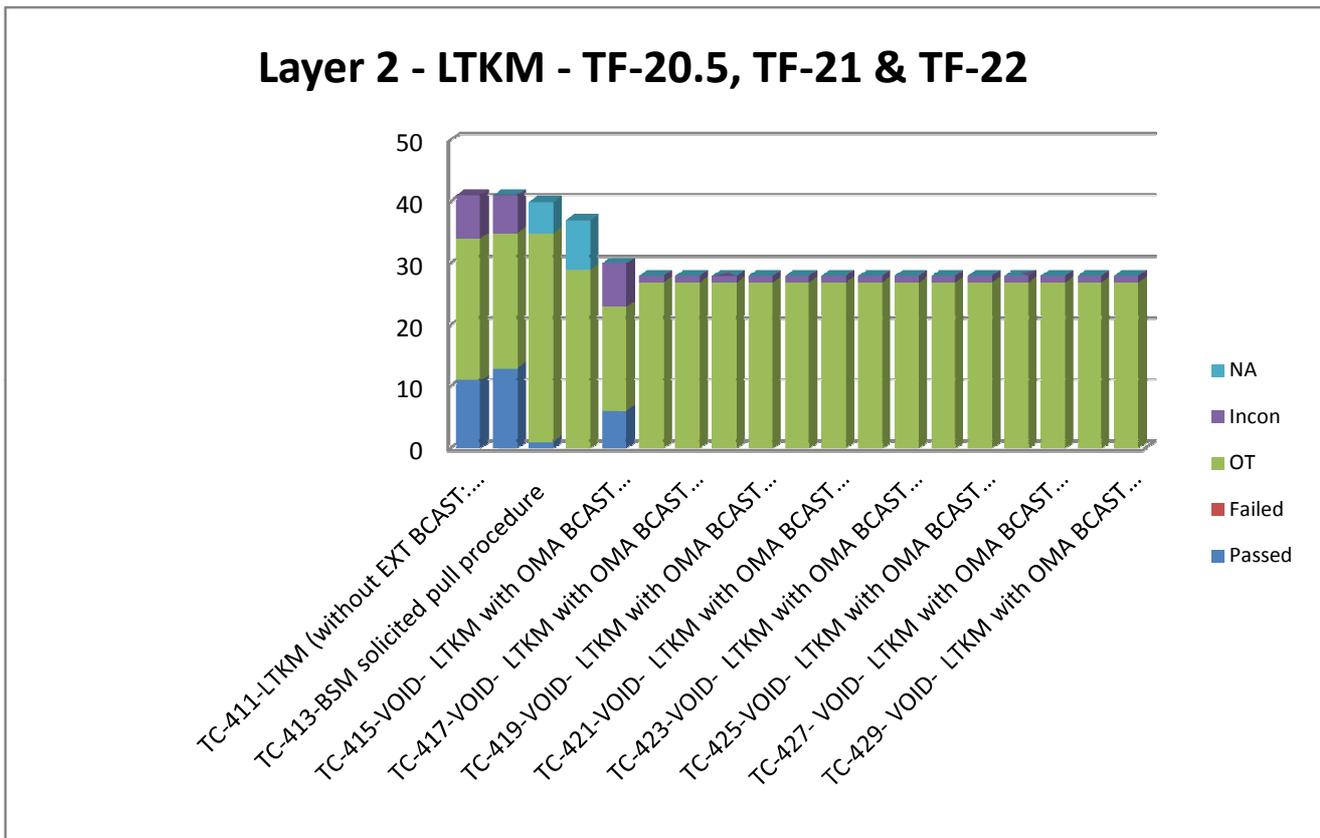


Service & Content Protection - Smartcard Profile (Layer 2 - Long Term Key Management)

The graph indicates how many times each of the Service & Content Protection - SmartCard Profile

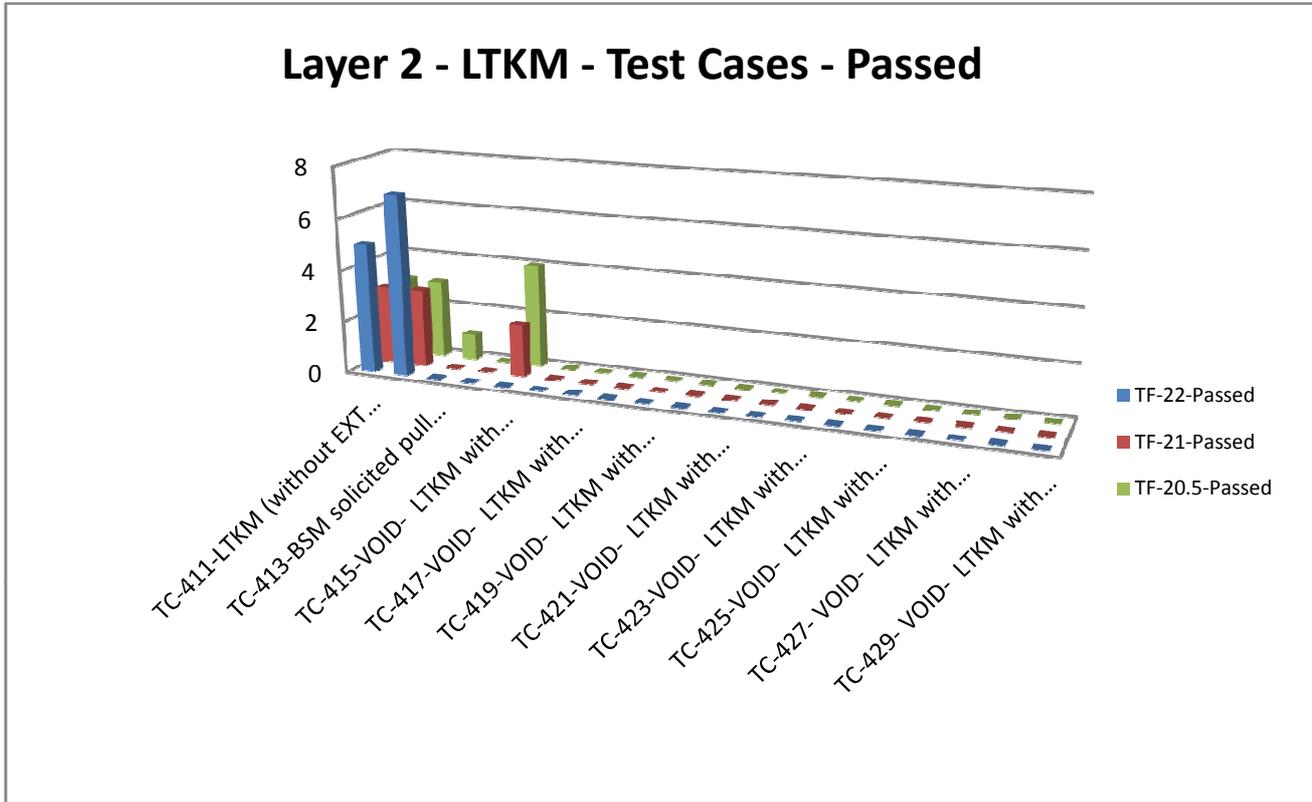
Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Service & Content Protection - Smartcard Profile (Layer 2 - Long Term Key Management)

The below graph indicates the number of times each Test Case was marked as "Passed"
The information relates to each TestFest in which BCAST v1.0 was tested

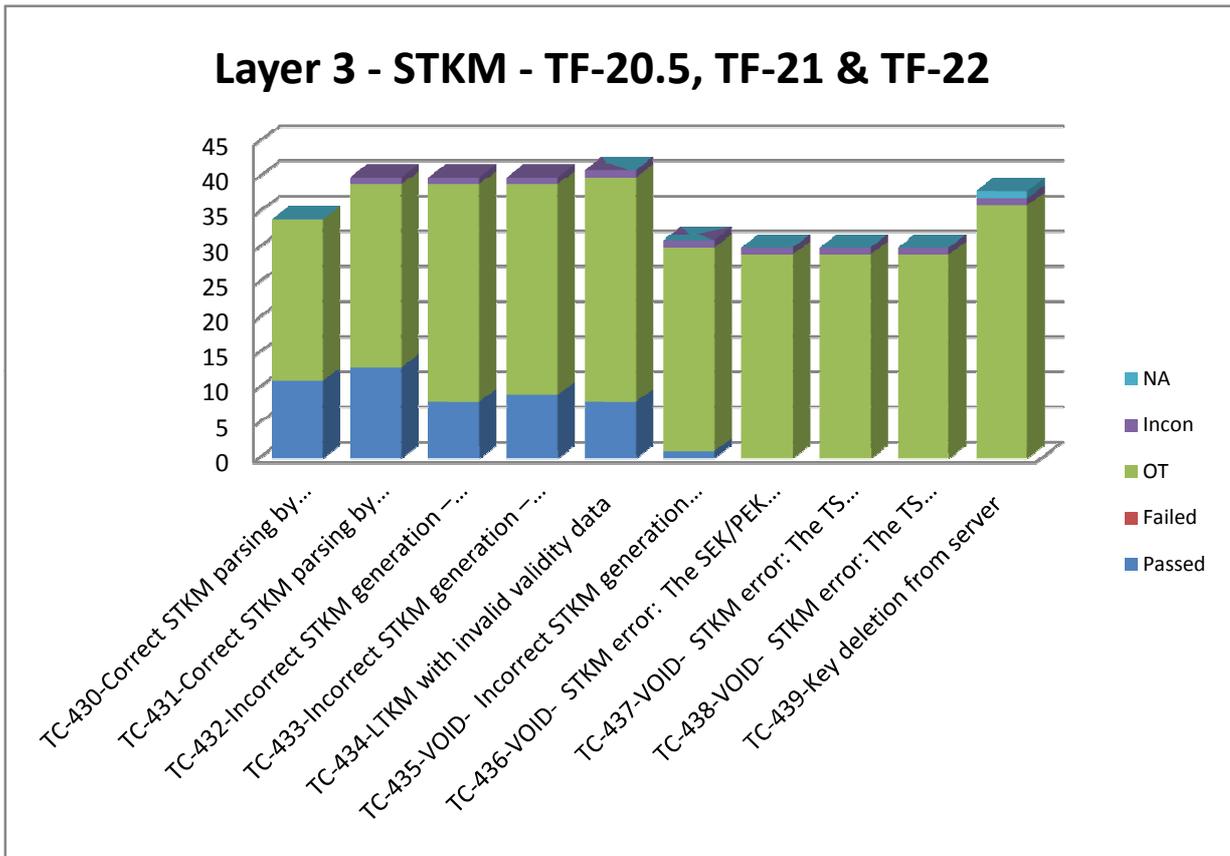


Service & Content Protection - Smartcard Profile (Layer 3 - Short Term Key Management)

The graph indicates how many times each of the Service & Content Protection - SmartCard Profile

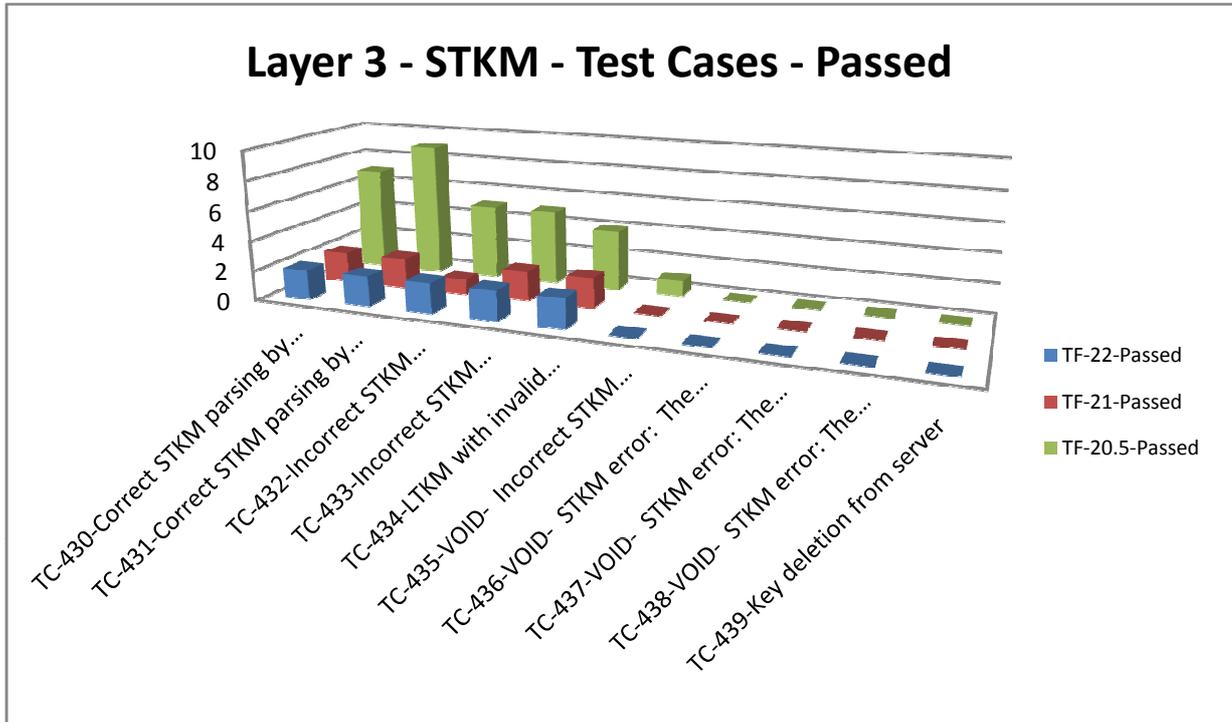
Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Service & Content Protection - Smartcard Profile (Layer 3 - Short Term Key Management)

The below graph indicates the number of times each Test Case was marked as "Passed"
The information relates to each TestFest in which BCAST v1.0 was tested

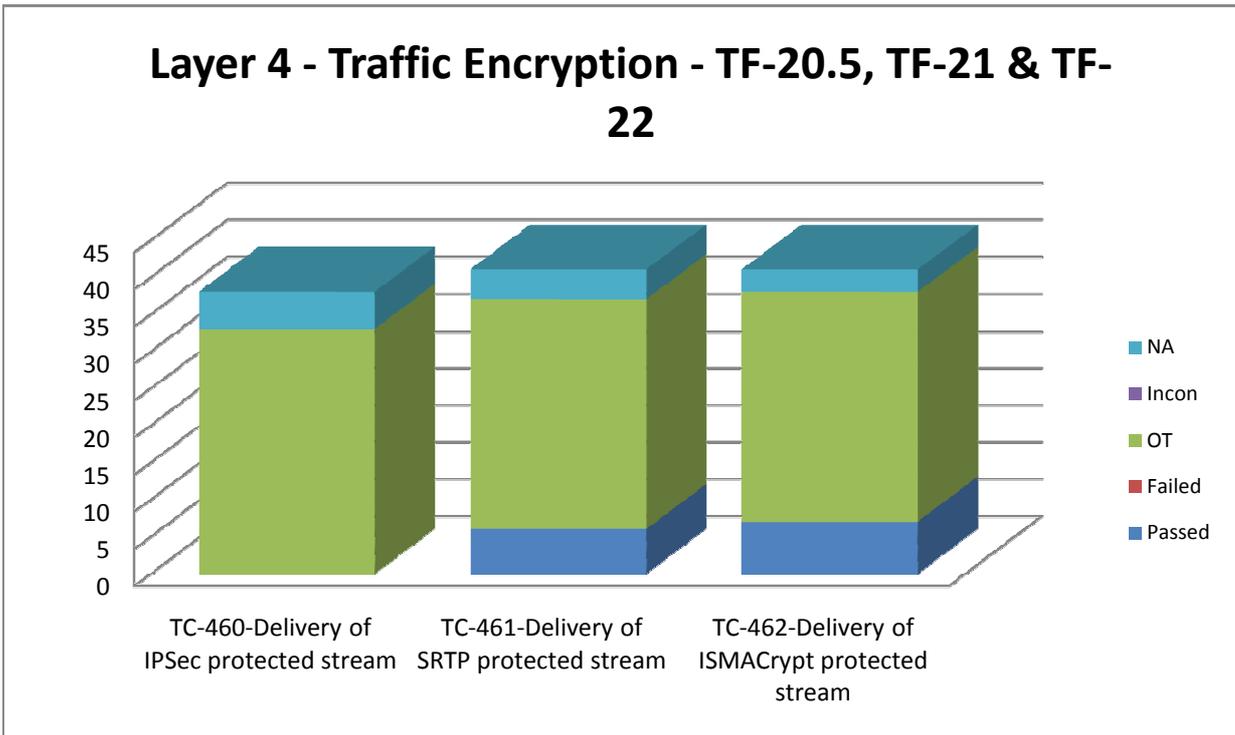


Service & Content Protection - Smartcard Profile (Layer 4 - Traffic Encryption)

The graph indicates how many times each of the Service & Content Protection - SmartCard Profile

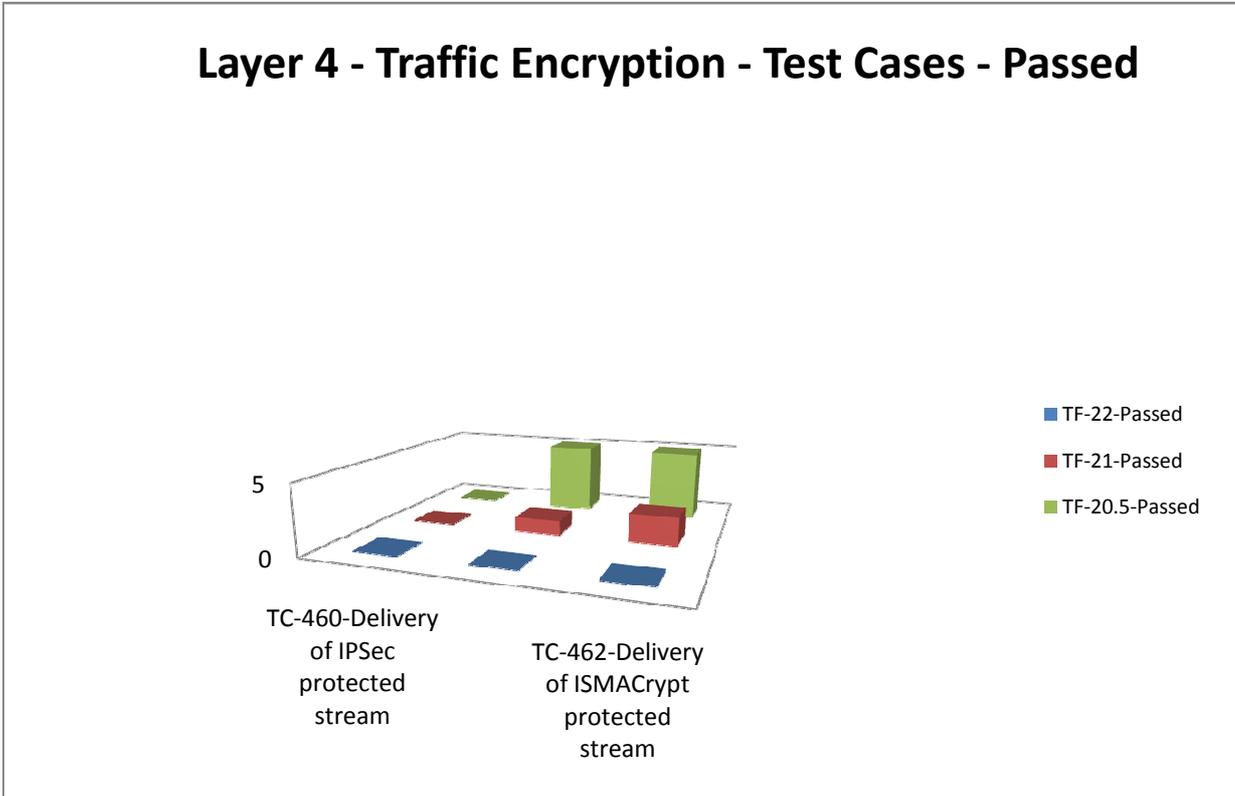
Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Service & Content Protection - Smartcard Profile (Layer 4 - Traffic Encryption)

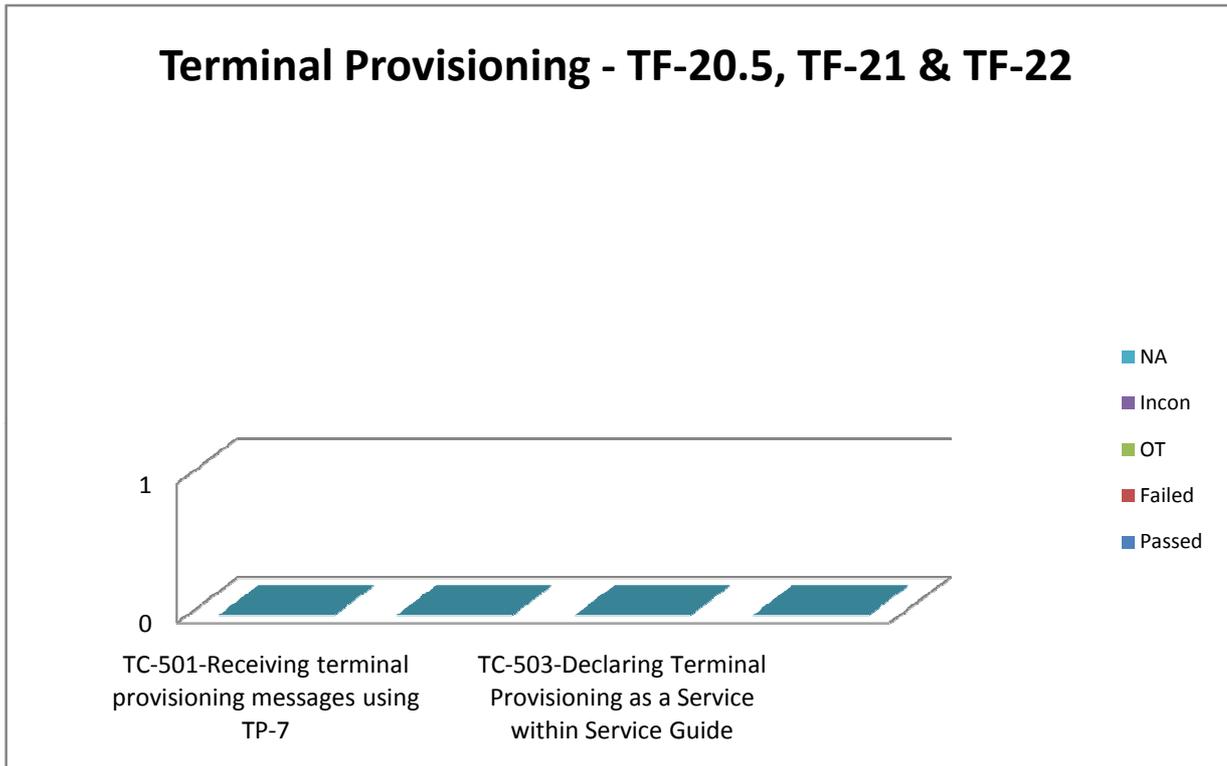
The below graph indicates the number of times each Test Case was marked as "Passed"
The information relates to each TestFest in which BCASv1.0 was tested



Terminal Provisioning

The graph indicates how many times each of the Service & Content Protection - SmartCard Profile Test Cases have been run and marked as:

- Passed
- Failed
- Out of Time
- Inconclusive
- Non Applicable



Terminal Provisioning

The below graph indicates the number of times each Test Case was marked as "Passed"
 The information relates to each TestFest in which BCAST v1.0 was tested

