

## GSMA Roaming Database IR.21 Data



### RAEX IR.21 Information

<b>Creation date:</b>	2020-11-11
<b>Creation time:</b>	17:46:59+01:00
<b>File type:</b>	IR.21
<b>Sender TADIG:</b>	BRASP
<b>Publish Comment:</b>	Deleted GTs due to Network Equipaments Deactivation
<b>TADIG-GEN schema version:</b>	2.4
<b>RAEX-IR.21 schema version:</b>	14.0

**ORGANISATION INFORMATION**

Section ID: 1 (Mandatory)

<b>Organisation name:</b>	TIM S.A.
<b>Country initials:</b>	BRA

## History of changes

TADIG Code	Section ID	Section	Date	Description
BRASP	4	Routing Information	2020-11-11	MSISDN Number Ranges updated
BRASP	13	Network Elements Information	2020-11-11	Deleted GTs (551181134012, 551181136200, 551181139200, 551184138100, 551184138200, 551184138300, 550031102205, 550031102206) due to HLRs deactivation;
BRASP	13	Network Elements Information	2020-11-11	Deleted GTs (551183138500, 551183138700, 551185234216-551185234221, 551185234234-551185234240, 551185238500, 551185238510, 551185238520, 551181138203, 551185234230-551185234233, 551185234246) due to SCPs deactivation;
BRASP	13	Network Elements Information	2020-11-11	New SCP range added (551185234257 - 551185234259)
BRARN	4	Routing Information	2020-11-11	MSISDN Number Ranges updated
BRARN	13	Network Elements Information	2020-11-11	Deleted Duplicated GTs (550029102004, 550029102005 and 550029102006)
BRARN	13	Network Elements Information	2020-11-11	New MSC/VLR GT added (550022101050)
BRARN	13	Network Elements Information	2020-11-11	Deleted GTs (552181137200, 552181136702, 552181136705, 552181136705, 552181136713, 553193099701, 553193099702, 553193099704, 553193099705) due to HLRs deactivation;
BRARN	13	Network Elements Information	2020-11-11	Deleted GT (553191937900) due to SCP deactivation;
BRARN	13	Network Elements Information	2020-11-11	Deleted GT (558199238210) due to SMSC deactivation;
BRACS	4	Routing Information	2020-11-11	MSISDN Number Ranges Updated
BRACS	13	Network Elements Information	2020-11-11	Deleted GTs (556181136100, 554199138100, 554199135001, 554199138907, 554899138100, 554899133100, 554899134800) due to HLRs deactivation;
BRACS	13	Network Elements Information	2020-11-11	Deleted GTs (554199136200, 554199138200, 554199138210, 554199138220, 554199138230, 555181136200, 555181136210, 555181136220, 555181136230) due to SMSCs deactivation;
BRACS	13	Network Elements Information	2020-11-11	Deleted GTs (554195049800, 554195049800, 554195049800, 554195049800) due to MSCs/VLRs deactivation;
BRACS	13	Network Elements Information	2020-11-11	Deleted GTs (556181138500, 554199134000) due to SCPs deactivation;
BRAPS	4	Routing Information	2020-11-06	New Network Node added
BRAPS	13	Network Elements Information	2020-11-06	New SMSC added
BRASP	20	LTE Roaming Information	2020-10-05	EPC realms of roaming interconnection updated
BRACS	20	LTE Roaming Information	2020-10-05	EPC realms of roaming interconnection updated
BRAPS	20	LTE Roaming Information	2020-10-05	EPC realms of roaming interconnection updated
BRASP	13	Network Elements Information	2020-07-16	New HLR elements (GTs 550031102205 and 550031102206) added.
BRARN	13	Network Elements Information	2020-07-16	New HLR elements (GTs 550022102001, 550022102003, 550023102004, 550023102005, 550027102005, 550027102006, 550028502002 and 550029102004) added.
BRACS	13	Network Elements Information	2020-07-16	New HLR elements (GTs 550046102003 and 550044102006) added.
BRASP	4	Routing Information	2020-07-13	MSRN Ranges massively updated.
BRASP	4	Routing Information	2020-07-13	MSISDN range updated.
BRASP	13	Network Elements Information	2020-07-13	New SCP element added
BRASP	17	IP Roaming/Networking Information	2020-07-13	New IP address range added
BRARN	4	Routing Information	2020-07-13	MSRN Ranges massively updated.
BRARN	13	Network Elements Information	2020-07-13	New SCP elements added.
BRARN	17	IP Roaming/Networking Information	2020-07-13	New IP address range added
BRACS	4	Routing Information	2020-07-13	MSRN Ranges massively updated.
BRACS	13	Network Elements Information	2020-07-13	New SCP element added
BRACS	17	IP Roaming/Networking Information	2020-07-13	New IP address range added
BRAPS	17	IP Roaming/Networking Information	2020-07-13	New IP address range added

TADIG Code	Section ID	Section	Date	Description
BRASP	17	IP Roaming/Networking Information	2020-05-06	New IP address range added
BRARN	17	IP Roaming/Networking Information	2020-05-06	New IP address range added
BRACS	17	IP Roaming/Networking Information	2020-05-06	New IP address range added
BRAPS	17	IP Roaming/Networking Information	2020-05-06	New IP address range added
BRASP	17	IP Roaming/Networking Information	2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
BRARN	17	IP Roaming/Networking Information	2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
BRACS	17	IP Roaming/Networking Information	2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
BRAPS	17	IP Roaming/Networking Information	2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
BRASP	17	IP Roaming/Networking Information	2020-03-24	IP address range Updated
BRARN	17	IP Roaming/Networking Information	2020-03-24	IP address range Updated
BRACS	17	IP Roaming/Networking Information	2020-03-24	IP address range Updated
BRAPS	17	IP Roaming/Networking Information	2020-03-24	IP address range Updated
BRASP	17	IP Roaming/Networking Information	2020-02-28	BICS Autonomous system number (ASN) has been added
BRASP	17	IP Roaming/Networking Information	2020-02-28	BICS SA has been added as GRX provider
BRASP	20	LTE Roaming Information	2020-02-28	BICS has been added as IPX provider
BRASP	21	Contact Information	2020-02-28	Contacts list has been updated
BRARN	17	IP Roaming/Networking Information	2020-02-28	BICS Autonomous system number (ASN) has been added
BRARN	17	IP Roaming/Networking Information	2020-02-28	BICS SA has been added as GRX provider
BRARN	20	LTE Roaming Information	2020-02-28	BICS has been added as IPX provider
BRARN	21	Contact Information	2020-02-28	Contacts list has been updated
BRACS	17	IP Roaming/Networking Information	2020-02-28	BICS Autonomous system number (ASN) has been added
BRACS	17	IP Roaming/Networking Information	2020-02-28	BICS SA has been added as GRX provider
BRACS	20	LTE Roaming Information	2020-02-28	BICS has been added as IPX provider
BRACS	21	Contact Information	2020-02-28	Contacts list has been updated
BRAPS	17	IP Roaming/Networking Information	2020-02-28	BICS Autonomous system number (ASN) has been added
BRAPS	17	IP Roaming/Networking Information	2020-02-28	BICS SA has been added as GRX provider
BRAPS	20	LTE Roaming Information	2020-02-28	BICS has been added as IPX provider
BRAPS	21	Contact Information	2020-02-28	Contacts list has been updated
BRASP	5	International SCCP Gateway	2020-02-20	BICS has been added as International SCCP carrier.
BRARN	5	International SCCP Gateway	2020-02-20	BICS has been added as International SCCP carrier.
BRACS	5	International SCCP Gateway	2020-02-20	BICS has been added as International SCCP carrier.
BRAPS	5	International SCCP Gateway	2020-02-20	BICS has been added as International SCCP carrier.
BRAPS	4	Routing Information	2020-01-07	New BRAPS network information added
BRAPS	4	Routing Information	2020-01-07	New BRAPS Network Nodes GT Number Ranges added
BRASP	5	International SCCP Gateway	2020-01-06	New network BRAPS information added
BRARN	5	International SCCP Gateway	2020-01-06	New network TADIG BRAPS added
BRACS	5	International SCCP Gateway	2020-01-06	New network TADIG BRAPS added
BRAPS	5	International SCCP Gateway	2020-01-06	New network TADIG BRAPS added
BRAPS	7	SCCP Protocol	2020-01-06	New network BRAPS information added
BRAPS	8	Subscriber Identity Authentication	2020-01-06	New network BRAPS information added
BRAPS	10	MAP	2020-01-06	New network BRAPS information added
BRAPS	12	MAP Inter Operator SMS Enhancement	2020-01-06	New network BRAPS information added
BRAPS	14	USSD Information	2020-01-06	New network BRAPS information added
BRAPS	15	CAMEL Information	2020-01-06	New network BRAPS information added

TADIG Code	Section ID	Section	Date	Description
BRAPS	17	IP Roaming/Networking Information	2020-01-06	New network BRAPS information added
BRAPS	18	MMS Interworking Information	2020-01-06	New network BRAPS information added
BRAPS	20	LTE Roaming Information	2020-01-06	New network BRAPS information added
BRAPS	21	Contact Information	2020-01-06	New network BRAPS information added
BRASP	17	IP Roaming/Networking Information	2019-12-19	New IP range 189.40.176.0 / 21 added
BRARN	17	IP Roaming/Networking Information	2019-12-19	New IP range 189.40.176.0 / 21 added
BRACS	17	IP Roaming/Networking Information	2019-12-19	New IP range 189.40.176.0 / 21 added
BRASP	17	IP Roaming/Networking Information	2019-11-25	New IP range 135.92.41.1/32 added
BRARN	17	IP Roaming/Networking Information	2019-11-25	New IP range 135.92.41.1/32 added
BRACS	17	IP Roaming/Networking Information	2019-11-25	New IP range 135.92.41.1/32 added
BRASP	17	IP Roaming/Networking Information	2019-11-18	Update - IP ranges 135.92.40.16/29 and 135.92.41.16/29 were removed and New IP range 135.92.40.1/32 added.
BRARN	17	IP Roaming/Networking Information	2019-11-18	Update - IP ranges 135.92.40.16/29 and 135.92.41.16/29 were removed and New IP range 135.92.40.1/32 added.
BRACS	17	IP Roaming/Networking Information	2019-11-18	Update - IP ranges 135.92.40.16/29 and 135.92.41.16/29 were removed and New IP range 135.92.40.1/32 added.
BRASP	17	IP Roaming/Networking Information	2019-11-13	NEW IP Addresses ranges
BRASP	21	Contact Information	2019-11-13	Escalation contact updated.
BRARN	9	Test Numbers Information	2019-11-13	Test Numbers Updated
BRARN	21	Contact Information	2019-11-13	Contacts updated.
BRARN	21	Contact Information	2019-11-13	Escalation contact updated.
BRACS	21	Contact Information	2019-11-13	Escalation contact updated.
BRASP	4	Routing Information	2019-11-11	MSRN range updated
BRASP	9	Test Numbers Information	2019-11-11	Test Numbers updated
BRASP	13	Network Elements Information	2019-11-11	Network elements update
BRASP	21	Contact Information	2019-11-11	Contacts updated
BRARN	4	Routing Information	2019-11-11	MSISDN range updated.
BRARN	4	Routing Information	2019-11-11	MSRN Number Ranges Updated
BRARN	13	Network Elements Information	2019-11-11	Network Elements Update
BRARN	13	Network Elements Information	2019-11-11	Network Nodes Update
BRACS	4	Routing Information	2019-11-11	MSRN Number Range Updated
BRACS	4	Routing Information	2019-11-11	MSISDN Number Range Updated
BRACS	9	Test Numbers Information	2019-11-11	Test Numbers Updated
BRACS	13	Network Elements Information	2019-11-11	Network Elements Updated
BRACS	21	Contact Information	2019-11-11	Contacts updated.
BRARN	17	IP Roaming/Networking Information	2019-10-28	NEW IP Addresses ranges
BRACS	17	IP Roaming/Networking Information	2019-10-28	NEW IP Addresses ranges
BRASP	21	Contact Information	2019-08-21	Contacts updated.
BRASP	21	Contact Information	2019-08-21	Escalation contact.
BRARN	21	Contact Information	2019-08-21	Contacts updated.
BRARN	21	Contact Information	2019-08-21	Escalation contact.
BRACS	21	Contact Information	2019-08-21	Contacts updated.
BRACS	21	Contact Information	2019-08-21	Escalation contact.
BRASP	4	Routing Information	2019-04-26	MSRN range deleted 55129831390xx.
BRASP	5	International SCCP Gateway	2019-04-26	Comfone has been removed from SCCP carrier.
BRASP	17	IP Roaming/Networking Information	2019-04-26	Comfone has been removed from GRX provider.
BRASP	20	LTE Roaming Information	2019-04-26	Comfone and Tata have been removed from IPX carrier.
BRASP	20	LTE Roaming Information	2019-04-26	TIS update.

TADIG Code	Section ID	Section	Date	Description
BRASP	20	LTE Roaming Information	2019-04-26	Diameter for roaming interconnection update.
BRARN	5	International SCCP Gateway	2019-04-26	Comfone has been removed from SCCP carrier.
BRARN	13	Network Elements Information	2019-04-26	New HLRs 550022102003, 550023102005, 550027102006.
BRARN	17	IP Roaming/Networking Information	2019-04-26	Comfone has been removed from GRX provider.
BRARN	20	LTE Roaming Information	2019-04-26	Comfone and Tata have been removed from IPX carrier.
BRARN	20	LTE Roaming Information	2019-04-26	TIS update.
BRARN	20	LTE Roaming Information	2019-04-26	Diameter for roaming interconnection update.
BRACS	5	International SCCP Gateway	2019-04-26	Comfone has been removed from SCCP carrier.
BRACS	17	IP Roaming/Networking Information	2019-04-26	Comfone has been removed from GRX provider.
BRACS	20	LTE Roaming Information	2019-04-26	Comfone and Tata have been removed from IPX carrier.
BRACS	20	LTE Roaming Information	2019-04-26	TIS update
BRACS	20	LTE Roaming Information	2019-04-26	Diameter for roaming interconnection update.
BRARN	13	Network Elements Information	2019-02-05	HLR GTs updated - 553193099704, 553193099705, 558599236403, 552181136713, 557191938505, 559881398700, 559881398701.
BRACS	13	Network Elements Information	2019-02-05	HLR GTs updated - 554899133100, 554899134800, 556281136300
BRARN	13	Network Elements Information	2018-12-11	Network Elements Update
BRASP	5	International SCCP Gateway	2018-11-26	International SCCP Gateway Update
BRASP	21	Contact Information	2018-11-26	Contacts Update
BRARN	5	International SCCP Gateway	2018-11-26	International SCCP Gateway Update
BRARN	21	Contact Information	2018-11-26	Contacts Updated
BRACS	5	International SCCP Gateway	2018-11-26	International SCCP Gateway Update
BRASP	17	IP Roaming/Networking Information	2018-10-10	Update - Connection to inter-PMN IP backbone
BRASP	17	IP Roaming/Networking Information	2018-10-10	Update - Autonomous system number (ASN)
BRARN	17	IP Roaming/Networking Information	2018-10-10	Update - Connection to inter-PMN IP backbone
BRARN	17	IP Roaming/Networking Information	2018-10-10	Update - Autonomous system number (ASN)
BRARN	21	Contact Information	2018-10-10	Contacts Updated
BRACS	17	IP Roaming/Networking Information	2018-10-10	Update - Connection to inter-PMN IP backbone
BRACS	17	IP Roaming/Networking Information	2018-10-10	Update - Autonomous system number (ASN)
BRACS	21	Contact Information	2018-10-10	Contacts Update
BRASP	4	Routing Information	2018-10-02	BRASP Routing Update
BRASP	5	International SCCP Gateway	2018-10-02	International SCCP Gateway Update
BRASP	13	Network Elements Information	2018-08-28	Update Network Elements
BRASP	13	Network Elements Information	2018-08-28	Network Elements - Update
BRASP	13	Network Elements Information	2018-08-28	Network elements update
BRASP	13	Network Elements Information	2018-08-28	New SGSN elements
BRASP	16	Packet Data Service Information	2018-08-28	APN Type update
BRASP	17	IP Roaming/Networking Information	2018-08-28	NEW IP Addresses ranges
BRASP	20	LTE Roaming Information	2018-08-28	EPC realms of roaming interconnection update
BRARN	13	Network Elements Information	2018-08-28	Update Network Elements
BRARN	13	Network Elements Information	2018-08-28	SGSN update
BRARN	13	Network Elements Information	2018-08-28	Removed duplicated SMSCs GTs
BRARN	13	Network Elements Information	2018-08-28	SGSN IP Addresses update
BRARN	16	Packet Data Service Information	2018-08-28	APN Type update
BRARN	17	IP Roaming/Networking Information	2018-08-28	NEW IP Addresses ranges
BRARN	20	LTE Roaming Information	2018-08-28	EPC realms of roaming interconnection update
BRACS	13	Network Elements Information	2018-08-28	Update Network Elements

TADIG Code	Section ID	Section	Date	Description
BRACS	13	Network Elements Information	2018-08-28	SGSN update
BRACS	13	Network Elements Information	2018-08-28	Network Elements - Update
BRACS	17	IP Roaming/Networking Information	2018-08-28	NEW IP Addresses ranges
BRACS	20	LTE Roaming Information	2018-08-28	EPC realms of roaming interconnection update
BRASP	13	Network Elements Information	2018-08-24	Deleted Ericsson and Nokia's SGSN
BRARN	13	Network Elements Information	2018-08-24	Removed Ericsson and Nokia's SGSN
BRACS	4	Routing Information	2018-08-24	MSRN 12 digits deleted
BRASP	4	Routing Information	2018-08-23	MSRN range updated
BRASP	20	LTE Roaming Information	2018-08-23	FQDN data updated
BRARN	4	Routing Information	2018-08-23	MSRN ranges updated
BRARN	20	LTE Roaming Information	2018-08-23	FQDN data updated
BRARN	21	Contact Information	2018-08-23	Contacts Updated
BRACS	4	Routing Information	2018-08-23	Validation
BRACS	20	LTE Roaming Information	2018-08-23	FQDN data updated
BRACS	21	Contact Information	2018-08-23	Contacts Update
BRASP	4	Routing Information	2018-03-14	MSISDN range updated.
BRASP	13	Network Elements Information	2018-03-14	New IN GT address 551185234269
BRASP	13	Network Elements Information	2018-03-14	New IN element
BRASP	20	LTE Roaming Information	2018-03-14	New FQDN Diameter Edge Agent
BRARN	4	Routing Information	2018-03-14	MSISDN range updated.
BRARN	5	International SCCP Gateway	2018-03-14	Add Comfone as backup carrier.
BRARN	20	LTE Roaming Information	2018-03-14	New FQDN Diameter Edge Agent
BRACS	4	Routing Information	2018-03-14	MSISDN range updated.
BRACS	5	International SCCP Gateway	2018-03-14	Add Comfone as backup carrier
BRACS	20	LTE Roaming Information	2018-03-14	New FQDN Diameter Edge Agent
BRACS	21	Contact Information	2018-03-14	Contacts Update
BRASP	16	Packet Data Service Information	2017-11-30	MMS and WAP - APNs Update
BRARN	16	Packet Data Service Information	2017-11-30	MMS and WAP - APNs Update
BRACS	16	Packet Data Service Information	2017-11-30	MMS and WAP - APNs Update
BRASP	20	LTE Roaming Information	2017-06-08	IPX interconnection information
BRARN	20	LTE Roaming Information	2017-06-08	IPX interconnection information
BRACS	20	LTE Roaming Information	2017-06-08	IPX interconnection information
BRASP	20	LTE Roaming Information	2017-04-25	Sparkle added as IPX Backup/Second
BRARN	20	LTE Roaming Information	2017-04-25	Sparkle added as IPX Backup/Second.
BRACS	20	LTE Roaming Information	2017-04-25	Sparkle added as IPX Backup/Second.
BRASP	20	LTE Roaming Information	2017-04-18	TATA added as IPX provider
BRARN	4	Routing Information	2017-04-18	Additional routing Information update.
BRARN	20	LTE Roaming Information	2017-04-18	TATA added as IPX carrier.
BRACS	4	Routing Information	2017-04-18	Additional routing Information update.
BRACS	20	LTE Roaming Information	2017-04-18	TATA added as IPX Carrier.
BRASP	13	Network Elements Information	2017-01-18	New SMSC updated
BRACS	13	Network Elements Information	2017-01-18	New SMSC updated
BRASP	9	Test Numbers Information	2017-01-17	Added 9th digit on test numbers.
BRARN	4	Routing Information	2017-01-17	MSISDN ranges updated.
BRARN	9	Test Numbers Information	2017-01-17	Added 9th digit on test numbers.
BRACS	9	Test Numbers Information	2017-01-17	Added 9th digit on test numbers.
BRASP	20	LTE Roaming Information	2016-10-28	LTE updates



TADIG Code	Section ID	Section	Date	Description
BRARN	20	LTE Roaming Information	2016-10-28	LTE updates
BRARN	4	Routing Information	2016-10-12	Removed old eighth digit on MSRN ranges.
BRARN	4	Routing Information	2016-10-12	Removed old eighth digit on MSISDN ranges.
BRACS	4	Routing Information	2016-10-12	Added new ninth digit on MSISDN ranges to NDC 4x and 5x from November 6th, 2016.
BRACS	4	Routing Information	2016-10-12	Added new ninth digit on MSRN ranges to NDC 4x and 5x from November 6th, 2016.
BRASP	20	LTE Roaming Information	2016-07-29	Realm updated.
BRACS	20	LTE Roaming Information	2016-07-29	Realm updated.
BRASP	13	Network Elements Information	2016-07-28	New MSC/VLR and SGSN ranges.
BRASP	20	LTE Roaming Information	2016-07-05	Added TATA as Diameter backup.
BRARN	20	LTE Roaming Information	2016-07-05	Added TATA as Diameter backup.
BRACS	20	LTE Roaming Information	2016-07-05	Added TATA as Diameter backup.
BRASP	20	LTE Roaming Information	2016-05-20	Removed TATA as Diameter backup.
BRARN	20	LTE Roaming Information	2016-05-20	Removed TATA as Diameter backup.
BRACS	20	LTE Roaming Information	2016-05-20	Removed TATA as Diameter backup.
BRASP	20	LTE Roaming Information	2016-05-02	Added Telecom Italia Sparkle as IPX Provider and TATA as Diameter backup.
BRARN	20	LTE Roaming Information	2016-05-02	Added Telecom Italia Sparkle as IPX Provider and TATA as Diameter backup.
BRACS	4	Routing Information	2016-05-02	For MSISDN Number Range and MSRN Number Range, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of August, 2016.
BRACS	4	Routing Information	2016-05-02	MSRN Number Range Updated - ATTENTION - The National Destination codes 61, 62, 63, 64, 65, 66, 67, 68 and 69 will have 13 digits on May 29th, 2016. The number "9" (nine) will be inserted before the SN range.
BRACS	4	Routing Information	2016-05-02	MSISDN Number Range Updated - ATTENTION - The National Destination codes 61, 62, 63, 64, 65, 66, 67, 68 and 69 will have 13 digits on May 29th, 2016. The number "9" (nine) will be inserted before the SN range.
BRACS	20	LTE Roaming Information	2016-05-02	Added Telecom Italia Sparkle as IPX Provider and TATA as Diameter backup.
BRARN	4	Routing Information	2016-02-25	MSRN Number Range Updated
BRASP	13	Network Elements Information	2016-02-23	New Network Element for MME (551181137201, 551181137202, 551181136101, 551181136102)
BRASP	20	LTE Roaming Information	2015-10-20	Removed two DREs not active for roaming.
BRARN	20	LTE Roaming Information	2015-10-20	Removed two DREs inactives for roaming.
BRACS	20	LTE Roaming Information	2015-10-20	Removed two DREs not active for roaming.
BRARN	4	Routing Information	2015-09-25	Routing Info updated.
BRARN	4	Routing Information	2015-09-25	Considering MSISDN Number Ranges and MSRN number ranges, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of January, 2016.
BRARN	4	Routing Information	2015-09-25	MSRN Number Ranges Updated - ATTENTION - The National Destination codes 31, 32, 33, 34, 35, 36, 37, 38, 39, 71, 72, 73, 74, 75, 76, 77, 78 and 79 will have 13 digits on October 11, 2015. The digit "9" (nine) will be inserted before the SN range
BRARN	4	Routing Information	2015-09-25	MSISDN Number Ranges Updated - ATTENTION - The National Destination codes 31, 32, 33, 34, 35, 36, 37, 38, 39, 71, 72, 73, 74, 75, 76, 77, 78 and 79 will have 13 digits on October 11, 2015. The digit "9" (nine) will be inserted before the SN range
BRACS	4	Routing Information	2015-09-25	MSRN Number Range Updated
BRACS	4	Routing Information	2015-09-25	MSISDN Number Range Updated
BRASP	20	LTE Roaming Information	2015-09-08	LTE DATA updated



TADIG Code	Section ID	Section	Date	Description
BRARN	16	Packet Data Service Information	2015-09-08	Data Update
BRARN	20	LTE Roaming Information	2015-09-08	LTE DATA updated
BRACS	20	LTE Roaming Information	2015-09-08	LTE DATA updated
BRASP	20	LTE Roaming Information	2015-07-03	FQDN Diameter Edge Agent list updated. ATTENTION - NDRJO2 and NDSNE2 won't be operational until the end of July.
BRARN	20	LTE Roaming Information	2015-07-03	FQDN Diameter Edge Agent list updated. ATTENTION - NDRJO2 and NDSNE2 won't be operational until the end of July.
BRACS	20	LTE Roaming Information	2015-07-03	FQDN Diameter Edge Agent list updated. ATTENTION - NDRJO2 and NDSNE2 won't be operational until the end of July.
BRASP	13	Network Elements Information	2015-05-28	New Network Element for MSC/VLR (551181133000, 551184138000) / New Network Element for HLR (551181134036)
BRASP	20	LTE Roaming Information	2015-05-28	Roaming Interconnection information updated
BRARN	4	Routing Information	2015-05-28	Considering MSISDN Number Ranges and MSRN Number Ranges, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of July, 2015.
BRARN	4	Routing Information	2015-05-28	MSISDN Number Ranges Updated - ATTENTION - The National Destination codes 81, 82, 83, 84, 85, 86, 87, 88 and 89 will have 13 digits on May 31, 2015. The digit "9" (nine) will be inserted before the SN range.
BRARN	4	Routing Information	2015-05-28	MSRN Number Ranges Updated - ATTENTION - The National Destination codes 81, 82, 83, 84, 85, 86, 87, 88 and 89 will have 13 digits on May 31, 2015. The digit "9" (nine) will be inserted before the SN range.
BRARN	20	LTE Roaming Information	2015-05-28	Roaming Interconnection information updated
BRACS	4	Routing Information	2015-05-28	MSISDN Number Range Updated
BRACS	4	Routing Information	2015-05-28	MSRN Number Range Updated
BRACS	13	Network Elements Information	2015-05-28	Network Element list reviewed
BRACS	20	LTE Roaming Information	2015-05-28	Roaming Interconnection information updated
BRARN	4	Routing Information	2015-01-21	Edited Network Nodes Global Title Number Ranges
BRASP	13	Network Elements Information	2014-12-02	New Network Element for MSC/VLR (550031101010 and 550031101110) / Removed Network Element for MSC/VLR (55138113000)
BRARN	4	Routing Information	2014-12-02	Added new Network Nodes Global Title Number Ranges (From 559189000000 to 559189969999)
BRARN	4	Routing Information	2014-12-02	MSISDN Number Range Updated
BRARN	4	Routing Information	2014-12-02	MSRN Number Range Updated
BRACS	4	Routing Information	2014-12-02	MSISDN Number Range Updated
BRACS	4	Routing Information	2014-12-02	MSRN Number Range Updated
BRACS	13	Network Elements Information	2014-12-02	New Network Element for SGSN (554199138908 and 556181136204)
BRASP	13	Network Elements Information	2014-09-22	New Network Element for HLR (551181134030,551181134031,551181134032 and 551181134033)
BRARN	4	Routing Information	2014-09-22	MSRN Number Range Updated - ATENTION - The National Destination codes 91, 92, 93, 94, 95, 96, 97, 98 and 99 will have 13 digits on November 2, 2014. The number "9" (nine) will be inserted before the SN range.
BRARN	4	Routing Information	2014-09-22	MSISDN Number Range Updated - ATENTION - The National Destination codes 91, 92, 93, 94, 95, 96, 97, 98 and 99 will have 13 digits on November 2, 2014. The number "9" (nine) will be inserted before the SN range.
BRARN	4	Routing Information	2014-09-22	For MSISDN Number Range and MSRN Number Range, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of january, 2015.
BRACS	4	Routing Information	2014-09-22	MSRN Number Range Updated
BRACS	4	Routing Information	2014-09-22	MSISDN Number Range Updated

TADIG Code	Section ID	Section	Date	Description
BRACS	13	Network Elements Information	2014-09-22	New Network Element for SMSC (554199138901)
BRASP	20	LTE Roaming Information	2014-05-15	S6a Hostnames updated
BRARN	4	Routing Information	2014-05-15	MSISDN Number Range Updated
BRARN	4	Routing Information	2014-05-15	MSRN Number Range Updated
BRARN	20	LTE Roaming Information	2014-05-15	S6a Hostnames updated
BRACS	4	Routing Information	2014-05-15	MSISDN Number Range Updated
BRACS	4	Routing Information	2014-05-15	MSRN Number Range Updated
BRACS	20	LTE Roaming Information	2014-05-15	S6a Hostnames updated
BRASP	13	Network Elements Information	2014-05-14	New Network Element for SMSC (551181134022, 551181134023, 551181134024, 551181134025, 551181134026, 551181134027)
BRASP	13	Network Elements Information	2014-05-14	New Network Element for SGSN (551181134037, 551181134038, 551181134039)
BRACS	13	Network Elements Information	2014-05-14	New Network Element for SMSC (554199138902, 554199138903, 554199138904, 554199138905, 554199138906)
BRASP	13	Network Elements Information	2014-02-13	New Network Element for HSS (550031102021) / New Network Element for HLR (551181134013, 551181134014 and 551181134036) / Removed Network Element for MSC/VLR (551181132100 and 551181133000) / New Network Element for SGSN (551181134035)
BRARN	4	Routing Information	2014-02-13	MSRN Number Range Updated
BRARN	5	International SCCP Gateway	2014-02-13	SCCP MNOs TADIG codes updated
BRACS	4	Routing Information	2014-02-13	MSRN Number Range Updated
BRACS	5	International SCCP Gateway	2014-02-13	SCCP MNOs TADIG codes updated
BRACS	13	Network Elements Information	2014-02-13	New Network Element for HLR (554199138907) / New Network Element for SMSC (551181134029, 551181138201, 551181138202 and 551183134001)
BRASP	13	Network Elements Information	2013-11-22	New Network Element for HSS (HSSNE1) and MME (DMSNE2)
BRASP	16	Packet Data Service Information	2013-11-22	Section applicable for TADIG codes removed
BRASP	20	LTE Roaming Information	2013-11-22	LTE information added
BRARN	16	Packet Data Service Information	2013-11-22	Section applicable for TADIG codes removed
BRARN	20	LTE Roaming Information	2013-11-22	Added LTE information
BRACS	4	Routing Information	2013-11-22	Added new Network Nodes Global Title Number Ranges (From 550040000000 to 550049999999)
BRACS	16	Packet Data Service Information	2013-11-22	Section applicable for TADIG codes removed
BRACS	20	LTE Roaming Information	2013-11-22	LTE Information added
BRARN	4	Routing Information	2013-11-21	Added new Network Nodes Global Title Number Ranges (From 550020000000 to 550029999999)
BRARN	4	Routing Information	2013-10-11	For MSISDN Number Range and MSRN Number Range, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of January, 2014.
BRARN	4	Routing Information	2013-10-11	MSISDN Number Range Updated - ATENTION - The National Destination codes 21, 22, 24, 27, and 28 will have 13 digits on October 27th. The number 9 (nine) will be inserted before the SN range.
BRARN	4	Routing Information	2013-10-11	MSRN Number Range Updated - ATENTION - The National Destination codes 21, 22, 24, 27, and 28 will have 13 digits on October 27th. The number 9 (nine) will be inserted before the SN range.
BRASP	16	Packet Data Service Information	2013-10-10	Added 2G/3G QOS profiles
BRARN	16	Packet Data Service Information	2013-10-10	Added 2G/3G QOS profiles
BRACS	16	Packet Data Service Information	2013-10-10	Added 2G/3G QOS profiles
BRASP	13	Network Elements Information	2013-10-09	New Network Element for MSC/VLR (551181132100) and New Network Element for SGSN (551181186702, 551184136002)
BRARN	4	Routing Information	2013-10-09	MSRN Number Range Updated

TADIG Code	Section ID	Section	Date	Description
BRARN	5	International SCCP Gateway	2013-10-09	SCCP connectivity information updated
BRACS	4	Routing Information	2013-10-09	MSRN Number Range Updated
BRACS	5	International SCCP Gateway	2013-10-09	SCCP connectivity information updated
BRARN	4	Routing Information	2013-08-20	MSRN Number Range Updated
BRACS	4	Routing Information	2013-08-20	MSRN Number Range Updated
BRASP	13	Network Elements Information	2013-07-18	Removed Network Element for MSC/VLR (551181137000, 551181138000, 551184138000 and 551981137000) / New Network Element for HLR (551181136004, 551181136005) / for SMSC (551181136002, 551181136003) / for SCP (551181136000, 551181136001).
BRACS	4	Routing Information	2013-07-18	MSRN Number Range Updated
BRACS	13	Network Elements Information	2013-07-18	Removed Network Element for MSC/VLR (554199138000, 554499138000, 554899138000, 556181138000 and 556281138000).
BRACS	9	Test Numbers Information	2013-04-01	Removed duplicated AAC test number (556981191199)
BRASP	16	Packet Data Service Information	2012-10-08	Added new APN (timbrasil.br)
BRARN	16	Packet Data Service Information	2012-10-08	Added new APN (timbrasil.br)
BRACS	16	Packet Data Service Information	2012-10-08	Added new APN (timbrasil.br)

**NETWORK**

TADIG code: BRASP

Section ID: 2 (Mandatory, Repeating)

<b>TADIG code:</b>	BRASP
<b>Network type:</b>	Terrestrial
<b>Technology:</b>	<b>Frequency list:</b>
<b>2G-GSM frequencies:</b>	GSM 900, DCS 1800
<b>3G-UTRA/FDD frequencies:</b>	1 - IMT 2.1 GHz
<b>3G-UTRA/TDD frequencies:</b>	Unsupported
<b>4G-E-UTRAN frequencies:</b>	28 - 700 MHz APAC, 5 - 850 MHz, 3 - DCS 1800, 1 - IMT 2.1 GHz, 7 - 2.6 GHz
<b>4G-E-UTRAN-MIoT-LTE-M frequencies:</b>	Unsupported
<b>4G-E-UTRAN-MIoT-NB-IoT frequencies:</b>	28 - 700 MHz APAC
<b>MIoT-NB-IoT deployment modes:</b>	Unsupported
<b>Presentation of country initials and MNN:</b>	TIM BRA
<b>Abbreviated MNN:</b>	TIM

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**NETWORK INFORMATION**

TADIG code: BRASP

Section ID: 3 (Mandatory)

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The following information refer to the network identified by TADIG code BRASP

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**ROUTING INFORMATION**

TADIG code: BRASP

Section ID: 4 (Mandatory)

Effective date of change: 2020-11-11

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	11	930000000	930199999				
	55	11	938000000	938109999				
	55	11	948000000	950099999				
	55	11	950150000	950199999				
	55	11	951000000	951019999				
	55	11	951040000	951049999				
	55	11	951060000	951099999				
	55	11	951130000	951149999				
	55	11	951160000	951709999				
	55	11	951720000	951799999				
	55	11	951900000	951909999				
	55	11	951920000	952119999				
	55	11	952140000	952519999				
	55	11	952680000	952999999				
	55	11	953270000	953989999				
	55	11	954200000	954719999				
	55	11	954750000	954999999				
	55	11	957870000	959999999				
	55	11	960610000	960859999				
	55	11	963400000	963699999				
	55	11	964200000	964699999				
	55	11	968270000	968399999				
	55	11	970110000	970519999				
	55	11	977000000	978069999				
	55	11	979500000	979679999				
	55	11	981000000	987999999				
	55	12	966660000	966669999				
	55	12	976000000	976009999				
	55	12	976020000	976069999				
	55	12	981000000	983019999				
	55	12	983030000	983219999				
	55	13	955380000	955519999				
	55	13	976000000	976009999				
	55	13	976030000	976059999				
	55	13	981000000	982339999				
	55	14	976000000	976009999				
	55	14	976020000	976049999				
	55	14	981000000	982339999				
	55	15	976000000	976009999				
	55	15	976020000	976049999				
	55	15	981000000	981919999				

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	16	976000000	976009999				
	55	16	976020000	976049999				
	55	16	981000000	982719999				
	55	17	976000000	976009999				
	55	17	976020000	976049999				
	55	17	981000000	982319999				
	55	18	976000000	976009999				
	55	18	976020000	976049999				
	55	18	981000000	982079999				
	55	19	953210000	953349999				
	55	19	976000000	976009999				
	55	19	976030000	976059999				
	55	19	981000000	984609999				
<b>Network Nodes Global Title Number Range(s)</b>								
	55	11	81000000	81999999				
	55	11	83000000	83999999				
	55	11	84000000	84999999				
	55	11	85000000	85999999				
	55	12	81000000	81999999				
	55	13	81000000	81999999				
	55	16	81000000	81999999				
	55	19	81000000	81999999				
	55	003	0000000	9999999				
<b>MSRN Number Range(s)</b>								
	55	11	981132100	981132999				
	55	11	981137400	981137599				
	55	11	981137800	981138199				
	55	11	981187800	981187999				
	55	11	984135100	984135999				
	55	11	984136100	984137299				
	55	11	984139700	984139799				
	55	11	985237300	985237799				
	55	11	985238200	985238499				
	55	11	985923600	985923999				
	55	11	985924200	985924299				
	55	11	985924800	985925499				
	55	11	985925800	985925999				
	55	12	981138000	981138499				
	55	12	981138800	981139599				
	55	12	981139900	981139999				
	55	12	983135000	983135499				
	55	12	983135600	983135699				
	55	12	983135800	983135999				
	55	12	983138700	983138799				



MSRN Number Range(s)							
	55	13	981138000	981139199			
	55	13	981139400	981139599			
	55	13	981689300	981689999			
	55	14	981138000	981138499			
	55	14	981139000	981139599			
	55	14	981139900	981139999			
	55	15	981138800	981138999			
	55	15	981139400	981139599			
	55	15	981740000	981740799			
	55	16	981138300	981138799			
	55	16	981138900	981139299			
	55	16	981139400	981139499			
	55	17	981138000	981138399			
	55	17	981138500	981138899			
	55	17	981139100	981139499			
	55	18	981139300	981139499			
	55	18	981880000	981880999			
	55	19	981137900	981138499			
	55	19	981139300	981139599			
	55	19	984388100	984389999			

E. 212 Number series	Mobile Country Code (MCC)	Mobile Network Code (MNC)
	724	03

E. 214 Mobile Global Title (MGT)	Country Code of MGT (CC)	Network Code of MGT (NC)
	55	003

Does Number Portability apply ?	Yes
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Is 15 Digit MSISDN Supported ?	No
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USIM SIM Header	895503
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Additional Information
The IMSI complies with the GSM 03.03 and ITU-T E.212 and has a fixed length of 15 digits.
The MSISDN complies with the GSM 03.03 and ITU-T E.164 has a length of 13 digits.
Number portability was introduced on 01st September 2008. This means that TIM Brazil customers can have a MSISDN, which is taken from any Brazil mobile network NDC. In Brazil we have other six mobile companies: Claro, VIVO, Oi, CTBC, Sercomtel and Unicef.
TIM uses RAN Sharing on LTE in some places sharing E.212 72499.

#### History of changes

Date	Description
2020-11-11	MSISDN Number Ranges updated
2020-07-13	MSRN Ranges massively updated.
2020-07-13	MSISDN range updated.
2019-11-11	MSRN range updated
2019-04-26	MSRN range deleted 55129831390xx.
2018-10-02	BRASP Routing Update
2018-08-23	MSRN range updated

<b>Date</b>	<b>Description</b>
2018-03-14	MSISDN range updated.

**INTERNATIONAL SCCP GATEWAY**

TADIG code: BRASP

Section ID: 5 (Optional)

Effective date of change: 2020-02-20

International SCCP carrier list	
<b>SCCP carrier name:</b>	Telecom Italia Sparkle
<b>Connectivity information:</b>	Primary
<b>Comments:</b>	Telecom Italia Sparkle
<b>MNO TADIG code list:</b>	BRASP, BRARN, BRACS, BRAPS
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.45.4
Comments:	
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.46.2
Comments:	
<b>SCCP carrier name:</b>	BICS
<b>Connectivity information:</b>	Backup
<b>Comments:</b>	BICS
<b>MNO TADIG code list:</b>	BRASP, BRARN, BRACS, BRAPS
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.5
Comments:	
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.6
Comments:	

**History of changes**

Date	Description
2020-02-20	BICS has been added as International SCCP carrier.
2020-01-06	New network BRAPS information added
2019-04-26	Comfone has been removed from SCCP carrier.
2018-11-26	International SCCP Gateway Update
2018-10-02	International SCCP Gateway Update

**SCCP Protocol available at PMN for connection for International SS7 Roaming**

TADIG code: BRASP

Section ID: 7 (Optional)

Effective date of change: 2011-12-28

SCCP Protocol available at PMN	Availability (Yes / No)
ETSI (ITU):	Yes
ANSI:	No

**History of changes**

**SUBSCRIBER IDENTITY AUTHENTICATION**

TADIG code: BRASP

Section ID: 8 (Optional)

Effective date of change: 2011-12-28

<b>Authentications</b>	<b>Performed (Yes / No)</b>
<b>Authentication performed for Roaming subscribers at the commencement of GSM service</b>	Yes
<b>Authentication performed for roaming subscribers in case of GPRS</b>	Yes
<b>A5 Cipher Algorithm version in use</b>	

**History of changes**

**Test Numbers Information**

TADIG code: BRASP

Section ID: 9 (Optional)

Effective date of change: 2019-11-13

Number Type	Test Number	Location	Comments
AAC	5512981121199		
AAC	5512981131199		
AAC	5512981451199		
AAC	5513981131199		
AAC	5514981131199		
AAC	5514981141199		
AAC	5515981111199		
AAC	5515981131199		
AAC	5516981131199		
AAC	5516981161199		
AAC	5517981131199		
AAC	5517981171199		
AAC	5518981131199		
AAC	5518981181199		

**History of changes**

Date	Description
2019-11-11	Test Numbers updated
2017-01-17	Added 9th digit on test numbers.

**MOBILE APPLICATION PART (MAP)**

TADIG code: BRASP

Section ID: 10 (Optional)

Effective date of change: 2011-12-28

<b>Interworking specifically for roaming</b>				
<b>Application context name</b>	<b>Current version in</b>			<b>Comments</b>
	<b>Inbound roaming</b>		<b>Outbound roaming</b>	
	<b>MSC/VLR</b>	<b>SGSN</b>	<b>Outbound roaming</b>	
networkLocUp	MAPv3	N/A	MAPv3	
roamingNumberEnquiry	MAPv3	N/A	MAPv3	
InfoRetrieval	MAPv3	MAPv3	MAPv3	
subscribeDataMngt	-	-	-	
networkFunctionalSs	MAPv2	N/A	MAPv2	
mwdMngt	-	-	-	
shortMsgMT-Relay (called shortMsgRelay in v1)	MAPv2	-	MAPv2	
shortMsgMO-Relay (called shortMsgRelay in v1)	MAPv2	-	MAPv2	
ss-InvocationNotification	MAPv2	N/A	MAPv2	
subscriberInfoEnquiry	-	-	-	
gprsLocationUpdate	N/A	MAPv3	MAPv3	
locationCancellation	MAPv3	MAPv3	MAPv3	
msPurging	-	-	-	
reset	-	-	-	
networksUnstructuredSs	-	N/A	-	
reporting	-	N/A	-	
callCompletion	-	N/A	-	
istAlerting	-	N/A	-	
service Termination	-	N/A	-	
locationSvcGateway	N/A	N/A	-	
mm-EventReporting	-	N/A	-	
authenticationFailureReport	-	-	-	
imsiRetrieval	MAPv3	N/A	MAPv3	
gprsNotifyContext	N/A	-	-	
gprsLocationInfoRetrieval	N/A	-	-	
failureReport	N/A	-	-	
secureTransportHandling	MAPv2	MAPv2	MAPv2	

**History of changes**



**MAP Inter Operator SMS Enhancement**

TADIG code: BRASP

Section ID: 12 (Optional)

Effective date of change: 2011-12-28

**Inter - Operator SMS Enhancement**

Application context name	Current version in			Comments
	SMS - IWMSC	SMS - GMSC	HLR	
shortMsgGateway	N/A	MAPv2	MAPv2	
shortMsgAlert	MAPv2	N/A	MAPv2	

**History of changes**

## NETWORK ELEMENTS INFORMATION

TADIG code: BRASP

Section ID: 13 (Optional)

Effective date of change: 2020-11-11

Node type	Node ID	GT address / Address range	IP address / Address range	IPv6 address / Address range	Vendor info	SW / HW version	UTC offset
HLR		55 11 81134030 / 81134033					-03:00
HLR		55 11 83138900 / 83138999					-03:00
HLR		55 1181134013					-03:00
HLR		55 1181134014					-03:00
HLR		55 1181134036					-03:00
HLR		55 1181136004					-03:00
HLR		55 1181136005					-03:00
HLR		55 1181136100					-03:00
HSS		55 1181136007					-03:00
HSS		55 0031102201					-03:00
HSS		55 0031102202					-03:00
MME	DMSPO1	55 1181136101			Huawei		-03:00
MME	DMSPO2	55 1181136102			Huawei		-03:00
MME	DMSNE3	55 1181137201			Huawei		-03:00
MME	DMSNE4	55 1181137202			Huawei		-03:00
MME	DMSNE5	55 0031106105			Huawei		-03:00
MSC/VLR		55 11 83138780 / 83138899					-03:00
MSC/VLR		55 11 84137700 / 84137876					-03:00
MSC/VLR		55 11 84137911 / 84137917					-03:00
MSC/VLR		55 0031101010					-03:00
MSC/VLR		55 0031101110					-03:00
MSC/VLR		55 1181132000					-03:00
MSC/VLR		55 1181132800					-03:00
MSC/VLR		55 1181133000					-03:00
MSC/VLR		55 1183138739					-03:00
MSC/VLR		55 1184136000					-03:00
MSC/VLR		55 1184137000					-03:00
MSC/VLR		55 1184137200					-03:00
MSC/VLR		55 1184138000					-03:00
MSC/VLR		55 1981799000					-03:00
SCP		55 1181186001					-03:00
SCP		55 1185234208					-03:00
SCP		55 1185234209					-03:00
SCP		55 1185234210					-03:00
SCP		55 1185234211					-03:00
SCP		55 1185234224					-03:00
SCP		55 1185234225					-03:00
SCP		55 1185234227					-03:00
SMSC		55 1181136710			Huawei		-03:00
SMSC		55 1181136711					-03:00
SMSC		55 1181136712					-03:00
SMSC		55 11 81134015 / 81134016					-03:00
SMSC		55 11 81134022 / 81134027					-03:00
SMSC		55 11 83138298 / 83138301					-03:00
SMSC		55 1181134006					-03:00
SMSC		55 1181134008					-03:00
SMSC		55 1181134009					-03:00
SMSC		55 1181136002					-03:00
SMSC		55 1181136003					-03:00
SMSC		55 1181138201					-03:00
SMSC		55 1181138202					-03:00
IN		55 1185234269					-03:00
SGSN	DMSNE3	55 1181137201	189.40.173.8		Huawei		-03:00
SGSN	DMSNE4	55 1181137202	189.40.173.73		Huawei		-03:00
SGSN	DMSPO1	55 1181136101	189.40.173.40		Huawei		-03:00
SGSN	DMSPO2	55 1181136102	189.40.173.105		Huawei		-03:00
SCP		55 11 85234270 / 85234282					-03:00
SCP		55 11 85234257 / 85234268					-03:00
SCP		55 1183138510					-03:00
SCP		55 1183138520					-03:00
SCP		55 1184138511					-03:00

Node type	Node ID	GT address / Address range	IP address / Address range	IPv6 address / Address range	Vendor info	SW / HW version	UTC offset
SCP		55 1184138512					-03:00
SCP		55 1185234228					-03:00
SCP		55 1185234243					-03:00
SCP		55 1185234244					-03:00
SCP		55 11 85234256 / 85234259					-03:00
SCP		55 0031103001					-03:00
SCP		55 0031103050					-03:00
BSC		55 0031102205					-03:00
MSC/VLR		55 0031101012					-03:00
SCP		55 0031103902					-03:00

### History of changes

Date	Description
2020-11-11	Deleted GTs (551181134012, 551181136200, 551181139200, 551184138100, 551184138200, 551184138300, 550031102205, 550031102206) due to HLRs deactivation;
2020-11-11	Deleted GTs (551183138500, 551183138700, 551185234216-551185234221, 551185234234-551185234240, 551185238500, 551185238510, 551185238520, 551181138203, 551185234230-551185234233, 551185234246) due to SCPs deactivation;
2020-11-11	New SCP range added (551185234257 - 551185234259)
2020-07-16	New HLR elements (GTs 550031102205 and 550031102206) added.
2020-07-13	New SCP element added
2019-11-11	Network elements update
2018-08-28	Update Network Elements
2018-08-28	Network Elements - Update
2018-08-28	Network elements update
2018-08-28	New SGSN elements
2018-08-24	Deleted Ericsson and Nokia's SGSN
2018-03-14	New IN GT address 551185234269
2018-03-14	New IN element
2017-01-18	New SMSC updated
2016-07-28	New MSC/VLR and SGSN ranges.
2016-02-23	New Network Element for MME (551181137201, 551181137202, 551181136101, 551181136102)
2015-05-28	New Network Element for MSC/VLR (551181133000, 551184138000) / New Network Element for HLR (551181134036)
2014-12-02	New Network Element for MSC/VLR (550031101010 and 550031101110) / Removed Network Element for MSC/VLR (55138113000)
2014-09-22	New Network Element for HLR (551181134030, 551181134031, 551181134032 and 551181134033)
2014-05-14	New Network Element for SMSC (551181134022, 551181134023, 551181134024, 551181134025, 551181134026, 551181134027)
2014-05-14	New Network Element for SGSN (551181134037, 551181134038, 551181134039)
2014-02-13	New Network Element for HSS (550031102021) / New Network Element for HLR (551181134013, 551181134014 and 551181134036) / Removed Network Element for MSC/VLR (551181132100 and 551181133000) / New Network Element for SGSN (551181134035)
2013-11-22	New Network Element for HSS (HSSNE1) and MME (DMSNE2)
2013-10-09	New Network Element for MSC/VLR (551181132100) and New Network Element for SGSN (551181186702, 551184136002)
2013-07-18	Removed Network Element for MSC/VLR (551181137000, 551181138000, 551184138000 and 551981137000) / New Network Element for HLR (551181136004, 551181136005) / for SMSC (551181136002, 551181136003) / for SCP (551181136000, 551181136001).

**USSD Information**

TADIG code: BRASP

Section ID: 14 (Optional)

Effective date of change: 2011-12-28

<b>USSD capability available</b>	Yes
<b>Supported phase</b>	Phase 2

**History of changes**

**CAMEL INFO**

TADIG code: BRASP

Section ID: 15 (Conditional)

Effective date of change: 2011-12-28

**gsmSSF/MSC**

<b>CAP Version supported (Inbound)</b>	<b>CAP Version supported (Outbound)</b>
CAPv1 CAPv2 CAPv3	CAPv2

**CAPv4 Partial Implementations**

<b>CAMEL Phase 4 CSIs:</b>	<b>Supported (Yes / No)</b>	<b>Planned Date</b>
MT-SMS-CSI		
MG-CSI		
PSI Enhancements		

**History of changes**

**Packet Data Services Information**

TADIG code: BRASP

Section ID: 16 (Conditional)

Effective date of change: 2018-08-28

**List of APN Operator Identifiers**

APN Operator Identifier	Description	Example
mnc003.mcc724.gprs		

**List of APN's available for testing and troubleshooting**
**APN WEB List**

APN Credential			APN Type	ISP DNS IP address (primary)	ISP DNS IP address (secondary)
APN	Username	Password			
tim.br	tim	tim	H-APN		
timbrasil.br			H-APN		

**APN WAP List**

APN Credential			APN Type	WAP Gateway IP address	WAP Server URL	WAP Port ver 1	WAP Port ver 2
APN	Username	Password					
timbrasil.br			H-APN	189.40.191.95	http://wap.timbrasil.com.br	8080	9201 9203

**APN MMS List**

APN	APN Credential		WAP Gateway IP address for MMS	Messaging Server URL
	Username	Password		
timbrasil.br			189.40.191.96	http://mms.tim.br/servlets/mms/

**IPv6 Connectivity Information**

	IPv6 PDP Supported	IPv4v6 PDP Supported
SGSN Support	No	No
GGSN Support	No	No

**List of 2G/3G QOS profiles**

Profile name:	2G
Traffic class:	Interactive
ARP:	1
Evolved ARP support:	Yes
Evolved ARP priority level:	1
Evolved APR preemption vulnerability list:	
Evolved APR preemption capability list:	

**GTP Version**

SGSN	GTPv1
GGSN	GTPv1

**List of Data Service supported**

2G Data Services	Multislot Class Capability
GPRS	
EDGE	

3G Data Services	UE 3G Category
HSDPA	

**Multiple PDP Context Support**

Number of Primary PDP Context	4
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**History of changes**

Date	Description
2018-08-28	APN Type update

Date	Description
2017-11-30	MMS and WAP - APNs Update
2013-11-22	Section applicable for TADIG codes removed
2013-10-10	Added 2G/3G QOS profiles
2012-10-08	Added new APN (timbrasil.br)



**IP - Roaming and IP - Interworking Information**

TADIG code: BRASP

Section ID: 17 (Conditional)

Effective date of change: 2020-07-13

List of All IP address ranges used by PMN for connection to inter - PMN IP backbone	IP Address Range
	189.40.99.0/24
	189.40.96.0/23
	189.40.243.0/24
	189.40.242.0/25
	189.40.241.0/24
	189.40.240.0/24
	189.40.173.0/24
	189.40.172.0/24
	189.40.169.0/24
	189.40.168.0/24
	189.40.167.0/24
	189.40.166.0/24
	131.166.134.0/24
	131.166.136.0/24
	135.92.40.0/24
	135.92.41.0/24
	189.40.176.0/21
	189.40.98.0/23
	79.140.91.112/29

List of Autonomous System Number (ASN):	ASN
	64717
	22870
	6774

List of Autonomous System Number (ASN4B):	ASN4B
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List of PMN authoritative DNS server IP addresses and names		
IP address	IPv6 address	DNS Name
189.40.167.230		Primary
189.40.167.226		Secondary

List of GRX Providers	GRX Provider
	Telecom Italia Sparkle BICS SA

**History of changes**

Date	Description
2020-07-13	New IP address range added
2020-05-06	New IP address range added
2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
2020-03-24	IP address range Updated
2020-02-28	BICS Autonomous system number (ASN) has been added
2020-02-28	BICS SA has been added as GRX provider
2019-12-19	New IP range 189.40.176.0 / 21 added
2019-11-25	New IP range 135.92.41.1/32 added
2019-11-18	Update - IP ranges 135.92.40.16/29 and 135.92.41.16/29 were removed and New IP range 135.92.40.1/32 added.
2019-11-13	NEW IP Addresses ranges
2019-04-26	Comfone has been removed from GRX provider.
2018-10-10	Update - Connection to inter-PMN IP backbone
2018-10-10	Update - Autonomous system number (ASN)

<b>Date</b>	<b>Description</b>
2018-08-28	NEW IP Addresses ranges

**MMS Interworking Information**

TADIG code: BRASP

Section ID: 18 (Optional)

Effective date of change: 2011-12-28

**MMS Elements Data**

Domain name of MMSC	IP Address	Max. size of MMS allowed	Delivery Report allowed? (Yes / No)	Read Report allowed? (Yes / No)	IP address(es) of Incoming MTA	IP address(es) of Outgoing MTA
mms.mnc003.mcc724.gprs	189.40.240.0/26	1000	Yes	Yes	189.40.240.33	189.40.240.33

**List of MMS IW Hub Provider**

MMS IW Hub Provider Name	GT address(es)
Telecom Italia Sparkle	

**History of changes**

**LTE Roaming Information**

TADIG code: BRASP

Section ID: 20 (Optional)

Effective date of change: 2020-10-05

IPX Provider Name	IPX DA Realm Used	Diameter Architecture
TIS - Telecom Italia Sparkle (Main/First)	net2mobile.grx	
Primary IP address of DA	Secondary IP address of DA	
93.186.140.134	93.186.140.198	
IPX Provider Name	IPX DA Realm Used	Diameter Architecture
BICS SA (Backup/Second)	dra.bics.3gppnetwork.org	
Primary IP address of DA	Secondary IP address of DA	
94.102.166.168	94.102.166.184	
94.102.166.199	94.102.166.215	

**Roaming Interconnection**

EPC Realms For Roaming
epc.mnc003.mcc724.3gppnetwork.org

**FQDN Diameter Edge Agent**

FQDN	Primary IP Address DEA FQDN	Secondary IP Address DEA FQDN
nvrjo2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.182 186.230.181.178	186.230.181.190 186.230.181.186
nvsne2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.198 186.230.181.194	186.230.181.206 186.230.181.202

S6a Supported without IWF	S6a MAP IWF supported to HSS	S6a MAP IWF supported to MME
true	false	false
S6d used for legacy SGSN	S9 used for PCC	
false	false	

**SMS ITW**

SMS delivery over IP	SMS delivery over SGs
false	true

**Voice ITW**

CSFB

**Roaming CS Fallback**

Not Supported

LTE Roaming Agreement Only	LTE Only Roaming Supported	HPMN	VPMN
2G/3G Roaming Agreement Only	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	Yes
2G/3G/LTE Roaming Agreement	Scenario 1 Supported	Yes	Yes
	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	No
	Scenario 4 Supported	No	No
	Scenario 5 Supported	No	No
	Scenario 6 Supported	No	No

**List of LTE QOS profiles**

Profile name:	4G
QCI Value List:	9
QOS ARP List:	7
ARP Preemption Vulnerability List:	0
ARP Preemption Capability List:	0

**IPv6 Connectivity Information**

	IPv6 PDP Supported	IPv4v6 PDP Supported
MME Support	No	No
SGW Support	No	No
PGW Support	No	No

**5G early drop support**

	As HPMN	AS VPMN
<b>5G NSA (non-standalone access) supported</b>	No	No
<b>DNS PGW NAPTR includes +nc-nr</b>	No	No
<b>NSA options for EN-DC</b>		
<b>ARD set to support of NR as secondary RAT</b>	No	
<b>Restrict NR access if HSS is not set to support NR as secondary RAT</b>		No

**History of changes**

Date	Description
2020-10-05	EPC realms of roaming interconnection updated
2020-02-28	BICS has been added as IPX provider
2019-04-26	Comfone and Tata have been removed from IPX carrier.
2019-04-26	TIS update.
2019-04-26	Diameter for roaming interconnection update.
2018-08-28	EPC realms of roaming interconnection update
2018-08-23	FQDN data updated
2018-03-14	New FQDN Diameter Edge Agent
2017-06-08	IPX interconnection information
2017-04-25	Sparkle added as IPX Backup/Second
2017-04-18	TATA added as IPX provider
2016-10-28	LTE updates
2016-07-29	Realm updated.
2016-07-05	Added TATA as Diameter backup.
2016-05-20	Removed TATA as Diameter backup.
2016-05-02	Added Telecom Italia Sparkle as IPX Provider and TATA as Diameter backup.
2015-10-20	Removed two DREs not active for roaming.
2015-09-08	LTE DATA updated
2015-07-03	FQDN Diameter Edge Agent list updated. ATTENTION - NDRJO2 and NDSNE2 won't be operational until the end of July.
2015-05-28	Roaming Interconnection information updated
2014-05-15	S6a Hostnames updated
2013-11-22	LTE information added

**CONTACT INFORMATION**

TADIG code: BRASP

Section ID: 21 (Optional, Repeating)

Effective date of change: 2020-02-28

**List of Roaming Troubleshooting Contact Information****Roaming Troubleshooting Contact Information**

<b>Location</b>	Brazil		
<b>Office Time Zone in UTC</b>	-03:00		
<b>Office Hours</b>	<b>Week Day (s)</b>	<b>Start Time</b>	<b>End Time</b>
	Mon Tue Wed Thu Fri	09:00:00	18:00:00

**Main Contact for Troubleshooting (Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Escalation Contact for Troubleshooting**

Person Name	Tel.	Mobile	Fax	Email
Mr Cezar Serafini	+552141128996			cserafini@timbrasil.com.br

**24 x 7 Troubleshooting (contact out of Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Roaming Troubleshooting Ticketing System Information**

Ticket system web address

Ticket system email address

**Additional Contacts****SCCP Inquires and ordering of SS7 Routes**

Person Name	Tel.	Mobile	Fax
TIS Telecom Italia Sparkle	+3906321000		+390652744560
JobTitle	Email		
NOC - Network Operation Center	contactcenter.tis@telecomitaliasparkle.com		

**Roaming Coordinator**

Person Name	Tel.	Mobile	Fax
Mr Marcio Aragão	+552141128715	+5521981131102	
JobTitle	Email		
Roaming Specialist	maragao@timbrasil.com.br		

**IREG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**TADIG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**Other contact(s)**

Person Name	Tel.	Mobile	Fax
Ms Ana Carolina Fonseca	+552141127537		
JobTitle	Email		
Roaming Expert	afonseca@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Eduardo Bruno	+552141127903		
JobTitle	Email		
Roaming Expert	elopes@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr. Emerson Dos Santos	+558141075158		
JobTitle	Email		
	egrdsantos@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Fabricio Gonçalves	+552141125190		
JobTitle	Email		
Roaming Expert	fagoncalves@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Ms Carla Isadora Silva			

JobTitle		Email	
		cimdsilva@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Marcus Vinicius Ferreira	+552141127286		
JobTitle		Email	
Roaming Manager		mvferreira@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Mr. Michel Marinho		+5521981134544	
JobTitle		Email	
		mmarinho@timbrasil.com.br	

IR21 Distribution Email Address	Email
	roaming@timbrasil.com.br

#### History of changes

Date	Description
2020-02-28	Contacts list has been updated
2019-11-13	Escalation contact updated.
2019-11-11	Contacts updated
2019-08-21	Contacts updated.
2019-08-21	Escalation contact.
2018-11-26	Contacts Update

**SECTIONS NOT IN USE**

TADIG Code	Section ID	Section Name
BRASP	6	Domestic SCCP Gateway
BRASP	11	MAP Optimal Routing Section
BRASP	19	WLAN Information
BRASP	22	Hosted Networks
BRASP	23	M2M Roaming Information
BRASP	24	MVNO Information
BRASP	26	VoLTE Roaming Information Section
BRASP	27	LPWA Roaming Information Section



**NETWORK**

TADIG code: BRARN

Section ID: 2 (Mandatory, Repeating)

<b>TADIG code:</b>	BRARN
<b>Network type:</b>	Terrestrial
<b>Technology:</b>	<b>Frequency list:</b>
<b>2G-GSM frequencies:</b>	GSM 900, DCS 1800
<b>3G-UTRA/FDD frequencies:</b>	1 - IMT 2.1 GHz
<b>3G-UTRA/TDD frequencies:</b>	Unsupported
<b>4G-E-UTRAN frequencies:</b>	28 - 700 MHz APAC, 5 - 850 MHz, 3 - DCS 1800, 1 - IMT 2.1 GHz, 7 - 2.6 GHz
<b>4G-E-UTRAN-MIoT-LTE-M frequencies:</b>	Unsupported
<b>4G-E-UTRAN-MIoT-NB-IoT frequencies:</b>	28 - 700 MHz APAC
<b>MIoT-NB-IoT deployment modes:</b>	Unsupported
<b>Presentation of country initials and MNN:</b>	TIM BRA
<b>Abbreviated MNN:</b>	TIM

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**NETWORK INFORMATION**

TADIG code: BRARN

Section ID: 3 (Mandatory)

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The following information refer to the network identified by TADIG code BRARN

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**ROUTING INFORMATION**

TADIG code: BRARN

Section ID: 4 (Mandatory)

Effective date of change: 2020-11-11

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	21	960110000	960119999				
	55	21	960140000	960219999				
	55	21	965000000	965999999				
	55	21	969000000	969999999				
	55	21	979000000	983999999				
	55	21	989720000	989729999				
	55	22	981000000	981849999				
	55	22	981860000	981879999				
	55	24	981000000	981839999				
	55	24	981860000	981899999				
	55	27	981000000	981099999				
	55	27	981110000	981299999				
	55	27	981310000	981399999				
	55	27	981410000	981569999				
	55	27	981580000	981599999				
	55	27	981610000	981949999				
	55	28	981000000	981039999				
	55	28	981110000	981229999				
	55	31	973000000	973459999				
	55	31	973480000	973509999				
	55	31	973520000	973669999				
	55	31	975000000	975479999				
	55	31	975530000	975999999				
	55	31	991000000	993639999				
	55	31	993650000	994999999				
	55	32	991000000	991519999				
	55	32	991530000	991569999				
	55	32	991580000	991689999				
	55	32	991720000	991869999				
	55	32	991930000	991999999				
	55	33	991000000	991599999				
	55	33	991610000	991619999				
	55	33	991630000	991809999				
	55	33	991900000	991999999				
	55	34	991000000	992919999				
	55	34	992930000	993429999				
	55	35	991000000	992399999				
	55	35	992410000	992779999				
	55	37	991000000	991539999				
	55	37	991550000	991629999				
	55	37	991640000	991659999				

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	37	991680000	991849999				
	55	37	991860000	991869999				
	55	37	991910000	991999999				
	55	38	991000000	992329999				
	55	38	992340000	992719999				
	55	71	991000000	993929999				
	55	71	993950000	993979999				
	55	71	993990000	994189999				
	55	73	991000000	991749999				
	55	73	991760000	991879999				
	55	73	991910000	991999999				
	55	74	991000000	991459999				
	55	74	991470000	991499999				
	55	74	991510000	991619999				
	55	74	991880000	991999999				
	55	75	991000000	992669999				
	55	75	992680000	993029999				
	55	77	991000000	991849999				
	55	77	991860000	992149999				
	55	79	991000000	991009999				
	55	79	991020000	991499999				
	55	79	991510000	991659999				
	55	79	991690000	991829999				
	55	79	991910000	991939999				
	55	79	991950000	991959999				
	55	79	991980000	991999999				
	55	81	979000000	979169999				
	55	81	995000000	995519999				
	55	81	995550000	999999999				
	55	82	996000000	996999999				
	55	82	998000000	998139999				
	55	82	998160000	998189999				
	55	82	998200000	998449999				
	55	82	999000000	999999999				
	55	83	996000000	996999999				
	55	83	998000000	998419999				
	55	83	998430000	998969999				
	55	83	999000000	999999999				
	55	84	935030000	935039999				
	55	84	996000000	997109999				
	55	84	998000000	998229999				
	55	84	998270000	998809999				
	55	84	998890000	999999999				
	55	85	996000000	998729999				
	55	85	999000000	999999999				

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	86	998000000	998359999				
	55	86	998380000	998679999				
	55	86	999000000	999999999				
	55	87	996000000	996709999				
	55	87	996750000	996839999				
	55	87	998000000	998279999				
	55	87	999000000	999999999				
	55	88	996000000	997559999				
	55	88	997610000	998749999				
	55	88	999000000	999999999				
	55	89	999000000	999429999				
	55	89	999440000	999479999				
	55	89	999710000	999799999				
	55	89	999810000	999949999				
	55	89	999970000	999979999				
	55	91	980100000	983229999				
	55	91	983240000	983999999				
	55	91	989000000	989969999				
	55	91	998000000	998409999				
	55	92	981000000	982939999				
	55	93	981000000	981319999				
	55	93	981330000	981349999				
	55	94	981000000	981999999				
	55	95	981000000	981279999				
	55	95	981290000	981299999				
	55	96	981000000	981469999				
	55	96	981480000	981489999				
	55	97	981000000	981289999				
	55	98	981000000	983569999				
	55	99	981000000	982289999				
	55	99	982340000	982799999				
	55	99	982850000	982859999				

<b>Network Nodes Global Title Number Range(s)</b>								
	55	002	0000000	9999999				
	55	21	81000000	81999999				
	55	21	82000000	82999999				
	55	21	83000000	83999999				
	55	31	75000000	75999999				
	55	31	91000000	91999999				
	55	31	93000000	93999999				
	55	34	91000000	91999999				
	55	71	91000000	91999999				
	55	81	98000000	98999999				
	55	81	99000000	99999999				
	55	82	99000000	99999999				

Network Nodes Global Title Number Range(s)								
	55	83	97000000	98999999				
	55	84	99000000	99999999				
	55	85	99000000	99999999				
	55	88	99000000	99999999				
	55	91	81000000	81999999				
	55	91	82000000	82999999				
	55	91	89000000	89969999				
	55	92	81000000	81999999				
	55	93	81000000	81999999				
	55	95	81000000	81999999				
	55	96	81000000	81999999				
	55	98	81000000	81999999				
	55	99	81000000	81999999				

MSRN Number Range(s)								
	55	21	982138000	982138699				
	55	21	982139300	982139699				
	55	21	982365000	982365599				
	55	21	982365900	982366399				
	55	21	982367100	982367199				
	55	21	982740000	982740499				
	55	21	982741500	982741899				
	55	21	982743300	982743999				
	55	21	982745000	982745999				
	55	21	982747000	982747999				
	55	22	981138000	981138899				
	55	22	981139500	981139599				
	55	22	981298000	981298599				
	55	22	981298700	981299499				
	55	24	981138000	981138899				
	55	24	981139000	981139599				
	55	24	981709000	981709499				
	55	27	981138100	981138799				
	55	27	981139000	981139499				
	55	27	981771200	981771699				
	55	28	981138000	981138899				
	55	28	981139000	981139599				
	55	31	975450000	975450999				
	55	31	991930400	991930499				
	55	31	991930700	991930999				
	55	31	991934200	991934699				
	55	31	991935000	991935299				
	55	31	991938000	991939499				
	55	32	991560000	991560999				
	55	32	991930300	991930999				
	55	32	991936000	991936299				
	55	32	991936600	991936999				
	55	32	991938000	991938399				

MSRN Number Range(s)							
55	32	991938500	991939599				
55	33	991930500	991930999				
55	33	991936000	991936199				
55	33	991936800	991936999				
55	33	991938000	991938499				
55	33	991939000	991939599				
55	34	991930300	991930999				
55	34	991936200	991936899				
55	34	991938300	991938499				
55	34	991938600	991939599				
55	34	992780000	992780199				
55	34	993049400	993049999				
55	35	991930400	991930499				
55	35	991936000	991936299				
55	35	991936500	991936999				
55	35	991938000	991939599				
55	37	991930000	991930199				
55	37	991936000	991936499				
55	37	991938000	991938499				
55	37	991939000	991939599				
55	38	991930000	991930999				
55	38	991938000	991938499				
55	38	991938600	991939599				
55	71	991930000	991932999				
55	71	991938000	991938199				
55	71	991938600	991938799				
55	71	991939200	991939299				
55	73	991930300	991930799				
55	73	991936000	991936299				
55	73	991936800	991936999				
55	73	991938000	991938599				
55	73	991939000	991939599				
55	74	991930300	991930499				
55	74	991936100	991936399				
55	74	991936600	991936999				
55	74	991938200	991938599				
55	74	991938800	991939599				
55	74	991939900	991939999				
55	75	991930300	991930699				
55	75	991930900	991930999				
55	75	991931100	991931199				
55	75	991936300	991936999				
55	75	991938000	991938399				
55	75	991939000	991939199				
55	75	991939500	991939599				
55	77	991930300	991930599				
55	77	991936000	991936499				

MSRN Number Range(s)							
55	77	991938000	991938799				
55	77	991939200	991939499				
55	79	991930300	991930999				
55	79	991936000	991936299				
55	79	991936400	991936999				
55	79	991938000	991939599				
55	81	998620000	998620699				
55	81	998691600	998691899				
55	81	998760000	998760499				
55	81	998760900	998762699				
55	82	999230600	999231999				
55	82	999233300	999233499				
55	82	999233800	999233999				
55	82	999239200	999239299				
55	82	999239400	999239499				
55	83	998190000	998191399				
55	83	999230300	999230399				
55	83	999231000	999231699				
55	83	999231900	999232899				
55	83	999234500	999234699				
55	83	999238000	999238399				
55	84	999230300	999230999				
55	84	999234300	999234599				
55	84	999239100	999239599				
55	85	999230600	999231599				
55	85	999234000	999234799				
55	85	999238000	999238499				
55	85	999239500	999239599				
55	86	999230300	999231599				
55	86	999231700	999231999				
55	86	999235200	999236899				
55	86	999238000	999238099				
55	86	999238800	999239099				
55	86	999239300	999239499				
55	87	996470400	996470799				
55	87	999231600	999231799				
55	87	999235000	999235199				
55	87	999238500	999238699				
55	87	999238900	999239599				
55	87	999789200	999789999				
55	88	997979200	997979999				
55	88	999231800	999231999				
55	88	999236400	999236599				
55	88	999238000	999238899				
55	88	999239000	999239199				
55	88	999239500	999239599				
55	89	999230000	999230499				



MSRN Number Range(s)							
55	89	999231000	999231499				
55	89	999231700	999231999				
55	89	999236600	999236999				
55	89	999238000	999239599				
55	91	981117000	981117499				
55	91	981117700	981117899				
55	91	981760700	981760899				
55	91	983290000	983290499				
55	91	983291200	983291999				
55	91	989020000	989021799				
55	91	989100000	989101599				
55	91	989518200	989519999				
55	92	981116300	981116999				
55	92	981117100	981117299				
55	93	981119000	981119599				
55	93	981119900	981119999				
55	93	981168000	981168499				
55	93	981168700	981169499				
55	93	981169700	981169999				
55	93	981339000	981339299				
55	94	981119000	981119599				
55	94	981119900	981119999				
55	94	981200000	981200299				
55	94	981238000	981238199				
55	94	981238300	981238999				
55	94	981239100	981239199				
55	94	981239300	981239999				
55	95	981148000	981149499				
55	96	981119000	981119399				
55	96	981228500	981228999				
55	96	981229100	981229999				
55	97	981117000	981117199				
55	97	981118800	981118999				
55	97	981119500	981119599				
55	97	981119900	981119999				
55	98	981119000	981119499				
55	98	981398000	981398499				
55	98	981398800	981398999				
55	98	981501200	981501999				
55	99	981060400	981060599				
55	99	981119000	981119599				
55	99	981201200	981201999				
55	99	981236000	981236099				
55	99	981258000	981259299				
55	99	981259600	981259999				
55	99	981479200	981479999				
55	99	982000300	982000499				

<b>E. 212 Number series</b>	<b>Mobile Country Code (MCC)</b>	<b>Mobile Network Code (MNC)</b>
	724	02
<b>E. 214 Mobile Global Title (MGT)</b>	<b>Country Code of MGT (CC)</b>	<b>Network Code of MGT (NC)</b>
	55	002
<b>Does Number Portability apply ?</b>	Yes	
<b>Is 15 Digit MSISDN Supported ?</b>	No	
<b>USIM SIM Header</b>	895502	

<b>Additional Information</b>
The IMSI complies with the GSM 03.03 and ITU-T E.212 and has a fixed length of 15 digits.
The MSISDN complies with the GSM 03.03 and ITU-T E.164 has a length of 13 digits.
Number portability was introduced on 01st September 2008. This means that TIM Brazil customers can have a MSISDN, which is taken from any Brazil mobile network NDC. In Brazil we have other six mobile companies: Claro, VIVO, OI, CTBC, Sercomtel and Unicef.
TIM uses RAN Sharing on LTE in some places sharing E.212 72499.

### History of changes

<b>Date</b>	<b>Description</b>
2020-11-11	MSISDN Number Ranges updated
2020-07-13	MSRN Ranges massively updated.
2019-11-11	MSISDN range updated.
2019-11-11	MSRN Number Ranges Updated
2018-08-23	MSRN ranges updated
2018-03-14	MSISDN range updated.
2017-04-18	Additional routing Information update.
2017-01-17	MSISDN ranges updated.
2016-10-12	Removed old eighth digit on MSRN ranges.
2016-10-12	Removed old eighth digit on MSISDN ranges.
2016-02-25	MSRN Number Range Updated
2015-09-25	Routing Info updated.
2015-09-25	Considering MSISDN Number Ranges and MSRN number ranges, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of January, 2016.
2015-09-25	MSRN Number Ranges Updated - ATTENTION - The National Destination codes 31, 32, 33, 34, 35, 36, 37, 38, 39, 71, 72, 73, 74, 75, 76, 77, 78 and 79 will have 13 digits on October 11, 2015. The digit "9" (nine) will be inserted before the SN range
2015-09-25	MSISDN Number Ranges Updated - ATTENTION - The National Destination codes 31, 32, 33, 34, 35, 36, 37, 38, 39, 71, 72, 73, 74, 75, 76, 77, 78 and 79 will have 13 digits on October 11, 2015. The digit "9" (nine) will be inserted before the SN range
2015-05-28	Considering MSISDN Number Ranges and MSRN Number Ranges, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of July, 2015.
2015-05-28	MSISDN Number Ranges Updated - ATTENTION - The National Destination codes 81, 82, 83, 84, 85, 86, 87, 88 and 89 will have 13 digits on May 31, 2015. The digit "9" (nine) will be inserted before the SN range.
2015-05-28	MSRN Number Ranges Updated - ATTENTION - The National Destination codes 81, 82, 83, 84, 85, 86, 87, 88 and 89 will have 13 digits on May 31, 2015. The digit "9" (nine) will be inserted before the SN range.
2015-01-21	Edited Network Nodes Global Title Number Ranges
2014-12-02	Added new Network Nodes Global Title Number Ranges (From 559189000000 to 559189969999)
2014-12-02	MSISDN Number Range Updated
2014-12-02	MSRN Number Range Updated
2014-09-22	MSRN Number Range Updated - ATTENTION - The National Destination codes 91, 92, 93, 94, 95, 96, 97, 98 and 99 will have 13 digits on November 2, 2014. The number "9" (nine) will be inserted before the SN range.
2014-09-22	MSISDN Number Range Updated - ATTENTION - The National Destination codes 91, 92, 93, 94, 95, 96, 97, 98 and 99 will have 13 digits on November 2, 2014. The number "9" (nine) will be inserted before the SN range.

Date	Description
2014-09-22	For MSISDN Number Range and MSRN Number Range, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of January, 2015.
2014-05-15	MSISDN Number Range Updated
2014-05-15	MSRN Number Range Updated
2014-02-13	MSRN Number Range Updated
2013-11-21	Added new Network Nodes Global Title Number Ranges (From 550020000000 to 550029999999)
2013-10-11	For MSISDN Number Range and MSRN Number Range, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of January, 2014.
2013-10-11	MSISDN Number Range Updated - ATTENTION - The National Destination codes 21, 22, 24, 27, and 28 will have 13 digits on October 27th. The number 9 (nine) will be inserted before the SN range.
2013-10-11	MSRN Number Range Updated - ATTENTION - The National Destination codes 21, 22, 24, 27, and 28 will have 13 digits on October 27th. The number 9 (nine) will be inserted before the SN range.
2013-10-09	MSRN Number Range Updated
2013-08-20	MSRN Number Range Updated

**INTERNATIONAL SCCP GATEWAY**

TADIG code: BRARN

Section ID: 5 (Optional)

Effective date of change: 2020-02-20

International SCCP carrier list	
<b>SCCP carrier name:</b>	Telecom Italia Sparkle
<b>Connectivity information:</b>	Primary
<b>MNO TADIG code list:</b>	BRARN, BRACS, BRASP, BRAPS
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.45.4
Comments:	
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.46.2
Comments:	
<b>SCCP carrier name:</b>	BICS
<b>Connectivity information:</b>	Backup
<b>Comments:</b>	BICS
<b>MNO TADIG code list:</b>	BRASP, BRARN, BRACS, BRAPS
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.5
Comments:	
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.6
Comments:	

**History of changes**

Date	Description
2020-02-20	BICS has been added as International SCCP carrier.
2020-01-06	New network TADIG BRAPS added
2019-04-26	Comfone has been removed from SCCP carrier.
2018-11-26	International SCCP Gateway Update
2018-03-14	Add Comfone as backup carrier.
2014-02-13	SCCP MNOs TADIG codes updated
2013-10-09	SCCP connectivity information updated

**SCCP Protocol available at PMN for connection for International SS7 Roaming**

TADIG code: BRARN

Section ID: 7 (Optional)

Effective date of change: 2011-12-28

SCCP Protocol available at PMN	Availability (Yes / No)
ETSI (ITU):	Yes
ANSI:	No

**History of changes**

**SUBSCRIBER IDENTITY AUTHENTICATION**

TADIG code: BRARN

Section ID: 8 (Optional)

Effective date of change: 2011-12-28

<b>Authentications</b>	<b>Performed (Yes / No)</b>
<b>Authentication performed for Roaming subscribers at the commencement of GSM service</b>	Yes
<b>Authentication performed for roaming subscribers in case of GPRS</b>	Yes
<b>A5 Cipher Algorithm version in use</b>	

**History of changes**

**Test Numbers Information**

TADIG code: BRARN

Section ID: 9 (Optional)

Effective date of change: 2019-11-13

Number Type	Test Number	Location	Comments
AAC	5521981111199		
AAC	5521981211199		
AAC	5522981111199		
AAC	5523981111199		
AAC	5524981111199		
AAC	5528981111199		
AAC	5531991861199		
AAC	5531991931199		
AAC	5531993091199		
AAC	5532991931199		
AAC	5533991931199		
AAC	5534991931199		
AAC	5535991181199		
AAC	5535991931199		
AAC	5537991931199		
AAC	5538991931199		
AAC	5571991931199		
AAC	5573991931199		
AAC	5574991931199		
AAC	5574991951199		
AAC	5575991931199		
AAC	5577991931199		
AAC	5579991931199		
AAC	5581996181199		
AAC	5582999091199		
AAC	5583999031199		
AAC	5584999021199		
AAC	5585999211199		
AAC	5586999261199		
AAC	5587996341199		
AAC	5591981111199		
AAC	5592981111199		
AAC	5592981131199		
AAC	5592981251199		
AAC	5593981111199		
AAC	5593981131199		
AAC	5594981111199		
AAC	5594981131199		
AAC	5595981111199		
AAC	5595981131199		
AAC	5595981141199		
AAC	5595981151199		
AAC	5596981111199		
AAC	5596981131199		

Number Type	Test Number	Location	Comments
AAC	5597981111199		
AAC	5597981131199		
AAC	5598981111199		
AAC	5598981131199		
AAC	5599981111199		
AAC	5599981131199		

**History of changes**

Date	Description
2019-11-13	Test Numbers Updated
2017-01-17	Added 9th digit on test numbers.



**MOBILE APPLICATION PART (MAP)**

TADIG code: BRARN

Section ID: 10 (Optional)

Effective date of change: 2011-12-28

<b>Interworking specifically for roaming</b>				
<b>Application context name</b>	<b>Current version in</b>			<b>Comments</b>
	<b>Inbound roaming</b>		<b>Outbound roaming</b>	
	<b>MSC/VLR</b>	<b>SGSN</b>	<b>Outbound roaming</b>	
networkLocUp	MAPv3	N/A	MAPv3	
roamingNumberEnquiry	MAPv3	N/A	MAPv3	
InfoRetrieval	MAPv3	MAPv3	MAPv3	
subscribeDataMngt	-	-	-	
networkFunctionalSs	MAPv2	N/A	MAPv2	
mwdMngt	-	-	-	
shortMsgMT-Relay (called shortMsgRelay in v1)	MAPv2	-	MAPv2	
shortMsgMO-Relay (called shortMsgRelay in v1)	MAPv2	-	MAPv2	
ss-InvocationNotification	MAPv2	N/A	MAPv2	
subscriberInfoEnquiry	-	-	-	
gprsLocationUpdate	N/A	MAPv3	MAPv3	
locationCancellation	MAPv3	MAPv3	MAPv3	
msPurging	-	-	-	
reset	-	-	-	
networksUnstructuredSs	-	N/A	-	
reporting	-	N/A	-	
callCompletion	-	N/A	-	
istAlerting	-	N/A	-	
service Termination	-	N/A	-	
locationSvcGateway	N/A	N/A	-	
mm-EventReporting	-	N/A	-	
authenticationFailureReport	-	-	-	
imsiRetrieval	MAPv3	N/A	MAPv3	
gprsNotifyContext	N/A	-	-	
gprsLocationInfoRetrieval	N/A	-	-	
failureReport	N/A	-	-	
secureTransportHandling	MAPv2	MAPv2	MAPv2	

**History of changes**

**MAP Inter Operator SMS Enhancement**

TADIG code: BRARN

Section ID: 12 (Optional)

Effective date of change: 2011-12-28

<b>Inter - Operator SMS Enhancement</b>				
<b>Application context name</b>	<b>Current version in</b>			<b>Comments</b>
	<b>SMS - IWMSC</b>	<b>SMS - GMSC</b>	<b>HLR</b>	
shortMsgGateway	N/A	MAPv2	MAPv2	
shortMsgAlert	MAPv2	N/A	MAPv2	

**History of changes**

## NETWORK ELEMENTS INFORMATION

TADIG code: BRARN

Section ID: 13 (Optional)

Effective date of change: 2020-11-11

Node type	Node ID	GT address / Address range	IP address / Address range	IPv6 address / Address range	Vendor info	SW / HW version	UTC offset
HLR		55 21 82139900 / 82139999					-03:00
HLR		55 2181137505					-03:00
HLR		55 3193099703					-03:00
HLR		55 7191938501					-03:00
HLR		55 8199238231					-03:00
HLR		55 8199238300					-03:00
HLR		55 8199238601					-03:00
HLR		55 8599236401					-03:00
HLR		55 9181116901					-03:00
HLR		55 9182140000					-03:00
HLR		55 9281119500					-03:00
HSS		55 0022102011					-03:00
MME		55 2182139001					-03:00
MME		55 2182139002					-03:00
MSC/VLR		55 21 82139780 / 82139899					-03:00
MSC/VLR		55 21 82365600 / 82365777					-03:00
MSC/VLR		55 21 82365811 / 82365817					-03:00
MSC/VLR		55 2181137506					-03:00
MSC/VLR		55 2182139739					-03:00
MSC/VLR		55 2182365100					-03:00
MSC/VLR		55 2182368000					-03:00
MSC/VLR		55 2182740000					-03:00
MSC/VLR		55 2182745000					-03:00
MSC/VLR		55 3175450000					-03:00
MSC/VLR		55 3191930400					-03:00
MSC/VLR		55 3191930500					-03:00
MSC/VLR		55 3191938700					-03:00
MSC/VLR		55 7191930000					-03:00
MSC/VLR		55 7191931800					-03:00
MSC/VLR		55 7191939000					-03:00
MSC/VLR		55 8198761700					-03:00
MSC/VLR		55 8198762500					-03:00
MSC/VLR		55 8398190000					-03:00
MSC/VLR		55 8599230600					-03:00
MSC/VLR		55 8599235600					-03:00
MSC/VLR		55 9189020000					-03:00
MSC/VLR		55 9189100000					-03:00
MSC/VLR		55 9189518200					-03:00
MSC/VLR		55 9281116000					-03:00
MSC/VLR		55 9581148500					-03:00
MSC/VLR		55 9681228800					-03:00
MSC/VLR		55 9881119000					-03:00
SCP		55 2181138500					-03:00
SCP		55 2181138520					-03:00
SCP		55 2182138400					-03:00
SCP		55 2182138700					-03:00
SCP		55 2182139000					-03:00
SCP		55 3191934700					-03:00
SCP		55 3191934701					-03:00
SCP		55 7191938500					-03:00
SCP		55 8199232400					-03:00
SCP		55 8199232700					-03:00
SCP		55 8199235000					-03:00
SCP		55 8199236400					-03:00
SCP		55 8199238500					-03:00
SCP		55 9181117600					-03:00
SCP		55 9181117900					-03:00
SCP		55 9181760600					-03:00
SGSN	DMBHE1	55 3191934703	189.40.166.200		HUAWEI		-03:00
SGSN	DMBHE2	55 3191937000	189.40.168.201		HUAWEI		-03:00
SGSN	DMBLM1	55 9181116902	189.40.167.136		HUAWEI		-03:00

Node type	Node ID	GT address / Address range	IP address / Address range	IPv6 address / Address range	Vendor info	SW / HW version	UTC offset
SGSN	DMBLM2	55 9181116900	189.40.169.137		HUAWEI		-03:00
SGSN	DMMNS1	55 9281119502	189.40.166.235		HUAWEI		-03:00
SGSN	DMRCE1	55 8199238232	189.40.166.139		HUAWEI		-03:00
SGSN	DMRCE2	55 8199238400	189.40.168.138		HUAWEI		-03:00
SMSC		55 2181139407			Huawei		-03:00
SMSC		55 2183139914			Huawei		-03:00
SMSC		55 9181138200			Huawei		-03:00
SMSC		55 21 82138708 / 82138715					-03:00
SMSC		55 8199238201					-03:00
SMSC		55 81 99238204 / 99238205					-03:00
SMSC		55 2181136703					-03:00
SMSC		55 2181137507					-03:00
SMSC		55 2181137508					-03:00
SMSC		55 2181139401					-03:00
SMSC		55 2181139402					-03:00
SMSC		55 2182138704					-03:00
SMSC		55 2182138705					-03:00
SMSC		55 3191934710					-03:00
SMSC		55 3191934720					-03:00
SMSC		55 3191934730					-03:00
SGSN	DMRJO3	55 2182139001	189.40.172.11		HUAWEI		-03:00
SGSN	DMRJO4	55 2182139002	189.40.172.42		HUAWEI		-03:00
SGSN	DMSDR1	55 7191938503	189.40.167.202		HUAWEI		-03:00
SGSN	DMSDR2	55 7191938504	189.40.169.203		HUAWEI		-03:00
SGSN	DMFLA1	55 0028506101	189.40.96.33		HUAWEI		-03:00
SMSC		55 8199238202					-03:00
HLR		55 8599236402					-03:00
HLR		55 7191938505					-03:00
HLR		55 8599236403					-03:00
HLR		55 9881398700					-03:00
HLR		55 9881398701					-03:00
HLR		55 0022102003					-03:00
HLR		55 0023102005					-03:00
HLR		55 0027102006					-03:00
HLR		55 8899236403					-03:00
HLR		55 0022102001					-03:00
HLR		55 0027102005					-03:00
HLR		55 0029102004					-03:00
HLR		55 0028502002					-03:00
HSS		55 0022102201					-03:00
HSS		55 0022102200					-03:00
HSS		55 2181136714					-03:00
SCP		55 0028103001					-03:00
SCP		55 0027103001					-03:00
SCP		55 0022103001					-03:00
SCP		55 0029103001					-03:00
SCP		55 0023103001					-03:00
SCP		55 21 82139500 / 82139502					-03:00
SMSC		55 2183139915					-03:00
SMSC		55 2183139916					-03:00
SCP		55 0022103050					-03:00
SCP		55 0023103050					-03:00
HLR		55 0023102004					-03:00
MSC/VLR		55 0022101050					-03:00

### History of changes

Date	Description
2020-11-11	Deleted Duplicated GTs (550029102004, 550029102005 and 550029102006)
2020-11-11	New MSC/VLR GT added (550022101050)
2020-11-11	Deleted GTs (552181137200, 552181136702, 552181136705, 552181136705, 552181136713, 553193099701, 553193099702, 553193099704, 553193099705) due to HLRs deactivation;
2020-11-11	Deleted GT (553191937900) due to SCP deactivation;

Date	Description
2020-11-11	Deleted GT (558199238210) due to SMSC deactivation;
2020-07-16	New HLR elements (GTs 550022102001, 550022102003, 550023102004, 550023102005, 550027102005, 550027102006, 550028502002 and 550029102004) added.
2020-07-13	New SCP elements added.
2019-11-11	Network Elements Update
2019-11-11	Network Nodes Update
2019-04-26	New HLRs 550022102003, 550023102005, 550027102006.
2019-02-05	HLR GTs updated - 553193099704, 553193099705, 558599236403, 552181136713, 557191938505, 559881398700, 559881398701.
2018-12-11	Network Elements Update
2018-08-28	Update Network Elements
2018-08-28	SGSN update
2018-08-28	Removed duplicated SMSCs GTs
2018-08-28	SGSN IP Addresses update
2018-08-24	Removed Ericsson and Nokia's SGSN

**USSD Information**

TADIG code: BRARN

Section ID: 14 (Optional)

Effective date of change: 2011-12-28

<b>USSD capability available</b>	Yes
<b>Supported phase</b>	Phase 2

**History of changes**

**CAMEL INFO**

TADIG code: BRARN

Section ID: 15 (Conditional)

Effective date of change: 2011-12-28

**gsmSSF/MSC**

<b>CAP Version supported (Inbound)</b>	<b>CAP Version supported (Outbound)</b>
CAPv1 CAPv2 CAPv3	CAPv2

**CAPv4 Partial Implementations**

<b>CAMEL Phase 4 CSIs:</b>	<b>Supported (Yes / No)</b>	<b>Planned Date</b>
MT-SMS-CSI		
MG-CSI		
PSI Enhancements		

**History of changes**

**Packet Data Services Information**

TADIG code: BRARN

Section ID: 16 (Conditional)

Effective date of change: 2018-08-28

**List of APN Operator Identifiers**

APN Operator Identifier	Description	Example
mnc002.mcc724.gprs		

**List of APN's available for testing and troubleshooting**
**APN WEB List**

APN Credential			APN Type	ISP DNS IP address (primary)	ISP DNS IP address (secondary)
APN	Username	Password			
tim.br			H-APN		
timbrasil.br			H-APN		

**APN WAP List**

APN Credential			APN Type	WAP Gateway IP address	WAP Server URL	WAP Port ver 1	WAP Port ver 2
APN	Username	Password					
timbrasil.br			H-APN	189.40.191.95	http://wap.timbrasil.com.br	8080	9201 9203

**APN MMS List**

APN	APN Credential		WAP Gateway IP address for MMS	Messaging Server URL
	Username	Password		
timbrasil.br			189.40.191.96	http://mms.tim.br/servlets/mms/

**IPv6 Connectivity Information**

	IPv6 PDP Supported	IPv4v6 PDP Supported
SGSN Support	No	No
GGSN Support	No	No

**List of 2G/3G QOS profiles**

Profile name:	2G
Traffic class:	Interactive
ARP:	1
Evolved ARP support:	Yes
Evolved ARP priority level:	1
Evolved APR preemption vulnerability list:	
Evolved APR preemption capability list:	

**GTP Version**

SGSN	GTPv1
GGSN	GTPv1

**List of Data Service supported**

2G Data Services	Multislot Class Capability
GPRS	
EDGE	

3G Data Services	UE 3G Category
HSDPA	

**Multiple PDP Context Support**

Number of Primary PDP Context	4
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**History of changes**

Date	Description
2018-08-28	APN Type update



Date	Description
2017-11-30	MMS and WAP - APNs Update
2015-09-08	Data Update
2013-11-22	Section applicable for TADIG codes removed
2013-10-10	Added 2G/3G QOS profiles
2012-10-08	Added new APN (timbrasil.br)

**IP - Roaming and IP - Interworking Information**

TADIG code: BRARN

Section ID: 17 (Conditional)

Effective date of change: 2020-07-13

List of All IP address ranges used by PMN for connection to inter - PMN IP backbone	IP Address Range
	189.40.99.0/24
	189.40.96.0/23
	189.40.243.0/24
	189.40.242.0/25
	189.40.241.0/24
	189.40.240.0/24
	189.40.173.0/24
	189.40.172.0/24
	189.40.169.0/24
	189.40.168.0/24
	189.40.167.0/24
	189.40.166.0/24
	131.166.134.0/24
	131.166.136.0/24
	135.92.40.0/24
	135.92.41.0/24
	189.40.176.0/21
	189.40.98.0/23
	79.140.91.112/29

List of Autonomous System Number (ASN):	ASN
	64717
	22870
	6774

List of Autonomous System Number (ASN4B):	ASN4B
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List of PMN authoritative DNS server IP addresses and names		
IP address	IPv6 address	DNS Name
189.40.167.230		Primary
189.40.167.226		Secondary

List of GRX Providers	GRX Provider
	Telecom Italia Sparkle BICS SA

**History of changes**

Date	Description
2020-07-13	New IP address range added
2020-05-06	New IP address range added
2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
2020-03-24	IP address range Updated
2020-02-28	BICS Autonomous system number (ASN) has been added
2020-02-28	BICS SA has been added as GRX provider
2019-12-19	New IP range 189.40.176.0 / 21 added
2019-11-25	New IP range 135.92.41.1/32 added
2019-11-18	Update - IP ranges 135.92.40.16/29 and 135.92.41.16/29 were removed and New IP range 135.92.40.1/32 added.
2019-10-28	NEW IP Addresses ranges
2019-04-26	Comfone has been removed from GRX provider.
2018-10-10	Update - Connection to inter-PMN IP backbone
2018-10-10	Update - Autonomous system number (ASN)

<b>Date</b>	<b>Description</b>
2018-08-28	NEW IP Addresses ranges

**MMS Interworking Information**

TADIG code: BRARN

Section ID: 18 (Optional)

Effective date of change: 2011-12-28

**MMS Elements Data**

Domain name of MMSC	IP Address	Max. size of MMS allowed	Delivery Report allowed? (Yes / No)	Read Report allowed? (Yes / No)	IP address(es) of Incoming MTA	IP address(es) of Outgoing MTA
mms.mnc003.mcc724.gprs	189.40.240.0/26	1000	Yes	Yes	189.40.240.33	189.40.240.33

**List of MMS IW Hub Provider**

MMS IW Hub Provider Name	GT address(es)
Telecom Italia Sparkle	

**History of changes**

**LTE Roaming Information**

TADIG code: BRARN

Section ID: 20 (Optional)

Effective date of change: 2020-02-28

IPX Provider Name	IPX DA Realm Used	Diameter Architecture
TIS - Telecom Italia Sparkle (Main/First)	net2mobile.grx	
Primary IP address of DA	Secondary IP address of DA	
93.186.140.134	93.186.140.198	
IPX Provider Name	IPX DA Realm Used	Diameter Architecture
BICS SA (Backup/Second)	dra.bics.3gppnetwork.org	
Primary IP address of DA	Secondary IP address of DA	
94.102.166.168	94.102.166.184	
94.102.166.199	94.102.166.215	

**Roaming Interconnection**

EPC Realms For Roaming
epc.mnc002.mcc724.3gppnetwork.org

**FQDN Diameter Edge Agent**

FQDN	Primary IP Address DEA FQDN	Secondary IP Address DEA FQDN
nvrjo2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.182 186.230.181.178	186.230.181.190 186.230.181.186
nvsne2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.198 186.230.181.194	186.230.181.206 186.230.181.202

S6a Supported without IWF	S6a MAP IWF supported to HSS	S6a MAP IWF supported to MME
true	false	false
S6d used for legacy SGSN	S9 used for PCC	
false	false	

**SMS ITW**

SMS delivery over IP	SMS delivery over SGs
false	true

**Voice ITW**

CSFB

**Roaming CS Fallback**

Not Supported

LTE Roaming Agreement Only	LTE Only Roaming Supported	HPMN	VPMN
2G/3G Roaming Agreement Only	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	Yes
2G/3G/LTE Roaming Agreement	Scenario 1 Supported	Yes	Yes
	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	No
	Scenario 4 Supported	No	No
	Scenario 5 Supported	No	No
	Scenario 6 Supported	No	No

**List of LTE QOS profiles**

Profile name:	4G
QCI Value List:	9
QOS ARP List:	7
ARP Preemption Vulnerability List:	0
ARP Preemption Capability List:	0

**IPv6 Connectivity Information**

	IPv6 PDP Supported	IPv4v6 PDP Supported
MME Support	No	No
SGW Support	No	No
PGW Support	No	No

Information for Diameter certificates exchange	
Certificate of 1st IPsec gateway	No
Certificate of 2nd IPsec gateway	No
Operator roaming sub-CA certificate	No

5G early drop support		
	As HPMN	AS VPMN
5G NSA (non-standalone access) supported	No	No
DNS PGW NAPTR includes +nc-nr	No	No
NSA options for EN-DC		
ARD set to support of NR as secondary RAT	No	
Restrict NR access if HSS is not set to support NR as secondary RAT		No

#### History of changes

Date	Description
2020-02-28	BICS has been added as IPX provider
2019-04-26	Comfone and Tata have been removed from IPX carrier.
2019-04-26	TIS update.
2019-04-26	Diameter for roaming interconnection update.
2018-08-28	EPC realms of roaming interconnection update
2018-08-23	FQDN data updated
2018-03-14	New FQDN Diameter Edge Agent
2017-06-08	IPX interconnection information
2017-04-25	Sparkle added as IPX Backup/Second.
2017-04-18	TATA added as IPX carrier.
2016-10-28	LTE updates
2016-07-05	Added TATA as Diameter backup.
2016-05-20	Removed TATA as Diameter backup.
2016-05-02	Added Telecom Italia Sparkle as IPX Provider and TATA as Diameter backup.
2015-10-20	Removed two DREs inactives for roaming.
2015-09-08	LTE DATA updated
2015-07-03	FQDN Diameter Edge Agent list updated. ATTENTION - NDRJO2 and NDSNE2 won't be operational until the end of July.
2015-05-28	Roaming Interconnection information updated
2014-05-15	S6a Hostnames updated
2013-11-22	Added LTE information

**CONTACT INFORMATION**

TADIG code: BRARN

Section ID: 21 (Optional, Repeating)

Effective date of change: 2020-02-28

**List of Roaming Troubleshooting Contact Information****Roaming Troubleshooting Contact Information**

<b>Location</b>	Brazil		
<b>Office Time Zone in UTC</b>	-03:00		
<b>Office Hours</b>	<b>Week Day (s)</b>	<b>Start Time</b>	<b>End Time</b>
	Mon Tue Wed Thu Fri	09:00:00	18:00:00

**Main Contact for Troubleshooting (Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Escalation Contact for Troubleshooting**

Person Name	Tel.	Mobile	Fax	Email
Mr Cezar Serafini	+552141128996			cserafini@timbrasil.com.br

**24 x 7 Troubleshooting (contact out of Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Roaming Troubleshooting Ticketing System Information**

Ticket system web address

Ticket system email address

**Additional Contacts****SCCP Inquires and ordering of SS7 Routes**

Person Name	Tel.	Mobile	Fax
TIS Telecom Italia Sparkle	+3906321000		+390652744560
JobTitle	Email		
NOC - Network Operation Center	contactcenter.tis@telecomitaliasparkle.com		

**Roaming Coordinator**

Person Name	Tel.	Mobile	Fax
Mr Marcio Aragão	+552141128715	+5521981131102	
JobTitle	Email		
Roaming Specialist	maragao@timbrasil.com.br		

**IREG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**TADIG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**Other contact(s)**

Person Name	Tel.	Mobile	Fax
Ms Ana Carolina Fonseca	+552141127537		
JobTitle	Email		
Roaming Expert	afonseca@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Eduardo Bruno	+552141127903		
JobTitle	Email		
Roaming Expert	elopes@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr. Emerson Dos Santos	+558141075158		
JobTitle	Email		
	egrdsantos@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Fabricio Gonçalves	+552141125190		
JobTitle	Email		
Roaming Expert	fagoncalves@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Ms Carla Isadora Silva			

JobTitle		Email	
		cimdsilva@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Marcus Vinicius Ferreira	+552141127286		
JobTitle		Email	
Roaming Manager		mvferreira@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Mr. Michel Marinho		+5521981134544	
JobTitle		Email	
		mmarinho@timbrasil.com.br	

IR21 Distribution Email Address	Email
	roaming@timbrasil.com.br

#### History of changes

Date	Description
2020-02-28	Contacts list has been updated
2019-11-13	Contacts updated.
2019-11-13	Escalation contact updated.
2019-08-21	Contacts updated.
2019-08-21	Escalation contact.
2018-11-26	Contacts Updated
2018-10-10	Contacts Updated
2018-08-23	Contacts Updated



**SECTIONS NOT IN USE**

TADIG Code	Section ID	Section Name
BRARN	6	Domestic SCCP Gateway
BRARN	11	MAP Optimal Routing Section
BRARN	19	WLAN Information
BRARN	22	Hosted Networks
BRARN	23	M2M Roaming Information
BRARN	24	MVNO Information
BRARN	26	VoLTE Roaming Information Section
BRARN	27	LPWA Roaming Information Section

**NETWORK**

TADIG code: BRACS

Section ID: 2 (Mandatory, Repeating)

<b>TADIG code:</b>	BRACS
<b>Network type:</b>	Terrestrial
<b>Technology:</b>	<b>Frequency list:</b>
<b>2G-GSM frequencies:</b>	DCS 1800, GSM 900
<b>3G-UTRA/FDD frequencies:</b>	1 - IMT 2.1 GHz
<b>3G-UTRA/TDD frequencies:</b>	Unsupported
<b>4G-E-UTRAN frequencies:</b>	28 - 700 MHz APAC, 5 - 850 MHz, 1 - IMT 2.1 GHz, 3 - DCS 1800, 7 - 2.6 GHz
<b>4G-E-UTRAN-MIoT-LTE-M frequencies:</b>	Unsupported
<b>4G-E-UTRAN-MIoT-NB-IoT frequencies:</b>	28 - 700 MHz APAC
<b>MIoT-NB-IoT deployment modes:</b>	Unsupported
<b>Presentation of country initials and MNN:</b>	TIM BRA
<b>Abbreviated MNN:</b>	TIM

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**NETWORK INFORMATION**

TADIG code: BRACS

Section ID: 3 (Mandatory)

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The following information refer to the network identified by TADIG code BRACS

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**ROUTING INFORMATION**

TADIG code: BRACS

Section ID: 4 (Mandatory)

Effective date of change: 2020-11-11

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	41	995000000	995629999				
	55	41	995640000	999999999				
	55	42	998000000	998759999				
	55	42	999000000	999389999				
	55	42	999400000	999999999				
	55	43	981110000	981119999				
	55	43	996000000	996999999				
	55	43	998000000	998759999				
	55	43	999000000	999389999				
	55	43	999500000	999909999				
	55	44	996000000	996019999				
	55	44	997000000	997769999				
	55	44	998000000	999395999				
	55	44	999400000	999999999				
	55	45	998000000	998629999				
	55	45	999000000	999389999				
	55	45	999400000	999999999				
	55	46	999000000	999389999				
	55	46	999400000	999429999				
	55	46	999700000	999899999				
	55	47	996000000	997959999				
	55	47	999000000	999389999				
	55	47	999400000	999999999				
	55	48	996000000	996999999				
	55	48	998000000	998689999				
	55	48	999000000	999999999				
	55	49	998000000	998369999				
	55	49	998400000	998419999				
	55	49	999000000	999389999				
	55	49	999400000	999999999				
	55	51	981000000	983559999				
	55	51	983570000	983599999				
	55	53	981000000	981679999				
	55	53	999110000	999139999				
	55	53	999150000	999159999				
	55	53	999810000	999839999				
	55	53	999850000	999899999				
	55	54	981000000	981599999				
	55	54	981610000	981729999				
	55	55	981000000	981799999				
	55	61	981000000	983669999				

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	61	983690000	983859999				
	55	62	981000000	983469999				
	55	63	981000000	981599999				
	55	64	981000000	981809999				
	55	65	981000000	981659999				
	55	65	981670000	981759999				
	55	66	981000000	981589999				
	55	67	981000000	982249999				
	55	68	981000000	981159999				
	55	68	981170000	981249999				
	55	69	981000000	981729999				

<b>Network Nodes Global Title Number Range(s)</b>								
	55	41	95000000	95289999				
	55	41	97000000	97999999				
	55	41	99000000	99999999				
	55	44	99000000	99999999				
	55	47	99000000	99999999				
	55	48	96600000	96699999				
	55	48	99000000	99999999				
	55	51	81000000	81999999				
	55	51	83070000	83079999				
	55	53	81000000	81999999				
	55	61	81000000	81999999				
	55	62	81000000	81999999				
	55	004	00000000	99999999				

<b>MSRN Number Range(s)</b>								
	55	41	995049000	995049799				
	55	41	997390800	997391599				
	55	41	997510000	997510999				
	55	41	999132500	999132999				
	55	41	999134000	999134099				
	55	41	999139000	999139199				
	55	41	999139400	999139599				
	55	42	999133000	999133299				
	55	42	999133800	999134999				
	55	42	999138200	999138599				
	55	42	999138900	999139099				
	55	43	998219900	998219999				
	55	43	999133000	999133799				
	55	43	999134000	999134399				
	55	43	999138000	999138399				
	55	43	999138800	999139599				
	55	44	999133100	999133599				
	55	44	999134000	999134099				

MSRN Number Range(s)							
	55	44	999134300	999134599			
	55	44	999138100	999138799			
	55	44	999139000	999139499			
	55	45	999133000	999133599			
	55	45	999133700	999134999			
	55	45	999138000	999138699			
	55	45	999139500	999139599			
	55	46	999133000	999134999			
	55	46	999138100	999138199			
	55	46	999139000	999139399			
	55	47	999133100	999133799			
	55	47	999133900	999135999			
	55	47	999136900	999136999			
	55	47	999138200	999138399			
	55	47	999138500	999138899			
	55	48	996660000	996660199			
	55	48	996660300	996660899			
	55	48	998186000	998187899			
	55	48	999138100	999138799			
	55	49	999133500	999133999			
	55	49	999134400	999134899			
	55	49	999138000	999138499			
	55	49	999138700	999139199			
	55	49	999139400	999139599			
	55	51	981134000	981134399			
	55	51	981138000	981138699			
	55	51	983070000	983071799			
	55	53	981138000	981138999			
	55	54	981136000	981136599			
	55	54	981137400	981137799			
	55	54	981138700	981138799			
	55	54	981138900	981138999			
	55	55	981136000	981136299			
	55	55	981137100	981137699			
	55	55	981138700	981138999			
	55	61	981136000	981136199			
	55	61	981136300	981136599			
	55	61	981138700	981138999			
	55	61	983560000	983561399			
	55	61	983757100	983757499			
	55	62	981138000	981138699			
	55	62	981138800	981138999			
	55	62	982461800	982461999			
	55	62	982990000	982991399			
	55	63	981136000	981136599			
	55	63	981218000	981218799			
	55	63	981219500	981219999			

MSRN Number Range(s)							
	55	63	981290300	981290699			
	55	64	981100000	981100999			
	55	64	981136400	981136599			
	55	64	981138000	981138299			
	55	64	981139800	981139999			
	55	64	981239400	981239799			
	55	64	981600000	981600399			
	55	65	981136200	981136599			
	55	65	981137000	981137099			
	55	65	981137200	981137599			
	55	65	981137900	981137999			
	55	66	981090000	981090399			
	55	66	981090700	981090799			
	55	66	981136000	981136399			
	55	66	981136500	981136599			
	55	66	981137200	981137399			
	55	66	981137600	981137999			
	55	67	981136000	981136599			
	55	67	981137700	981137799			
	55	67	981138100	981138799			
	55	67	981200000	981200699			
	55	68	981136000	981136199			
	55	68	981137500	981138299			
	55	69	981136200	981136299			
	55	69	981136500	981136599			
	55	69	981137800	981138799			

E. 212 Number series	Mobile Country Code (MCC)	Mobile Network Code (MNC)
	724	04

E. 214 Mobile Global Title (MGT)	Country Code of MGT (CC)	Network Code of MGT (NC)
	55	004

Does Number Portability apply ?	Yes
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Is 15 Digit MSISDN Supported ?	No
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USIM SIM Header	895504
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Additional Information
The IMSI complies with the GSM 03.03 and ITU-T E.212 and has a fixed length of 15 digits.
Number portability was introduced on 01st September 2008. This means that TIM Brazil customers can have a MSISDN, which is taken from any Brazil mobile network NDC. In Brazil we have other six mobile companies: Claro, VIVO, Oi, CTBC, Sercomtel and Unicef.
TIM uses RAN Sharing on LTE in some places sharing E.212 72499.
The MSISDN complies with the GSM 03.03 and ITU-T E.164 and has a length of 13 digits.

#### History of changes

Date	Description
2020-11-11	MSISDN Number Ranges Updated

Date	Description
2020-07-13	MSRN Ranges massively updated.
2019-11-11	MSRN Number Range Updated
2019-11-11	MSISDN Number Range Updated
2018-08-24	MSRN 12 digits deleted
2018-08-23	Validation
2018-03-14	MSISDN range updated.
2017-04-18	Additional routing Information update.
2016-10-12	Added new ninth digit on MSISDN ranges to NDC 4x and 5x from November 6th, 2016.
2016-10-12	Added new ninth digit on MSRN ranges to NDC 4x and 5x from November 6th, 2016.
2016-05-02	For MSISDN Number Range and MSRN Number Range, please implement the new ranges (13 digits) and keep the old ones (12 digits) configured at your network until the end of August, 2016.
2016-05-02	MSRN Number Range Updated - ATENTION - The National Destination codes 61, 62, 63, 64, 65, 66, 67, 68 and 69 will have 13 digits on May 29th, 2016. The number "9" (nine) will be inserted before the SN range.
2016-05-02	MSISDN Number Range Updated - ATENTION - The National Destination codes 61, 62, 63, 64, 65, 66, 67, 68 and 69 will have 13 digits on May 29th, 2016. The number "9" (nine) will be inserted before the SN range.
2015-09-25	MSRN Number Range Updated
2015-09-25	MSISDN Number Range Updated
2015-05-28	MSISDN Number Range Updated
2015-05-28	MSRN Number Range Updated
2014-12-02	MSISDN Number Range Updated
2014-12-02	MSRN Number Range Updated
2014-09-22	MSRN Number Range Updated
2014-09-22	MSISDN Number Range Updated
2014-05-15	MSISDN Number Range Updated
2014-05-15	MSRN Number Range Updated
2014-02-13	MSRN Number Range Updated
2013-11-22	Added new Network Nodes Global Title Number Ranges (From 550040000000 to 550049999999)
2013-10-09	MSRN Number Range Updated
2013-08-20	MSRN Number Range Updated
2013-07-18	MSRN Number Range Updated



**INTERNATIONAL SCCP GATEWAY**

TADIG code: BRACS

Section ID: 5 (Optional)

Effective date of change: 2020-02-20

International SCCP carrier list	
<b>SCCP carrier name:</b>	Telecom Italia Sparkle
<b>Connectivity information:</b>	Primary
<b>MNO TADIG code list:</b>	BRACS, BRARN, BRASP, BRAPS
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.45.4
Comments:	
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.46.2
Comments:	
<b>SCCP carrier name:</b>	BICS
<b>Connectivity information:</b>	Backup
<b>Comments:</b>	BICS
<b>MNO TADIG code list:</b>	BRASP, BRARN, BRACS, BRAPS
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.5
Comments:	
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.6
Comments:	

**History of changes**

Date	Description
2020-02-20	BICS has been added as International SCCP carrier.
2020-01-06	New network TADIG BRAPS added
2019-04-26	Comfone has been removed from SCCP carrier.
2018-11-26	International SCCP Gateway Update
2018-03-14	Add Comfone as backup carrier
2014-02-13	SCCP MNOs TADIG codes updated
2013-10-09	SCCP connectivity information updated

**SCCP Protocol available at PMN for connection for International SS7 Roaming**

TADIG code: BRACS

Section ID: 7 (Optional)

Effective date of change: 2011-12-28

SCCP Protocol available at PMN	Availability (Yes / No)
ETSI (ITU):	Yes
ANSI:	No

**History of changes**

**SUBSCRIBER IDENTITY AUTHENTICATION**

TADIG code: BRACS

Section ID: 8 (Optional)

Effective date of change: 2011-12-28

<b>Authentications</b>	<b>Performed (Yes / No)</b>
<b>Authentication performed for Roaming subscribers at the commencement of GSM service</b>	Yes
<b>Authentication performed for roaming subscribers in case of GPRS</b>	Yes
<b>A5 Cipher Algorithm version in use</b>	

**History of changes**

### Test Numbers Information

TADIG code: BRACS

Section ID: 9 (Optional)

Effective date of change: 2019-11-13

Number Type	Test Number	Location	Comments
AAC	5541999221199		
AAC	5542999131199		
AAC	5543999131199		
AAC	5544999131199		
AAC	5545999131199		
AAC	5546999131199		
AAC	5547999131199		
AAC	5547999211199		
AAC	5549999131199		
AAC	5551981111199		
AAC	5553981111199		
AAC	5554981111199		
AAC	5555981111199		
AAC	5561981111199		
AAC	5562981121199		
AAC	5563981131199		
AAC	5563981211199		
AAC	5564981131199		
AAC	5564981141199		
AAC	5564981231199		
AAC	5565981131199		
AAC	5565981151199		
AAC	5566981131199		
AAC	5567981131199		
AAC	5567981171199		
AAC	5568981111199		
AAC	5568981131199		
AAC	5569981131199		
AAC	5569981191199		

### History of changes

Date	Description
2019-11-11	Test Numbers Updated
2017-01-17	Added 9th digit on test numbers.
2013-04-01	Removed duplicated AAC test number (556981191199)

**MOBILE APPLICATION PART (MAP)**

TADIG code: BRACS

Section ID: 10 (Optional)

Effective date of change: 2011-12-28

<b>Interworking specifically for roaming</b>				
<b>Application context name</b>	<b>Current version in</b>			<b>Comments</b>
	<b>Inbound roaming</b>		<b>Outbound roaming</b>	
	<b>MSC/VLR</b>	<b>SGSN</b>	<b>Outbound roaming</b>	
networkLocUp	MAPv3	N/A	MAPv3	
roamingNumberEnquiry	MAPv3	N/A	MAPv3	
InfoRetrieval	MAPv3	MAPv3	MAPv3	
subscribeDataMngt	-	-	-	
networkFunctionalSs	MAPv2	N/A	MAPv2	
mwdMngt	-	-	-	
shortMsgMT-Relay (called shortMsgRelay in v1)	MAPv2	-	MAPv2	
shortMsgMO-Relay (called shortMsgRelay in v1)	MAPv2	-	MAPv2	
ss-InvocationNotification	MAPv2	N/A	MAPv2	
subscriberInfoEnquiry	-	-	-	
gprsLocationUpdate	N/A	MAPv3	MAPv3	
locationCancellation	MAPv3	MAPv3	MAPv3	
msPurging	-	-	-	
reset	-	-	-	
networksUnstructuredSs	-	N/A	-	
reporting	-	N/A	-	
callCompletion	-	N/A	-	
istAlerting	-	N/A	-	
service Termination	-	N/A	-	
locationSvcGateway	N/A	N/A	-	
mm-EventReporting	-	N/A	-	
authenticationFailureReport	-	-	-	
imsiRetrieval	MAPv3	N/A	MAPv3	
gprsNotifyContext	N/A	-	-	
gprsLocationInfoRetrieval	N/A	-	-	
failureReport	N/A	-	-	
secureTransportHandling	MAPv2	MAPv2	MAPv2	

**History of changes**

**MAP Inter Operator SMS Enhancement**

TADIG code: BRACS

Section ID: 12 (Optional)

Effective date of change: 2011-12-28

**Inter - Operator SMS Enhancement**

Application context name	Current version in			Comments
	SMS - IWMSC	SMS - GMSC	HLR	
shortMsgGateway	N/A	MAPv2	MAPv2	
shortMsgAlert	MAPv2	N/A	MAPv2	

**History of changes**

## NETWORK ELEMENTS INFORMATION

TADIG code: BRACS

Section ID: 13 (Optional)

Effective date of change: 2020-11-11

Node type	Node ID	GT address / Address range	IP address / Address range	IPv6 address / Address range	Vendor info	SW / HW version	UTC offset
HLR		55 4199138100					-03:00
HLR		55 0046102003					-03:00
HLR		55 0044102006					-03:00
MSC/VLR		55 4195049000					-03:00
MSC/VLR		55 4197390800					-03:00
MSC/VLR		55 4199132500					-03:00
MSC/VLR		55 4799133900					-03:00
MSC/VLR		55 4896660000					-03:00
MSC/VLR		55 5181138600					-03:00
MSC/VLR		55 5183070000					-03:00
MSC/VLR		55 6181136000					-03:00
MSC/VLR		55 6181138800					-03:00
MSC/VLR		55 6281138800					-03:00
SCP		55 4199139597					-03:00
SCP		55 4199139598					-03:00
SCP		55 6181136203					-03:00
SCP		55 6181138501					-03:00
SGSN	DMBSA1	55 6181136204	189.40.166.168/32		HUAWEI		-03:00
SGSN	DMBSA2	55 6181138000	189.40.168.168/32		HUAWEI		-03:00
SMSC		55 419913 9504 / 9505					-03:00
SMSC		55 4199138901					-03:00
SMSC		55 4199138902					-03:00
SMSC		55 4199138903					-03:00
SMSC		55 4199138904					-03:00
SMSC		55 4199138905					-03:00
SMSC		55 4199138906					-03:00
SMSC		55 4199139501					-03:00
SMSC		55 4199139502					-03:00
SMSC		55 5381136200					-03:00
SMSC		55 6181138200			Huawei		-03:00
SMSC		55 6181138210					-03:00
SMSC		55 6181138220					-03:00
SMSC		55 6181138230					-03:00
SGSN	DMCTA1	55 4199138908	189.40.167.168/32		HUAWEI		-03:00
SGSN	DMCTA2	55 4199138400	189.40.169.168/32		HUAWEI		-03:00
HLR		55 6281136300					-03:00
HSS		55 0044102201					-03:00
HSS		55 0044102202					-03:00
SCP		55 0044103001					-03:00
SCP		55 0046103001					-03:00
SCP		55 0046103050					-03:00

### History of changes

Date	Description
2020-11-11	Deleted GTs (556181136100, 554199138100, 554199135001, 554199138907, 554899138100, 554899133100, 554899134800) due to HLRs deactivation;
2020-11-11	Deleted GTs (554199136200, 554199138200, 554199138210, 554199138220, 554199138230, 555181136200, 555181136210, 555181136220, 555181136230) due to SMSCs deactivation;
2020-11-11	Deleted GTs (554195049800, 554195049800, 554195049800, 554195049800) due to MSCs/VLRs deactivation;
2020-11-11	Deleted GTs (556181138500, 554199134000) due to SCPs deactivation;
2020-07-16	New HLR elements (GTs 550046102003 and 550044102006) added.
2020-07-13	New SCP element added
2019-11-11	Network Elements Updated
2019-02-05	HLR GTs updated - 554899133100, 554899134800, 556281136300
2018-08-28	Update Network Elements

Date	Description
2018-08-28	SGSN update
2018-08-28	Network Elements - Update
2017-01-18	New SMSC updated
2015-05-28	Network Element list reviewed
2014-12-02	New Network Element for SGSN (554199138908 and 556181136204)
2014-09-22	New Network Element for SMSC (554199138901)
2014-05-14	New Network Element for SMSC (554199138902, 554199138903, 554199138904, 554199138905, 554199138906)
2014-02-13	New Network Element for HLR (554199138907) / New Network Element for SMSC (551181134029, 551181138201, 551181138202 and 551183134001)
2013-07-18	Removed Network Element for MSC/VLR (554199138000, 554499138000, 554899138000, 556181138000 and 556281138000).



**USSD Information**

TADIG code: BRACS

Section ID: 14 (Optional)

Effective date of change: 2011-12-28

<b>USSD capability available</b>	Yes
<b>Supported phase</b>	Phase 2

**History of changes**

**CAMEL INFO**

TADIG code: BRACS

Section ID: 15 (Conditional)

Effective date of change: 2011-12-28

**gsmSSF/MSC**

<b>CAP Version supported (Inbound)</b>	<b>CAP Version supported (Outbound)</b>
CAPv1 CAPv2 CAPv3	CAPv2

**CAPv4 Partial Implementations**

<b>CAMEL Phase 4 CSIs:</b>	<b>Supported (Yes / No)</b>	<b>Planned Date</b>
MT-SMS-CSI		
MG-CSI		
PSI Enhancements		

**History of changes**

**Packet Data Services Information**

TADIG code: BRACS

Section ID: 16 (Conditional)

Effective date of change: 2018-08-24

**List of APN Operator Identifiers**

APN Operator Identifier	Description	Example
mnc004.mcc724.gprs		

**List of APN's available for testing and troubleshooting**
**APN WEB List**

APN Credential			APN Type	ISP DNS IP address (primary)	ISP DNS IP address (secondary)
APN	Username	Password			
tim.br	tim	tim	H-APN		
timbrasil.br			H-APN		

**APN WAP List**

APN Credential			APN Type	WAP Gateway IP address	WAP Server URL	WAP Port ver 1	WAP Port ver 2
APN	Username	Password					
timbrasil.br			H-APN	189.40.191.95	http://wap.timbrasil.com.br	8080	9201 9203

**APN MMS List**

APN	APN Credential		WAP Gateway IP address for MMS	Messaging Server URL
	Username	Password		
timbrasil.br			189.40.191.96	http://mms.tim.br/servlets/mms/

**IPv6 Connectivity Information**

	IPv6 PDP Supported	IPv4v6 PDP Supported
SGSN Support	No	No
GGSN Support	No	No

**List of 2G/3G QOS profiles**

Profile name:	2G
Traffic class:	Interactive
ARP:	1
Evolved ARP support:	Yes
Evolved ARP priority level:	1
Evolved APR preemption vulnerability list:	
Evolved APR preemption capability list:	

**GTP Version**

SGSN	GTPv1
GGSN	GTPv1

**List of Data Service supported**

2G Data Services	Multislot Class Capability
GPRS	
EDGE	

3G Data Services	UE 3G Category
HSDPA	

**Multiple PDP Context Support**

Number of Primary PDP Context	4
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**History of changes**

Date	Description
2017-11-30	MMS and WAP - APNs Update

Date	Description
2013-11-22	Section applicable for TADIG codes removed
2013-10-10	Added 2G/3G QOS profiles
2012-10-08	Added new APN (timbrasil.br)

**IP - Roaming and IP - Interworking Information**

TADIG code: BRACS

Section ID: 17 (Conditional)

Effective date of change: 2020-07-13

List of All IP address ranges used by PMN for connection to inter - PMN IP backbone	IP Address Range
	189.40.99.0/24
	189.40.96.0/23
	189.40.243.0/24
	189.40.242.0/25
	189.40.241.0/24
	189.40.240.0/24
	189.40.173.0/24
	189.40.172.0/24
	189.40.169.0/24
	189.40.168.0/24
	189.40.167.0/24
	189.40.166.0/24
	131.166.134.0/24
	131.166.136.0/24
	135.92.40.0/24
	135.92.41.0/24
	189.40.176.0/21
	189.40.98.0/23
	79.140.91.112/29

List of Autonomous System Number (ASN):	ASN
	64717
	22870
	6774

List of Autonomous System Number (ASN4B):	ASN4B
---	-------

List of PMN authoritative DNS server IP addresses and names		
IP address	IPv6 address	DNS Name
189.40.167.230		Primary
189.40.167.226		Secondary

List of GRX Providers	GRX Provider
	Telecom Italia Sparkle BICS SA

**History of changes**

Date	Description
2020-07-13	New IP address range added
2020-05-06	New IP address range added
2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
2020-03-24	IP address range Updated
2020-02-28	BICS Autonomous system number (ASN) has been added
2020-02-28	BICS SA has been added as GRX provider
2019-12-19	New IP range 189.40.176.0 / 21 added
2019-11-25	New IP range 135.92.41.1/32 added
2019-11-18	Update - IP ranges 135.92.40.16/29 and 135.92.41.16/29 were removed and New IP range 135.92.40.1/32 added.
2019-10-28	NEW IP Addresses ranges
2019-04-26	Comfone has been removed from GRX provider.
2018-10-10	Update - Connection to inter-PMN IP backbone
2018-10-10	Update - Autonomous system number (ASN)

<b>Date</b>	<b>Description</b>
2018-08-28	NEW IP Addresses ranges

**MMS Interworking Information**

TADIG code: BRACS

Section ID: 18 (Optional)

Effective date of change: 2011-12-28

**MMS Elements Data**

Domain name of MMSC	IP Address	Max. size of MMS allowed	Delivery Report allowed? (Yes / No)	Read Report allowed? (Yes / No)	IP address(es) of Incoming MTA	IP address(es) of Outgoing MTA
mms.mnc003.mcc724.gprs	189.40.240.0/26	1000	Yes	Yes	189.40.240.33	189.40.240.33

**List of MMS IW Hub Provider**

MMS IW Hub Provider Name	GT address(es)
Telecom Italia Sparkle	

**History of changes**

**LTE Roaming Information**

TADIG code: BRACS

Section ID: 20 (Optional)

Effective date of change: 2020-10-05

IPX Provider Name	IPX DA Realm Used	Diameter Architecture
TIS - Telecom Italia Sparkle (Main/First)	net2mobile.grx	
Primary IP address of DA	Secondary IP address of DA	
93.186.140.134	93.186.140.198	
IPX Provider Name	IPX DA Realm Used	Diameter Architecture
BICS SA (Backup/Second)	dra.bics.3gppnetwork.org	
Primary IP address of DA	Secondary IP address of DA	
94.102.166.168	94.102.166.184	
94.102.166.199	94.102.166.215	

**Roaming Interconnection**

EPC Realms For Roaming
epc.mnc004.mcc724.3gppnetwork.org

**FQDN Diameter Edge Agent**

FQDN	Primary IP Address DEA FQDN	Secondary IP Address DEA FQDN
nvrjo2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.182 186.230.181.178	186.230.181.190 186.230.181.186
nvsne2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.198 186.230.181.194	186.230.181.206 186.230.181.202

S6a Supported without IWF	S6a MAP IWF supported to HSS	S6a MAP IWF supported to MME
true	false	false
S6d used for legacy SGSN	S9 used for PCC	
false	false	

**SMS ITW**

SMS delivery over IP	SMS delivery over SGs
false	true

**Voice ITW**

CSFB

**Roaming CS Fallback**

Not Supported

LTE Roaming Agreement Only	LTE Only Roaming Supported	HPMN	VPMN
2G/3G Roaming Agreement Only	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	Yes
2G/3G/LTE Roaming Agreement	Scenario 1 Supported	Yes	Yes
	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	No
	Scenario 4 Supported	No	No
	Scenario 5 Supported	No	No
	Scenario 6 Supported	No	No

**List of LTE QOS profiles**

Profile name:	4G
QCI Value List:	9
QOS ARP List:	7
ARP Preemption Vulnerability List:	0
ARP Preemption Capability List:	0

**IPv6 Connectivity Information**

	IPv6 PDP Supported	IPv4v6 PDP Supported
MME Support	No	No
SGW Support	No	No
PGW Support	No	No



**Information for Diameter certificates exchange**
**5G early drop support**

	As HPMN	AS VPMN
<b>5G NSA (non-standalone access) supported</b>	No	No
<b>DNS PGW NAPTR includes +nc-nr</b>	No	No
<b>NSA options for EN-DC</b>		
<b>ARD set to support of NR as secondary RAT</b>	No	
<b>Restrict NR access if HSS is not set to support NR as secondary RAT</b>		No

**History of changes**

Date	Description
2020-10-05	EPC realms of roaming interconnection updated
2020-02-28	BICS has been added as IPX provider
2019-04-26	Comfone and Tata have been removed from IPX carrier.
2019-04-26	TIS update
2019-04-26	Diameter for roaming interconnection update.
2018-08-28	EPC realms of roaming interconnection update
2018-08-23	FQDN data updated
2018-03-14	New FQDN Diameter Edge Agent
2017-06-08	IPX interconnection information
2017-04-25	Sparkle added as IPX Backup/Second.
2017-04-18	TATA added as IPX Carrier.
2016-07-29	Realm updated.
2016-07-05	Added TATA as Diameter backup.
2016-05-20	Removed TATA as Diameter backup.
2016-05-02	Added Telecom Italia Sparkle as IPX Provider and TATA as Diameter backup.
2015-10-20	Removed two DREs not active for roaming.
2015-09-08	LTE DATA updated
2015-07-03	FQDN Diameter Edge Agent list updated. ATTENTION - NDRJO2 and NDSNE2 won't be operational until the end of July.
2015-05-28	Roaming Interconnection information updated
2014-05-15	S6a Hostnames updated
2013-11-22	LTE Information added

**CONTACT INFORMATION**

TADIG code: BRACS

Section ID: 21 (Optional, Repeating)

Effective date of change: 2020-02-28

**List of Roaming Troubleshooting Contact Information****Roaming Troubleshooting Contact Information**

<b>Location</b>	Brazil		
<b>Office Time Zone in UTC</b>	-03:00		
<b>Office Hours</b>	<b>Week Day (s)</b>	<b>Start Time</b>	<b>End Time</b>
	Mon Tue Wed Thu Fri	09:00:00	18:00:00

**Main Contact for Troubleshooting (Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Escalation Contact for Troubleshooting**

Person Name	Tel.	Mobile	Fax	Email
Mr Cezar Serafini	+552141128996			cserafini@timbrasil.com.br

**24 x 7 Troubleshooting (contact out of Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Roaming Troubleshooting Ticketing System Information**

Ticket system web address

Ticket system email address

**Additional Contacts****SCCP Inquires and ordering of SS7 Routes**

Person Name	Tel.	Mobile	Fax
TIS Telecom Italia Sparkle	+3906321000		+390652744560
JobTitle	Email		
NOC - Network Operation Center	contactcenter.tis@telecomitaliasparkle.com		

**Roaming Coordinator**

Person Name	Tel.	Mobile	Fax
Mr Marcio Aragão	+552141128715	+5521981131102	
JobTitle	Email		
Roaming Specialist	maragao@timbrasil.com.br		

**IREG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**TADIG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**Other contact(s)**

Person Name	Tel.	Mobile	Fax
Ms Ana Carolina Fonseca	+552141127537		
JobTitle	Email		
Roaming Expert	afonseca@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Eduardo Bruno	+552141127903		
JobTitle	Email		
Roaming Expert	elopes@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr. Emerson Dos Santos	+558141075158		
JobTitle	Email		
	egrdsantos@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Fabricio Gonçalves	+552141125190		
JobTitle	Email		
Roaming Expert	fagoncalves@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Ms Carla Isadora Silva			

JobTitle		Email	
		cimdsilva@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Marcus Vinicius Ferreira	+552141127286		
JobTitle		Email	
Roaming Manager		mvferreira@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Mr. Michel Marinho		+5521981134544	
JobTitle		Email	
		mmarinho@timbrasil.com.br	

IR21 Distribution Email Address	Email
	roaming@timbrasil.com.br

#### History of changes

Date	Description
2020-02-28	Contacts list has been updated
2019-11-13	Escalation contact updated.
2019-11-11	Contacts updated.
2019-08-21	Contacts updated.
2019-08-21	Escalation contact.
2018-10-10	Contacts Update
2018-08-23	Contacts Update
2018-03-14	Contacts Update

**SECTIONS NOT IN USE**

TADIG Code	Section ID	Section Name
BRACS	6	Domestic SCCP Gateway
BRACS	11	MAP Optimal Routing Section
BRACS	19	WLAN Information
BRACS	22	Hosted Networks
BRACS	23	M2M Roaming Information
BRACS	24	MVNO Information
BRACS	26	VoLTE Roaming Information Section
BRACS	27	LPWA Roaming Information Section

**NETWORK**

TADIG code: BRAPS

Section ID: 2 (Mandatory, Repeating)

<b>TADIG code:</b>	BRAPS
<b>Network type:</b>	Terrestrial
<b>Technology:</b>	<b>Frequency list:</b>
<b>2G-GSM frequencies:</b>	GSM 900, DCS 1800
<b>3G-UTRA/FDD frequencies:</b>	1 - IMT 2.1 GHz
<b>3G-UTRA/TDD frequencies:</b>	Unsupported
<b>4G-E-UTRAN frequencies:</b>	28 - 700 MHz APAC, 5 - 850 MHz, 3 - DCS 1800, 1 - IMT 2.1 GHz, 7 - 2.6 GHz
<b>4G-E-UTRAN-MIoT-LTE-M frequencies:</b>	Unsupported
<b>4G-E-UTRAN-MIoT-NB-IoT frequencies:</b>	28 - 700 MHz APAC
<b>MIoT-NB-IoT deployment modes:</b>	Unsupported
<b>Presentation of country initials and MNN:</b>	TIM BRA
<b>Abbreviated MNN:</b>	TIM

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**NETWORK INFORMATION**

TADIG code: BRAPS

Section ID: 3 (Mandatory)

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The following information refer to the network identified by TADIG code BRAPS

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**ROUTING INFORMATION**

TADIG code: BRAPS

Section ID: 4 (Mandatory)

Effective date of change: 2020-11-06

CCITT E.164 Number series	Country Code (CC)	National Destination Code (NDC)	SN Range Start	SN Range Stop	Primary International DPC	Secondary International DPC	MVNO Number	Location
<b>MSISDN number ranges (s)</b>								
	55	11	938000000	938109999				
	55	11	950000000	950099999				
	55	11	950150000	950199999				
	55	11	953270000	953289999				
	55	12	966660000	966669999				
	55	12	976000000	976009999				
	55	12	976020000	976069999				
	55	13	955380000	955519999				
	55	13	976000000	976009999				
	55	13	976030000	976059999				
	55	14	976000000	976009999				
	55	14	976020000	976049999				
	55	15	976000000	976009999				
	55	15	976020000	976049999				
	55	16	976000000	976009999				
	55	16	976020000	976049999				
	55	17	976000000	976009999				
	55	17	976020000	976049999				
	55	18	976000000	976009999				
	55	18	976020000	976049999				
	55	19	953210000	953349999				
	55	19	960110000	960119999				
	55	19	976000000	976009999				
	55	21	960110000	960119999				
	55	21	960140000	960219999				

<b>Network Nodes Global Title Number Range(s)</b>								
	55	11	81000000	81999999				
	55	11	84000000	84999999				
	55	21	81000000	81999999				
	55	31	93000000	93999999				
	55	41	99000000	99999999				
	55	48	99000000	99999999				
	55	61	81000000	81999999				
	55	62	81000000	81999999				
	55	71	91000000	91999999				
	55	81	99000000	99999999				
	55	85	99000000	99999999				
	55	91	81000000	81999999				
	55	91	82000000	82999999				
	55	92	81000000	81999999				
	55	98	81000000	81999999				

Network Nodes Global Title Number Range(s)							
	55	054	0000000	9999999			

E. 212 Number series	Mobile Country Code (MCC)	Mobile Network Code (MNC)
	724	54

E. 214 Mobile Global Title (MGT)	Country Code of MGT (CC)	Network Code of MGT (NC)
	55	054

Does Number Portability apply ?	Yes
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Is 15 Digit MSISDN Supported ?	No
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USIM SIM Header	895554
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Additional Information
The IMSI complies with the GSM 03.03 and ITU-T E.212 and has a fixed length of 15 digits.
The MSISDN complies with the GSM 03.03 and ITU-T E.164 has a length of 13 digits.
Number portability was introduced on 01st September 2008. This means that TIM Brazil customers can have a MSISDN, which is taken from TIM uses RAN Sharing on LTE in some places sharing E.212 72499.

#### History of changes

Date	Description
2020-11-06	New Network Node added
2020-01-07	New BRAPS network information added
2020-01-07	New BRAPS Network Nodes GT Number Ranges added



**INTERNATIONAL SCCP GATEWAY**

TADIG code: BRAPS

Section ID: 5 (Optional)

Effective date of change: 2020-02-20

International SCCP carrier list	
<b>SCCP carrier name:</b>	Telecom Italia Sparkle
<b>Connectivity information:</b>	Primary
<b>Comments:</b>	Telecom Italia Sparkle
<b>MNO TADIG code list:</b>	BRASP, BRARN, BRACS, BRAPS
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.45.4
Comments:	
<b>DPC info:</b>	
Signature:	Telecom Italia Sparkle
Type:	Stand-alone ISC
International DPC:	2.46.2
Comments:	
<b>SCCP carrier name:</b>	BICS
<b>Connectivity information:</b>	Backup
<b>Comments:</b>	BICS
<b>MNO TADIG code list:</b>	BRASP, BRARN, BRACS, BRAPS
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.5
Comments:	
<b>DPC info:</b>	
Signature:	BICS
Type:	Stand-alone ISC
International DPC:	3.181.6
Comments:	

**History of changes**

Date	Description
2020-02-20	BICS has been added as International SCCP carrier.
2020-01-06	New network TADIG BRAPS added

**SCCP Protocol available at PMN for connection for International SS7 Roaming**

TADIG code: BRAPS

Section ID: 7 (Optional)

Effective date of change: 2020-01-06

SCCP Protocol available at PMN	Availability (Yes / No)
ETSI (ITU):	Yes
ANSI:	No

**History of changes**

Date	Description
2020-01-06	New network BRAPS information added

**SUBSCRIBER IDENTITY AUTHENTICATION**

TADIG code: BRAPS

Section ID: 8 (Optional)

Effective date of change: 2020-01-06

<b>Authentications</b>	<b>Performed (Yes / No)</b>
<b>Authentication performed for Roaming subscribers at the commencement of GSM service</b>	Yes
<b>Authentication performed for roaming subscribers in case of GPRS</b>	Yes
<b>A5 Cipher Algorithm version in use</b>	

**History of changes**

<b>Date</b>	<b>Description</b>
2020-01-06	New network BRAPS information added

**MOBILE APPLICATION PART (MAP)**

TADIG code: BRAPS

Section ID: 10 (Optional)

Effective date of change: 2020-01-06

<b>Interworking specifically for roaming</b>				<b>Comments</b>
<b>Application context name</b>	<b>Current version in</b>			
	<b>Inbound roaming</b>		<b>Outbound roaming</b>	
	<b>MSC/VLR</b>	<b>SGSN</b>	<b>Outbound roaming</b>	
networkLocUp	-	N/A	MAPv3	
roamingNumberEnquiry	-	N/A	MAPv3	
InfoRetrieval	-	-	MAPv3	
subscribeDataMngt	-	-	-	
networkFunctionalSs	-	N/A	MAPv2	
mwdMngt	-	-	-	
shortMsgMT-Relay (called shortMsgRelay in v1)	-	-	MAPv2	
shortMsgMO-Relay (called shortMsgRelay in v1)	-	-	MAPv2	
ss-InvocationNotification	-	N/A	MAPv2	
subscriberInfoEnquiry	-	-	-	
gprsLocationUpdate	N/A	-	MAPv3	
locationCancellation	-	-	MAPv3	
msPurging	-	-	-	
reset	-	-	-	
networksUnstructuredSs	-	N/A	-	
reporting	-	N/A	-	
callCompletion	-	N/A	-	
istAlerting	-	N/A	-	
service Termination	-	N/A	-	
locationSvcGateway	N/A	N/A	-	
mm-EventReporting	-	N/A	-	
authenticationFailureReport	-	-	-	
imsiRetrieval	-	N/A	MAPv3	
gprsNotifyContext	N/A	-	-	
gprsLocationInfoRetrieval	N/A	-	-	
failureReport	N/A	-	-	
secureTransportHandling	-	-	MAPv2	

**History of changes**

<b>Date</b>	<b>Description</b>
2020-01-06	New network BRAPS information added

**MAP Inter Operator SMS Enhancement**

TADIG code: BRAPS

Section ID: 12 (Optional)

Effective date of change: 2020-01-06

**Inter - Operator SMS Enhancement**

Application context name	Current version in			Comments
	SMS - IWMSC	SMS - GMSC	HLR	
shortMsgGateway	N/A	MAPv2	MAPv2	
shortMsgAlert	MAPv2	N/A	MAPv2	

**History of changes**

Date	Description
2020-01-06	New network BRAPS information added

**NETWORK ELEMENTS INFORMATION**

TADIG code: BRAPS

Section ID: 13 (Optional)

Effective date of change: 2020-11-06

<b>Node type</b>	<b>Node ID</b>	<b>GT address / Address range</b>	<b>IP address / Address range</b>	<b>IPv6 address / Address range</b>	<b>Vendor info</b>	<b>SW / HW version</b>	<b>UTC offset</b>
SMSC		55 0541107000					-03:00

**History of changes**

<b>Date</b>	<b>Description</b>
2020-11-06	New SMSC added

**USSD Information**

TADIG code: BRAPS

Section ID: 14 (Optional)

Effective date of change: 2020-01-06

<b>USSD capability available</b>	Yes
<b>Supported phase</b>	Phase 2

**History of changes**

<b>Date</b>	<b>Description</b>
2020-01-06	New network BRAPS information added

**CAMEL INFO**

TADIG code: BRAPS

Section ID: 15 (Conditional)

Effective date of change: 2020-01-06

<b>gsmSSF/MSC</b>	
<b>CAP Version supported (Inbound)</b>	<b>CAP Version supported (Outbound)</b>
	CAPv2

**CAPv4 Partial Implementations**

<b>CAMEL Phase 4 CSIs:</b>	<b>Supported (Yes / No)</b>	<b>Planned Date</b>
<b>MT-SMS-CSI</b>		
<b>MG-CSI</b>		
<b>PSI Enhancements</b>		

**History of changes**

<b>Date</b>	<b>Description</b>
2020-01-06	New network BRAPS information added



**IP - Roaming and IP - Interworking Information**

TADIG code: BRAPS

Section ID: 17 (Conditional)

Effective date of change: 2020-07-13

List of All IP address ranges used by PMN for connection to inter - PMN IP backbone	IP Address Range
	189.40.99.0/24
	189.40.96.0/23
	189.40.243.0/24
	189.40.242.0/25
	189.40.241.0/24
	189.40.240.0/24
	189.40.173.0/24
	189.40.172.0/24
	189.40.169.0/24
	189.40.168.0/24
	189.40.167.0/24
	189.40.166.0/24
	131.166.134.0/24
	131.166.136.0/24
	135.92.40.0/24
	135.92.41.0/24
	189.40.176.0/21
	189.40.98.0/23
	79.140.91.112/29

List of Autonomous System Number (ASN):	ASN
	64717
	22870
	6774

List of Autonomous System Number (ASN4B):	ASN4B
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List of PMN authoritative DNS server IP addresses and names		
IP address	IPv6 address	DNS Name
189.40.167.230		Primary
189.40.167.226		Secondary

List of GRX Providers	GRX Provider
	Telecom Italia Sparkle BICS SA

**History of changes**

Date	Description
2020-07-13	New IP address range added
2020-05-06	New IP address range added
2020-03-25	Correction of the IP ranges - 135.92.40.1/24 and 135.92.41.1/24 removed and 135.92.40.0/24 and 135.92.41.0/24 added.
2020-03-24	IP address range Updated
2020-02-28	BICS Autonomous system number (ASN) has been added
2020-02-28	BICS SA has been added as GRX provider
2020-01-06	New network BRAPS information added

**MMS Interworking Information**

TADIG code: BRAPS

Section ID: 18 (Optional)

Effective date of change: 2020-01-06

**MMS Elements Data**

Domain name of MMSC	IP Address	Max. size of MMS allowed	Delivery Report allowed? (Yes / No)	Read Report allowed? (Yes / No)	IP address(es) of Incoming MTA	IP address(es) of Outgoing MTA
mms.mnc054.mcc724.gprs	189.40.240.0/26	1000	Yes	Yes	189.40.240.33	189.40.240.33

**List of MMS IW Hub Provider**

MMS IW Hub Provider Name	GT address(es)
Telecom Italia Sparkle	

**History of changes**

Date	Description
2020-01-06	New network BRAPS information added

**LTE Roaming Information**

TADIG code: BRAPS

Section ID: 20 (Optional)

Effective date of change: 2020-10-05

IPX Provider Name	IPX DA Realm Used	Diameter Architecture
TIS - Telecom Italia Sparkle (Main/First)	net2mobile.grx	
Primary IP address of DA	Secondary IP address of DA	
93.186.140.134	93.186.140.198	
IPX Provider Name	IPX DA Realm Used	Diameter Architecture
BICS SA (Backup/ Second)	dra.bics.3gppnetwork.org	
Primary IP address of DA	Secondary IP address of DA	
94.102.166.168	94.102.166.184	
94.102.166.199	94.102.166.215	

**Roaming Interconnection**

EPC Realms For Roaming
epc.mnc054.mcc724.3gppnetwork.org

**FQDN Diameter Edge Agent**

FQDN	Primary IP Address DEA FQDN	Secondary IP Address DEA FQDN
nvrjo2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.182 186.230.181.178	186.230.181.190 186.230.181.186
nvsne2.1.epc.mnc002.mcc724.3gppnetwork.org	186.230.181.198 186.230.181.194	186.230.181.206 186.230.181.202

S6a Supported without IWF	S6a MAP IWF supported to HSS	S6a MAP IWF supported to MME
true	false	false
S6d used for legacy SGSN	S9 used for PCC	
false	false	

**SMS ITW**

SMS delivery over IP	SMS delivery over SGs
false	true

**Voice ITW**

CSFB

**Roaming CS Fallback**

Not Supported

LTE Roaming Agreement Only	LTE Only Roaming Supported	HPMN	VPMN
2G/3G Roaming Agreement Only	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	Yes
2G/3G/LTE Roaming Agreement	Scenario 1 Supported	Yes	Yes
	Scenario 2 Supported	Yes	Yes
	Scenario 3 Supported	Yes	No
	Scenario 4 Supported	No	No
	Scenario 5 Supported	No	No
	Scenario 6 Supported	No	No

**List of LTE QOS profiles**

Profile name:	4G
QCI Value List:	9
QOS ARP List:	7
ARP Preemption Vulnerability List:	0
ARP Preemption Capability List:	0

**IPv6 Connectivity Information**

	IPv6 PDP Supported	IPv4v6 PDP Supported
MME Support	No	No
SGW Support	No	No
PGW Support	No	No

**5G early drop support**

	As HPMN	AS VPMN
<b>5G NSA (non-standalone access) supported</b>	No	No
<b>DNS PGW NAPTR includes +nc-nr</b>	No	No
<b>NSA options for EN-DC</b>		
<b>ARD set to support of NR as secondary RAT</b>	No	
<b>Restrict NR access if HSS is not set to support NR as secondary RAT</b>		No

**History of changes**

Date	Description
2020-10-05	EPC realms of roaming interconnection updated
2020-02-28	BICS has been added as IPX provider
2020-01-06	New network BRAPS information added

**CONTACT INFORMATION**

TADIG code: BRAPS

Section ID: 21 (Optional, Repeating)

Effective date of change: 2020-02-28

**List of Roaming Troubleshooting Contact Information****Roaming Troubleshooting Contact Information**

<b>Location</b>	Brazil		
<b>Office Time Zone in UTC</b>	-03:00		
<b>Office Hours</b>	<b>Week Day (s)</b>	<b>Start Time</b>	<b>End Time</b>
	Mon Tue Wed Thu Fri	09:00:00	18:00:00

**Main Contact for Troubleshooting (Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Escalation Contact for Troubleshooting**

Person Name	Tel.	Mobile	Fax	Email
Mr Cezar Serafini	+552141128996			cserafini@timbrasil.com.br

**24 x 7 Troubleshooting (contact out of Office Hours)**

Team Name	Tel.	Mobile	Fax	Email
iSOC	+552141093808	+5521982135301		qoc@timbrasil.com.br

**Roaming Troubleshooting Ticketing System Information**

Ticket system web address

Ticket system email address

**Additional Contacts****SCCP Inquires and ordering of SS7 Routes**

Person Name	Tel.	Mobile	Fax
TIS Telecom Italia Sparkle	+3906321000		+390652744560
JobTitle	Email		
NOC - Network Operation Center	contactcenter.tis@telecomitaliasparkle.com		

**Roaming Coordinator**

Person Name	Tel.	Mobile	Fax
Mr Marcio Aragão	+552141128715	+5521981131102	
JobTitle	Email		
Roaming Specialist	maragao@timbrasil.com.br		

**IREG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**TADIG Tests**

Person Name	Tel.	Mobile	Fax
IREG-TADIG Team	+552137234991 +552137234992		
JobTitle	Email		
	ireg-tadig@timbrasil.com.br		

**Other contact(s)**

Person Name	Tel.	Mobile	Fax
Ms Ana Carolina Fonseca	+552141127537		
JobTitle	Email		
Roaming Expert	afonseca@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Eduardo Bruno	+552141127903		
JobTitle	Email		
Roaming Expert	elopes@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr. Emerson Dos Santos	+558141075158		
JobTitle	Email		
	egrdsantos@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Mr Fabricio Gonçalves	+552141125190		
JobTitle	Email		
Roaming Expert	fagoncalves@timbrasil.com.br		
Person Name	Tel.	Mobile	Fax
Ms Carla Isadora Silva			

JobTitle		Email	
		cimdsilva@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Mr. Michel Marinho		+5521981134544	
JobTitle		Email	
		mmarinho@timbrasil.com.br	
Person Name	Tel.	Mobile	Fax
Marcus Vinicius Ferreira	+552141127286		
JobTitle		Email	
Roaming Manager		mvferreira@timbrasil.com.br	

IR21 Distribution Email Address	Email
	roaming@timbrasil.com.br

#### History of changes

Date	Description
2020-02-28	Contacts list has been updated
2020-01-06	New network BRAPS information added

**SECTIONS NOT IN USE**

TADIG Code	Section ID	Section Name
BRAPS	6	Domestic SCCP Gateway
BRAPS	9	Test Numbers Information
BRAPS	11	MAP Optimal Routing Section
BRAPS	16	Packet Data Services Information
BRAPS	19	WLAN Information
BRAPS	22	Hosted Networks
BRAPS	23	M2M Roaming Information
BRAPS	24	MVNO Information
BRAPS	26	VoLTE Roaming Information Section
BRAPS	27	LPWA Roaming Information Section