

GSMA Roaming Database IR.21 Data



RAEX IR.21 Information

Creation date:	2021-12-06
Creation time:	08:07:07+01:00
File type:	IR.21
Sender TADIG:	OMNVF
Publish Comment:	New NDC for OMNVF
TADIG-GEN schema version:	2.4
RAEX-IR.21 schema version:	15.0

ORGANISATION INFORMATION

Section ID: 1 (Mandatory)

Organisation name:	Oman Future Telecommunication S.A.O.C.
Country initials:	OMN

History of changes

TADIG Code	Section ID	Section	Date	Description
OMNVF	4	Routing Information	2021-12-06	new NDC
OMNVF	17	IP Roaming/Networking Information	2021-10-14	add new ASN

NETWORK

TADIG code: OMNVF

Section ID: 2 (Mandatory, Repeating)

TADIG code:	OMNVF
Network name:	Vodafone Oman
Network type:	Terrestrial
Technology:	Frequency list:
2G-GSM frequencies:	GSM 900
3G-UTRA/FDD frequencies:	Unsupported
3G-UTRA/TDD frequencies:	Unsupported
4G-E-UTRAN frequencies:	1 - IMT 2.1 GHz, 3 - DCS 1800, 8 - 900 MHz, 28 - 700 MHz APAC
4G-E-UTRAN-MIoT-LTE-M frequencies:	Unsupported
4G-E-UTRAN-MIoT-NB-IoT frequencies:	Unsupported
MIoT-NB-IoT deployment modes:	Unsupported
5G NR frequencies:	Unsupported
Other technology - 5G-NR:	28 - 700 MHz, 41 - 2.6 GHz
Presentation of country initials and MNN:	Vodafone OMN
Abbreviated MNN:	Vodafone

NETWORK INFORMATION

TADIG code: OMNVF

Section ID: 3 (Mandatory)

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

ROUTING INFORMATION

TADIG code: OMNVF

Section ID: 4 (Mandatory)

Effective date of change: 2021-12-06

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
MSISDN number ranges (s)								
	968	770						
	968	771						
	968	772						
	968	773						
	968	774						

Network Nodes Global Title Number Range(s)								
	968	770						

MSRN Number Range(s)								
	968	770	61200	61599				
	968	770	76100	76499				
	968	770	81200	81599				
	968	770	86100	86499				

E. 212 Number series	Mobile Country Code (MCC)	Mobile Network Code (MNC)
	422	06

E. 214 Mobile Global Title (MGT)	Country Code of MGT (CC)	Network Code of MGT (NC)
	968	770

Does Number Portability apply ?	Yes
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Is 15 Digit MSISDN Supported ?	Yes
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USIM SIM Header	8996806
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E. 164 Number Ranges due to Number Portability	CC	NDC	SN Range Start	SN Range Stop
	968	71		
	968	72		
	968	78		
	968	79		
	968	901		
	968	902		
	968	903		
	968	904		
	968	905		
	968	906		
	968	907		
	968	908		
	968	909		
	968	91		
	968	92		
	968	93		
	968	94		
	968	95		
	968	96		
	968	97		
	968	98		
	968	99		

History of changes

Date	Description
2021-12-06	new NDC

INTERNATIONAL SCCP GATEWAY

TADIG code: OMNVF

Section ID: 5 (Optional)

Effective date of change: 2021-06-01

International SCCP carrier list	
SCCP carrier name:	VRS
Connectivity information:	Primary
MNO TADIG code list:	
DPC info:	
Signature:	Deratsg01
Type:	ISC
International DPC:	2.121.0
Comments:	(5064)
DPC info:	
Signature:	Deratsg02
Type:	ISC
International DPC:	2.121.1
Comments:	(5065)
DPC info:	
Signature:	ltmlsg01
Type:	ISC
International DPC:	5.225.3
Comments:	(12043)
DPC info:	
Signature:	ltmlsg02
Type:	ISC
International DPC:	5.225.4
Comments:	(12044)

History of changes

SCCP Protocol available at PMN for connection for International SS7 Roaming

TADIG code: OMNVF

Section ID: 7 (Optional)

Effective date of change: 2021-06-01

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

History of changes

SUBSCRIBER IDENTITY AUTHENTICATION

TADIG code: OMNVF

Section ID: 8 (Optional)

Effective date of change: 2021-06-01

Authentications	Performed (Yes / No)
Authentication performed for Roaming subscribers at the commencement of GSM service	Yes
Authentication performed for roaming subscribers in case of GPRS	N/A
A5 Cipher Algorithm version in use	A5/1, A5/2, and A5/3

History of changes

MOBILE APPLICATION PART (MAP)

TADIG code: OMNVF

Section ID: 10 (Optional)

Effective date of change: 2021-06-01

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

History of changes

MAP Optimal Routing Section

TADIG code: OMNVF

Section ID: 11 (Optional)

Effective date of change: 2021-03-01

MAP Optimal Routing of mobile - to - mobile calls

Application Context Name	Current version in			Comments
	MSC	GMSC	HLR	
CallControlTransfer	MAPv3	MAPv3	N/A	
LocationInfoRetrieval	N/A	MAPv3	MAPv3	

History of changes

MAP Inter Operator SMS Enhancement

TADIG code: OMNVF

Section ID: 12 (Optional)

Effective date of change: 2021-03-01

Inter - Operator SMS Enhancement				
Application context name	Current version in			Comments
	SMS - IWMSC	SMS - GMSC	HLR	
shortMsgGateway	N/A	MAPv2	MAPv3	
shortMsgAlert	MAPv2	N/A	MAPv2	

History of changes

NETWORK ELEMENTS INFORMATION

TADIG code: OMNVF

Section ID: 13 (Optional)

Effective date of change: 2021-06-01

Node type	Node ID	GT address / Address range	IP address / Address range	IPv6 address / Address range	Vendor info	SW / HW version	UTC offset
MSC/VLR-2G		968 770 60520 / 60520			Ericsson		+04:00
MSC/VLR-2G		968 770 60540 / 60540			Ericsson		+04:00
SCP		968 770 60532 / 60532			Openet		+04:00
SCP		968 770 60552 / 60552			Openet		+04:00
SCP		968 770 60505 / 60505			Openet		+04:00
SMSC		968 770 60529 / 60529			Comviva		+04:00
SMSC		968 770 60549 / 60549			Comviva		+04:00
SMSC		968 770 60500 / 60500			Comviva		+04:00
HLR		968 770 60525 / 60525			Ericsson		+04:00
HLR		968 770 60545 / 60545			Ericsson		+04:00
MME			193.3.37.30/32		Ericsson		+04:00
MME			193.3.37.32/32		Ericsson		+04:00
MME			193.3.37.31/32		Ericsson		+04:00
MME			193.3.37.33/32		Ericsson		+04:00
HLR		968 770 60460 / 60460					+04:00
MSC		968 770 60461 / 60461					+04:00
SMSC		968 770 60462 / 60462					+04:00
SMSC		968 770 60463 / 60463					+04:00
SMSC		968 770 60464 / 60464					+04:00
SMSC		968 770 60465 / 60465					+04:00
HLR		968 770 60470 / 60470					+04:00
MSC		968 770 60471 / 60471					+04:00
SMSC		968 770 60472 / 60472					+04:00
SMSC		968 770 60473 / 60473					+04:00
SMSC		968 770 60474 / 60474					+04:00
SMSC		968 770 60475 / 60475					+04:00

History of changes

USSD Information

TADIG code: OMNVF

Section ID: 14 (Optional)

Effective date of change: 2021-03-01

USSD capability available	Yes
Supported phase	Phase 2

History of changes

CAMEL INFO

TADIG code: OMNVF

Section ID: 15 (Conditional)

Effective date of change: 2021-06-01

gsmSSF/MSC

CAP Version supported (Inbound)	CAP Version supported (Outbound)
	CAPv2 CAPv3

CAMEL Functionality Information

Service(s) Name	SK	CAP Version	SCP GT addresses
Openet SCP	1	CAPv2	96877060552

CAPv4 Partial Implementations

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

History of changes

Packet Data Services Information

TADIG code: OMNVF

Section ID: 16 (Conditional)

Effective date of change: 2021-07-09

List of APN Operator Identifiers

APN Operator Identifier	Description	Example
mnc006.mcc422.3gppnetwork.org	For LTE access	
mnc006.mcc422.gprs	For GPRS and WCDMA access	

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

APN	APN Credential		APN Type	ISP DNS IP address (primary)	ISP DNS IP address (secondary)
	Username	Password			
internet.vodafone.om			H-APN		
ims.vodafone.om			H-APN		
hos.vodafone.om			H-APN		

APN WAP List

APN	APN Credential		APN Type	WAP Gateway IP address	WAP Server URL	WAP Port ver 1	WAP Port ver 2
	Username	Password					

APN MMS List

APN	APN Credential		WAP Gateway IP address for MMS	Messaging Server URL
	Username	Password		

IPv6 Connectivity Information

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

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

SGSN	GTPv1
GGSN	GTPv2

List of Data Service supported

2G Data Services	Multislot Class Capability
GPRS	

3G Data Services

3G Data Services	UE 3G Category
HSUPA	

Multiple PDP Context Support

Number of Primary PDP Context	Not supported
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History of changes

IP - Roaming and IP - Interworking Information

TADIG code: OMNVF

Section ID: 17 (Conditional)

Effective date of change: 2021-10-14

List of All IP address ranges used by PMN for connection to inter - PMN IP backbone	IP Address Range
	193.3.37.0/25

List of Autonomous System Number (ASN):	ASN
	64521

List of Autonomous System Number (ASN4B):	ASN4B
	212661

List of PMN authoritative DNS server IP addresses and names		
IP address	IPv6 address	DNS Name
193.3.37.20		MU00edns01.epc.mnc006.mcc422.3gppnetwork.org
193.3.37.21		BS00edns01.epc.mnc006.mcc422.3gppnetwork.org

List of PMN local caching DNS server IP addresses and names		
IP address	IPv6 address	DNS Name
193.3.37.20		MU00edns01.epc.mnc006.mcc422.3gppnetwork.org
193.3.37.21		BS00edns01.epc.mnc006.mcc422.3gppnetwork.org

IP addresses that respond to ping / traceroute:	193.3.37.20 193.3.37.21
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List of GRX Providers	GRX Provider
	Vodafone Carrier Services (IPX) – primary iBasis (GRX)

History of changes

Date	Description
2021-10-14	add new ASN

LTE Roaming Information

TADIG code: OMNVF

Section ID: 20 (Optional)

Effective date of change: 2021-06-01

IPX Provider Name	IPX DA Realm Used	Diameter Architecture
Vodafone Carrier Services (IPX)	epc.mnc006.mcc422.3gppnetwork.org	

Primary IP address of DA	Secondary IP address of DA
139.47.252.6	139.47.252.38
139.47.252.20	139.47.252.52
139.47.236.6	139.47.236.38
139.47.236.20	139.47.236.52

Roaming Interconnection

EPC Realms For Roaming
epc.mnc006.mcc422.3gppnetwork.org

FQDN Diameter Edge Agent

FQDN	Primary IP Address DEA FQDN	Secondary IP Address DEA FQDN
mu00-vdsc01.epc.mnc006.mcc422.3gppnetwork.org	193.3.37.16	193.3.37.17
bs00-vdsc01.epc.mnc006.mcc422.3gppnetwork.org	193.3.37.18	193.3.37.19

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 over NAS (SGs) via SS7	SMS over NAS (SGd) via Diameter
true	true	false

Voice ITW

IMS

Roaming CS Fallback

Not Supported

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

IPv6 Connectivity Information

	IPv6 PDP Supported	IPv4v6 PDP Supported
MME Support	Yes	Yes
SGW Support	Yes	Yes
PGW Support	Yes	Yes

5G early drop support

	As HPMN	AS VPMN
5G NSA (non-standalone access) supported	Yes	Yes
DNS PGW NAPTR includes +nc-nr	No	No
NSA options for EN-DC		3x
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

CONTACT INFORMATION

TADIG code: OMNVF

Section ID: 21 (Optional, Repeating)

Effective date of change: 2021-06-01

List of Roaming Troubleshooting Contact Information				
Roaming Troubleshooting Contact Information				
Location		Oman, Muscat		
Office Time Zone in UTC		+04:00		
Office Hours	Week Day (s)	Start Time	End Time	
	all week days	08:30:00	17:30:00	
Main Contact for Troubleshooting (Office Hours)				
Team Name	Tel.	Mobile	Fax	Email
Roaming	+96899299050			roaming@vodafone.om
Escalation Contact for Troubleshooting				
Person Name	Tel.	Mobile	Fax	Email
Seham Al-Aamri	+96899299050			Seham.amri@vodafone.om
24 x 7 Troubleshooting (contact out of Office Hours)				
Team Name	Tel.	Mobile	Fax	Email
Roaming & IREG	+96899299050			roaming@vodafone.om lreg@vodafone.om
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
	IREG Team	+96899299050		
	JobTitle		Email	
			ireg@vodafone.om	
Roaming Coordinator				
	Person Name	Tel.	Mobile	Fax
	Roaming Team	+96899299050		
	JobTitle		Email	
			roaming@vodafone.om	
IREG Tests				
	Person Name	Tel.	Mobile	Fax
	IREG & Roaming Team	+96899299050		
	JobTitle		Email	
			vrs_roamingoman@vodafone.com ireg@vodafone.om	
TADIG Tests				
	Person Name	Tel.	Mobile	Fax
	IREG & Roaming Team	+96899299050		
	JobTitle		Email	
			vrs_roamingoman@vodafone.com ireg@vodafone.om	
CAMEL Tests				
	Person Name	Tel.	Mobile	Fax
	IREG & Roaming Team	+96899299050		
	JobTitle		Email	
			vrs_roamingoman@vodafone.com ireg@vodafone.om	
GPRS Tests				
	Person Name	Tel.	Mobile	Fax
	IREG & Roaming Team	+96899299050		
	JobTitle		Email	
			vrs_roamingoman@vodafone.com ireg@vodafone.om	
Contact Person(s) in PMN for GRX connectivity				
	Person Name	Tel.	Mobile	Fax
	IREG Team	+96899299050		
	JobTitle		Email	
			ireg@vodafone.om	

Contact Person(s) in PMN for GRX Provider				
Person Name	Tel.	Mobile	Fax	
IREG Team	+96899299050			
JobTitle		Email		
		ireg@vodafone.om		

Contact person(s) for IW MMS				
Person Name	Tel.	Mobile	Fax	
IREG Team	+96899299050			
JobTitle		Email		
		ireg@vodafone.om		

Contact Person(s) for WLAN				
Person Name	Tel.	Mobile	Fax	
IREG Team	+96899299050			
JobTitle		Email		
		ireg@vodafone.om		

Other contact(s)				
Person Name	Tel.	Mobile	Fax	
Seham Al-Aamri	+96899299050			
JobTitle		Email		
		Seham.amri@vodafone.om		

IR21 Distribution Email Address	Email
	ireg@vodafone.om

History of changes

SECTIONS NOT IN USE

TADIG Code	Section ID	Section Name
OMNVF	6	Domestic SCCP Gateway
OMNVF	9	Test Numbers Information
OMNVF	18	MMS Interworking Information
OMNVF	19	WLAN Information
OMNVF	22	Hosted Networks
OMNVF	23	M2M Roaming Information
OMNVF	24	MVNO Information
OMNVF	26	VoLTE Roaming Information Section
OMNVF	27	LPWA Roaming Information Section