

**Oracle® Communications
Performance Intelligence Center**

Release Notes

Release 10.2

E60681 Revision 3

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ORACLE®

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See more information on MOS in the Appendix section.

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Oracle Communications Performance Intelligence Center Release Notes

Release notices are distributed to customers with each new release of software. This release notice identifies the new features delivered with this release. It also lists the Bugs that have been Resolved.

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NOTE: The information in this Release Notice reflects the latest data available as of its date of publication and is subject to change.

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Content Summary

PIC 10.2 is a build stream that provides major and minor content releases for new features. It also contains Bug fixes to address issues found in previous PIC releases.

Platform Lifecycle :

- ✓ Management as replacement of Oracle ODA Appliance:
 - HP Gen9 RMS
 - Oracle X5-2
 - Oracle X6-2
- ✓ Mediation
 - Virtualized Mediation on Oracle Linux with KVM or VMware hypervisor
 - Oracle X6-2
- ✓ Storage:
 - Data Records and PDUs storage to Customer IT storage infrastructure
 - Oracle X6-2L
- ✓ Probed Acquisition:
 - Virtualized Probed Acquisition on Oracle Linux with KVM or VMware hypervisor
 - Oracle X6-2
- ✓ OCDSR Integrated Acquisition:
 - HP Gen9 RMS
 - Oracle X5-2
 - Oracle X6-2
- ✓ 10.2.0.0.1 includes an update to TPD (Tekelec Platform Distribution) Release 7.3.0 which is based on Oracle Linux 6 update 8

PIC Mediation Features / xDR Builder

- ✓ LTE Diameter xDR Builder
- ✓ Diameter AAA xDR Builder
- ✓ Diameter LCS xDR Builder
- ✓ GTPv2 Sv xDR Builder

PIC Mediation Features / xDR Builder improvements

- ✓ Increase link table size from 512 to 1024 on Integrated Acquisition Server
- ✓ Diameter Builder-Support of AVP 21 to extract RAT Type
- ✓ IP DNS TDR Builder- Adding FRAME SOURCE
- ✓ SGs xDR Builder- Hide only SMS data
- ✓ RAN Builder - Correlation Improvement Enhancement
- ✓ OCDSR Integrated Acquisition
- ✓ CS fallback Procedure improvements for LTE network
- ✓ Builder evolution to support 3GPP Release 12
- ✓ Performance improvement of subset of MAP Builders
- ✓ VLAN ID populated in identified list of xDRs
- ✓ 'Length SM' field in MAP SM & MAP builders wished in septets
- ✓ Integrated acquisition compatibility with Eagle R46.2

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PIC Applications improvements

- ✓ Big Data-Performance improvement of CSV streaming
- ✓ ProTrace Column resizing
- ✓ ProTrace-column display preference per user profile
- ✓ ProAlarm Lifecycle Management
- ✓ Features naming alignment with Oracles names

PIC Management / Product Administration

- ✓ Ability to use IP subnets in Static Enrichment
- ✓ Separate management and production network
- ✓ Improvement of Compliancy to Oracle Accessibility Guidelines

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Feature name mapping

Legacy Feature Naming	Oracle Feature Naming
Data Acquisition Layer	Data Acquisition - Integrated
Integrated Message Feeder (IMF)	Oracle Communications Performance Intelligence Center, Integrated Acquisition
Data Acquisition Layer	Data Acquisition - Probed
Probe Message Feeder (PMF)	Oracle Communications Performance Intelligence Center, Probed Acquisition
Data Acquisition Layer – Options	Data Acquisition - Product Option
MSU data feed at xMF (TADAPT)	Oracle Communications Performance Intelligence Center, Acquisition DataFeed
Data Mediation & Storage Layer, or 'IXP' (Integrated xDR Platform)	Data Mediation
IXP Base Server	Oracle Communications Performance Intelligence Center, Mediation Server
xDR Builders and Protocols	Oracle Communications Performance Intelligence Center, Mediation Protocol
	Oracle Communications Performance Intelligence Center, Mediation Protocol II
IXP xDR Storage	Oracle Communications Performance Intelligence Center, Data Record Storage
	Oracle Communications Technology Foundation for Monitoring Applications
IXP PDU Storage	Oracle Communications Performance Intelligence Center, Packet Data Unit Storage
Data Mediation – Options	Data Mediation - Product Option
Data feeds	Oracle Communications Performance Intelligence Center, Mediation DataFeed
Applications Layer	Applications
Centralized Configuration Management and Security (CCM) + ProTraQ KPI Builder + ProTrace xDR viewer + xDR enrichment	Oracle Communications Performance Intelligence Center, Management
	Oracle Communications Technology Foundation for Monitoring Applications
Applications Layer -Options	Applications - Product Options
ProTrace (Call-tracing)	Oracle Communications Performance Intelligence Center, Multiprotocol Troubleshooting
ProAlarm viewer + Alarm Forwarding	Oracle Communications Performance Intelligence Center, Network and Service Alarm
ProPerf (Real-time Performance Dashboards)	Oracle Communications Performance Intelligence Center, Network and Service Dashboard
ProDiag (Network Diagnostics)	Oracle Communications Performance Intelligence Center, SS7 Network Surveillance
Intelligent Data Management (IDM), or On Demand User Plane monitoring	Oracle Communications Performance Intelligence Center, On-Demand User Plane Capture

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Load Lineup for the Baseline Release

The software for Oracle Communications Performance Intelligence Center Release 10.2 is available on Oracle Software Delivery Cloud <https://edelivery.oracle.com/>.

Latest Media Pack Contents:

Oracle Communications Performance Intelligence Center 10.2.0.0.1

Oracle Communications Tekelec Platform 7.3.0.0.0

PIC 10.2.0.0.1-30.1.0	Software Version	Zip SKU
Mediation Server – IXP/DWS	10.2.0.0.1-30.1.0	V839627-01
Management – NSP	(not delivered, use 10.2.0.0.0 below)	
Probed and Integrated Acquisition – xMF	10.2.0.0.1-30.1.0	V839625-01
Mediation Protocol - xDR Builder	10.2.0.0.1-30.0.0	V839626-01
Acquisition Data Feed - Tadapt(32bits)	9.0.2-1.1.0	V46403-01
Oracle Database 11g Release 2 Patch Set	11.2.0.4.0	V73911-01
Oracle WebLogic Server Standard Edition 11.1.1.0.0 for Linux x86-64	10.3.6	V77401-01
Performance Intelligence Center MIBS	10.2.0.0.0	V839703-01
Tekelec Platform Components		
Tekelec Platform Distribution	7.3.0.0.0-88.30.0	V834374-01
Tekelec Platform Management and Configuration (Blade only)	6.3.0.0.0-63.3.0	V834376-01
Tekelec Virtual Operating Environment (Blade only)	3.3.0.0.0-88.30.0	V834375-01
Compatible Software		
Oracle Database Appliance	12.1.2.5.0 or later	
Oracle ZFS Storage Appliance	2013.1.4.2 (OS8.4.2) or later	
Java 7 (Management server)	7U121 or later	
Java 8 (Mediation and Acquisition servers)	8U111 or later	
Oracle Linux 7	Update 1 or later	
Oracle Database 11g Release 2 Patch Set	11.2.0.4.0 or later	
Oracle Database 12c Enterprise Edition Release 64bit [Data Record Storage only]	12.1.0.2.0 or later	
Oracle WebLogic Server Plug-in from Oracle WebLogic Server Standard Edition 12.1.0.0.0 for Linux x86-64	12.1.3.0.0 or later	
Oracle ASMLib	2.0.8 or later	
Compatible Products		
Eagle	46.1 & 46.2	
DSR	7.1.0	
Firmware		
HP Solutions Firmware Upgrade Pack	2.2.10 or later	
Oracle Firmware Upgrade Pack	3.1.6 or later	

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Oracle Communications Performance Intelligence Center 10.2.0.0.0

Oracle Communications Tekelec Platform 7.0.3.0.0

PIC 10.2.0.0-24.1.0	Software Version	Zip SKU
Mediation Server – IXP/DWS	10.2.0.0-24.1.0	V106348-01
Management – NSP	10.2.0.0-24.1.0	V106349-01
Probed and Integrated Acquisition – xMF	10.2.0.0-24.1.0	V137238-01
Mediation Protocol - xDR Builder	10.2.0.0-24.1.0	V106347-01
Acquisition Data Feed - Tadapt(32bits)	9.0.2-1.1.0	V46403-01
Oracle Database 11g Release 2 Patch Set	11.2.0.4.0	V73911-01
Oracle WebLogic Server Standard Edition 11.1.1.0.0 for Linux x86-64	10.3.6	V77401-01
Performance Intelligence Center MIBS	10.2.0.0	V137237-01
Tekelec Platform Components		
Tekelec Platform Distribution	7.0.3.0-86.40.0	V106309-01
Tekelec Platform Management and Configuration (Blade only)	6.0.3.0-60.25.0	V101065-01
Tekelec Virtual Operating Environment (Blade only)	3.0.3.0-86.40.0	V101068-01
Compatible Software		
Oracle Database Appliance	12.1.2.5.0 or later	
Oracle ZFS Storage Appliance	2013.1.4.2 (OS8.4.2) or later	
Java 7	7U91 or later	
Oracle Linux 7	Update 1 or later	
Oracle Database 11g Release 2 Patch Set	11.2.0.4.0 or later	
Oracle WebLogic Server Plug-in from Oracle WebLogic Server Standard Edition 12.1.0.0.0 for Linux x86-64	12.1.3.0.0 or later	
Oracle ASMLib	2.0.8 or later	
Compatible Products		
Eagle	46.1 & 46.2	
DSR	7.1.0	
Firmware		
HP Solutions Firmware Upgrade Pack	2.2.9 or later	
Oracle Firmware Upgrade Pack	3.1.5 or later	

PIC was tested with the above versions of Compatible Software. For the latest versions:

- ODA refer to MOS Oracle Database Appliance - 12.1.2 and 2.X Supported ODA Versions & Known Issues (Doc ID 888888.1)
- ZFS refer to MOS Oracle Support Document 2021771.1 (Oracle ZFS Storage Appliance: Software Updates)
- Java 7 and 8 refer to MOS Information Center: Installation & Configuration for Oracle Java SE (Doc ID 1412103.2)
- HP Firmware refer to OHC http://docs.oracle.com/cd/E57832_01/index.htm
- Oracle Firmware refer to OHC http://docs.oracle.com/cd/E57832_01/index.htm
- Oracle Linux refer to OSDC <https://edelivery.oracle.com/>
- Oracle Database and related patches refer to MOS <https://support.oracle.com/>
- Oracle Weblogic Server and Proxy Plugins refer to OSDC <https://edelivery.oracle.com/>
- Oracle ASMLib refer to OTN <http://www.oracle.com/technetwork/server-storage/linux/asmlib/ol7-2352094.html>

PIC 10.2 Release Notes

Upgrade and Installation

Upgrade/Installations are supported with the software distributions described in these Release Notes. All documents are available on OHC.

Major Upgrade:

PIC 9.0.3 to 10.2.0.0.1

PIC 9.0.4 to 10.2.0.0.1

PIC 10.1.0 to 10.2.0.0.1

PIC 10.1.5 to 10.2.0.0.1

PIC 10.2.0.0.0 to 10.2.0.0.1 (except MGMT)

Incremental Upgrade Support (Patching):

PIC (MGMT only) 10.2.0.0.0 to 10.2.0.0.0

PIC 10.2.0.0.1 to 10.2.0.0.1

Fresh Install Support: PIC 10.2.0.0.1

Disaster Recovery: PIC 10.2.0.0.1

Disaster Recovery (HW failure) shall replace existing supported server with the same HW if available. If not possible, a fresh install of the new hardware (not supported in PIC 10.1.5) shall be done in PIC 10.2. The server and the subsystem (if it exists) shall be in PIC 10.2.

Hardware baseline for new projects and supported Hardware

Refer to PIC Hardware installation Guidelines – Release 10.2 – E66862 available on OHC

Legacy interoperability

Interoperability with Tekelec Cross Connect, Falco SS7/Gb converter and Neptune Probe is supported.

MSW is no more supported

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Core Document Set

PIC customer documentation and online help are created whenever significant changes are made that affect system operation or configuration. Revised editions of the documentation and online help are distributed and installed on the customer system. Consult your Installation Manual for details on how to update user documentation. Additionally, all customer documentation is available on the Oracle Help Center (OHC). Release Notes are available on OHC with each new release of software. The Release Notes list the PRs that have been resolved in the current release and the PRs that are known to exist in the current release.

Listed below is the entire PIC documentation library of User's Guides.

- Management Security Guide
- Alarm Forwarding Guide
- Alarm Application Guide
- Alarm Configuration Guide
- Centralized Configuration Manager Guide
- On Demand UP Guide
- KPI Configuration Guide
- Dashboard Application Guide
- Dashboard Configuration Guide
- System Alarms Guide
- Troubleshooting Application Guide
- Data Feed Configuration Guide
- Audit Viewer Guide
- SS7 Surveillance Guide
- SigTran Surveillance Guide
- Reference Data Guide
- Browser Export Scheduler Guide
- Browser Export Guide
- Quick Start Guide

Workstation minimal requirements are now part of the Quick Start Guide.

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Known Issues

Bug	Title	Customer Impact
22328469	Error message not displayed correctly when deleting enrichment file in CCM	The error message "Unable to delete Enrichment file because it is used by Operate DFPS" is only displayed for a few seconds, what makes it difficult to read for a user.
22337400	OCDSR should not be deleted before removing dependencies in MGMT	This only affects the case of trying to delete already configured Integrated OCDSR sites. The system does not delete associated internal configurations when deleting a previously added Integrated OCDSR. There is a workaround to clean up the internal configuration in the internal database. Please contact Customer Support to obtain this workaround.
22480090	Linkset name didn't updated in the session in troubleshooting application	After a synchronization of an Integrated Probe subsystem and if there are changes in the linkset names in Eagle, the linkset names might not get updated in Troubleshooting application. The workaround is to apply changes after synchronization of Integrated Probes, even if the Apply changes banner is not visible.
22566943	Contact the Tekelec Customer Care Center.	The application Alarm troubleshooting shows a message indicating to Contact the Tekelec Customer Care Center for some alarms, instead of asking to check for KM on MOS or opening an SR.
22574413	curves use the same properties	Curves created with defaults in Dashboards appear with the same color and properties. The workaround is to change properties of the curves manually.
22644316	Nightly backup not created after Mgmt-one box major upgrade on standard server	There is a workaround already added to the Major Upgrade document that creates an entry in crontab to schedule the nightly backup.
22645011	interface eth04 logs garbage message in /var/log/messages	The unused eth04 interface in E5-APP-B cards generates log messages that should be ignored. The workaround is to ifdown interface eth04 in Integrated Probes with E5-APP-B hardware and change eth04 interface configuration manually to prevent it from happening again after reboot.
22660355	PDUs are not visible for configurations on ixp-1c after major upgrade on 10.2	In the unlikely event that this issue happens, the workaround to see the PDUs is to log onto the affected server as cfguser and stop and start the dsapi process: pm.set off dsapi pm.set on dsapi

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Bug Severity Definitions

The following sections refer to Bug severity levels. Definitions of these levels can be found in the following publication: TL9000 *Quality Management System - Revision 4.0*

Resolved Bugs

Bugs Resolved in 10.2.0.0.1 (in addition to Bugs Resolved in 10.2.0.0.0)

Bug	Title	Severity
25076632	Full decoding not displayed in ProTrace	3
25049275	addition of fields to MAP xDR (non compact)	2
24902816	S1AP process is restarting	3
24841277	BTNUP XDR: Wrong ANumber field	3
24824540	Location Number not populated in INAP when it is in "Location Information"	2
24815464	SIGTRAN RID enhancement	3
24795087	IP Way management is not working correctly.	2
24709816	LTE Diameter should be able to correlate DSR EGRESS traffic	2
24512466	DataExport process is not restarted when Watchdog is triggered	2
24487616	pmiaMonitor restarting in loop on Sun Netra X5-2	2
23747838	Some MSUs coming from FALCO are not processed by the builder	3
23724011	DataExport exported period cannot be reverted to IAS 6.6.x behavior	3
23624848	Full decoding not displayed in ProTrace	3
23598548	SIGTRAN RID enhancement	2
23335493	Fragmented packets are missing in session impacting correlation rate	2
23298466	pmiaMonitor consistently log: failed to update record for mtp3 route key	3
23094918	ISUP RLC MSUs on M3UA Links with Eagle STC copy are lost	3
22663428	PIC 10.2 Protraq cell alarm not generated.	3
22636641	Logs for Mediation Server Database Jobs are not getting created	4
22567170	Counters Collection Point QUALIF displays Mbps higher than the LINK and DEST	4
22546868	CIF feeds packet content has changed since IMF has been upgraded to PIC 9.0.3	3
22377895	Pmf not able to monitor traffic with VLAN filter	2
22337385	IPv6 load balacing for probed and Integrated OCDSR acquisition	3

Bugs Resolved in 10.2.0.0.0

Bug	Title	Severity
22218615	After incremental upgrade 10.1.5-9.1.0, start end date not refreshed in ProTrace	3
22173964	tarNSPLog.sh missing	3
22135842	DataFlow field does not show complete values for CollectionPoint "LINK"	3
22026862	IMSI field not filled in MAP xdrbuilder XDR	2
21950765	setSSVIP is done too early	3
21950528	crontab entry is not up to date	4
21908151	Missing SIP xdr	2

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Bug	Title	Severity
21893735	dhcpd IP range configuration conflicting with fastcopy card static IPs	3
21856576	Protocol upgrade on RAN SMS is failing	3
21848153	IxpStore are opening 2 oracle connections on the first DWS they connect to	2
21825050	Bad display of the Message Flow Diagram in ProTrace	3
21688620	ProPerf auto refresh do not show real-time data.	3
21546516	Can't verify the NSP Backup	3
21375438	Wrong capacity management EXPORT data	3
21163152	Weblogic OutOfMemoryError caused by 90-nproc.conf limits	3
20671172	ProPerf user filters are not working	4
20591578	RAN CC2: luC release alone should not result in xDR	3
20528676	IP PORT 111 must be opened between IXP and export server	3
20504195	Field contents incoherent the months having 31 days in (UMTS lu CS RAN SMS)	3
20393670	Location information and RAT type not filled in xDR when included in Grouped AVP	3
20363354	ProAlarm and ProPerf disconnection	2
20358213	MSISDN is not populated in Diameter Rx XDR even if it's present in the MSU	3
20357394	GTPv2: Some messages are filtered by LTE GTPv2 decoding layer	3
20222602	Gp traffic is missing data on Uplink/Downlink Data length	3
20222506	Megaco Builder is not processing traffic	2
20112887	ProPerf application randomly swaps panels in active dashboard	4
20102135	some NOTIFY messages are filtered out by SIP-T ANSI builder	3
20058430	Gn TDR Build is crashing when reaching 100000 xdr in progress	3
20016804	In CCM, apply on ixp is failing due to the amount of IXP processes	3
19805544	IxpStore "Clean Session " can delete the content of an XDR session	3
19773594	Russia timezone change	3
19724436	ProTrace quick filter on session name is not working with Internet Explorer	3
19710254	ProTrace quick filter on date not working	3
19601800	Improvement of proLib interface (32 to 64 bits interface)	3
19273556	SCTP Path Naming doesnot work for S6 Diameter TDR	2
19267979	IP DNS TDR Builder- Adding FRAME SOURCE	2
19244180	Set SCTP Path Naming Format under IP Transport is not correct	4
19143408	Properfs disconnected (OOM-KILLER kills some process).	2
19142977	Alarm supervision is sometimes disconnected (related to apache nightly restart)	3
19120104	[240259]builder settings based on "extaction message priority" cannot be sorted	2
19119999	[241138]builder user and content manual are not accessible in the online help	3
19119762	[241861] source and destination IPs getting displayed in reverse in PDU summary	3
19118841	[241117]Properf dashboard displayed on historic date are not optimized in firefo	3
19118837	[241113]Failed to choose any date from the calendar in dashboard display with Fi	3
19118337	[240689]Protraq/ operate stop working after upgrade.	2
19118330	[240685]Protraq edit Point code filter and save overwrite point code value with	2

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Bug	Title	Severity
19117840	[239500]Not able to open kpi archive session on ProTrace.	2
19117504	[240039]Audit view is slow to open	3
19116724	[239419]Right click on cell show ProTraQ menu and browser menu	3
19116655	[239365]Only one set of pdu mount server is removed from fstab each time you run	3
19116321	[239091]'Length SM' field in MAP SM & MAP builders wished in septets value inste	4
19116076	[237674]SS7 SCCP: useless log message	3
19115957	[238828]Object in proalarm viewer map are no more legible after windows resizing	4
19115732	[238662]Diameter CC - Stored frame truncation	3
19115533	[238496]ProTraQ corner with condition but no expression issue.	2
19115413	[238401]Gx: too much memory used Gx builder - Also applied to Gy and S9 builders	3
19115228	[222637]analyze_subsystem.sh return error for too many active sessions	3
19115169	[238238]Wrong PDU displayed when sorting (java applet enabled)	2
19115107	[238189]export of the list of session on Protrace doesn't export all column	3
19114836	[237977]NSP installation failed when when front-end and back-end interfaces are	3
19113965	[237294]Copy PDUs/Decoding on FireFox doesn't work when using Ctrl+C	3
19112344	[234645]Store processes are not deactivated when the protraq is deactivated	2
19111935	[235736]scheduled sftp export is failing because of sftp_security file rights	3
19111442	[235324]Copy/PDU decoding is not working when Sorting is applied	3
19110839	[234847]DWS Customer Integration must be done prior to IXP Customer integration	3
19109324	[233642]Forwarding rule apply issue along NSP cluster	2
19109080	[232673]Protraq file import allows configuring invalid files (FSE or GUI with "C	2
19108966	[233371]Since upgrade, ftp scheduled export cannot be found in same directory	3
19108021	[228280]ProAlarm config do not check Maximum allowed aggregates (5000)	2
19106546	[231501]Wrong list of fields displayed in "Default fields" for preferences of mu	3
19106327	[231330]https weblogic console access is redirected to http	3
19106092	[231149]ProTrace Query are slow and export queries randomly fails	3
19105221	[230484]UMSUDR process should be restarted when CcmLinks IDB table is updated	2
19098743	[225377]Subsequent query with period increase randomly raise unknown error	2
19086687	[211886]A warning popup should be raised when export limit is reached	4
18992962	ProTraQ scheduler GUI does not prevent start date in the past	3

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Appendix A: List of supported protocols and builders

The following spreadsheet identifies protocols supported by PIC and the version of the protocol specification implemented.

Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
SS7	ISUP V1	ITU-T			see ISUP V3
SS7	ISUP V2	ITU-T			see ISUP V3
SS7	ISUP V3	ITU-T	Signalling system N°7 - ISDN user part formats and codes	Q.763 / Sept_97 (Q.761 to Q.764, Q.766 and Q.767)	SS7IsupEtsiCdr SS7IsupEtsiSudrAccounting Ss7IsupEtsiSuperCdr SS7UMSudr
SS7	BT NUP (UK)	National UK BT	BT Network Requirement	BTNR 167 Jul-87	SS7BtNupCdr
SS7	IUP	British Standard Institute	PNO-ISC Information Document Number 004 - Proprietary Extensions to C7 Interconnect User Part (IUP), Issue 2 PNO-ISC Specification Number 006 - Interconnect User Part (IUP)	PNO-ISC/INFO/004 Oct-99 PNO-ISC/SPEC/006 Jul-00	SS7IupCdr
SS7	ISUP ANSI Party Information Parameter (PIP)	ANSI	Signalling System N°7 (SS7) - Integrated Services Digital Network (ISDN) User Part Calling Party Name Convention Facility Specification	T1.113-1995 Jun-05 TICO076E Feb-98	SS7IsupAnsiCdr Ss7IsupAnsiSentinelCdr SS7UMSudr
SS7	TUP	ITU-T	Telephone User Part - Formats and codes Incompatible with SSUTR2 and BTNUP	Q.723 (Q.721 to Q.725) Nov-88	SS7TupCdr
SS7	TUP Chinese	National China	Technical specifications of SS7 for the national Telephone network of China	GF 001 - 9001	see TUP
SS7	TUP Brazilian variant				see TUP
SS7	ISUP Chinese		ETSI ISUP support with 24 bits OPC/DPC		see ISUP V3
SS7	ISUP Russian Variant (Sovintel)	National	CIS ISUP - Functional Description	CIS ISUP - Functional Description	see ISUP V3
SS7	ISUP Portuguese Variant (NOVIS)	National Portugal PT	ESPECIFICAÇÃO DE INTERFACE COM A REDE PÚBLICA INTERFACE DE COMUTADOR (2 Mbit/s) Sinalização Canal Comum SS#7 - Procedimento de taxaço em ISUP	Spécifications PT - Procedimento de taxaço em ISUP Apr-99	see ISUP V3

PIC 10.2 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
SS7	ISUP Brazilian Variant	TELEBRAS	#7 Common Channel Signaling System ISDN User part - ISUP, Issue 3	TB 220-250-732 <i>Apr-98</i>	see ISUP V3
SS7	ISUP Colombian Variant	Ministerio des Comunicaciones	Norma Nacional de Señalización por Canal Comun N.º7 - SCC7	Norma Nacional <i>Apr-98</i>	see ISUP V3
SS7	ISUP Mexican Variant	Telmex	E-801.04 Sepcification - Integrated Services Degital Network user Part (ISUP), Edition "C-3"	E-801.04 <i>Dec-97</i>	see ISUP V3
SS7	ISUP Argentina variant	Telefonica Argentina	RDSI User Part Specification Signaling System N°7	General Specification AR.EG.s1.002 Ed 1 corrected	see ISUP V3
SS7	Cisco E-ISUP	Cisco	EISUP Specification - Cisco Systems	Cisco ENG-46168 Release 44	SS7_EISUP_CDR
		IETF	Reliable UDP Protocol	draft-ietf-sigtran-reliable-udp-00.txt <i>Feb-1999</i>	
SS7	LSSU	ITU-T	Signalling link	Q.703 <i>Jul-96</i>	
SS7	MTP ITU-T Level 2 & 3	ITU-T	Functional description of the Message Transfer Part (MTP) of Signalling System No. 7	Q.701 <i>Mar-93</i>	SS7L2L3EtsiSudr SS7Q752EtsiStats
			Signalling link	Q.703 / Q.704 <i>Jul-96</i>	
SS7	MTP ANSI Level 2 & 3	ANSI	Signalling System N°7 - Message Transfer Part (MTP)	T1.111-1996 <i>Mar-96</i>	SS7L2L3AnsiSudr
SS7	SCCP ITU-T	ITU-T	Signalling connection control part formats and codes	Q.713 <i>Jul-96</i>	Ss7SccpSuaSudr
SS7	SCCP ANSI	ANSI	Signalling System Number 7 - Signalling Connection Control Part (SCCP)	T1.112-1996 <i>Jan-96</i>	Ss7SccpSuaSudr
SS7	TCAP (MAP & INAP support)	ITU-T	Transaction capabilities formats and encoding	Q.773 <i>Jun-97</i>	
SS7	TCAP (IS-41 support)	ANSI	Signalling System Number 7 (SS7) - Transaction Capabilities Application Part (TCAP)	T1.114-1996 <i>Mar-96</i>	
		ANSI	Signalling System Number 7 (SS7) - Transaction Capabilities Application Part (TCAP)	T1.114-2000 <i>Jun-00</i>	
SS7	INAP Siemens	Specific: Siemens	Siemens Core INAP	P30308-A7128-A120-01-7659 <i>May-98</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR

PIC 10.2 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
SS7	INAP CS1	ETSI	Intelligent Network (IN); Intelligent Network Capability Set 1 (CS1); Core Intelligent Network Application Protocol (INAP);	ETS 300 374-1 <i>Sep-94</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
		ITU-T	Introduction to intelligent network capability set 1	ITU-T Q.1211 <i>Mar-93</i>	
		ITU-T	Distributed functional plane for intelligent network CS-1	ITU-T Q.1214 <i>Oct-95</i>	
		ITU-T	Interface Recommendation for intelligent network CS-1	ITU-T Q.1218 <i>Oct-95</i>	
SS7	INAP CS2	ITU-T	Intelligent Network (IN); Intelligent Network Application Protocol (INAP); Capability Set 2 (CS2)	ETS 301 140-1 <i>Jun-96</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	INAP Ericsson CS1	Ericsson	ERICSSON SUPPORT OF ETSI CORE INAP CS1 Ericsson Support of ETSI Core INAP CS1	87/155-CRT 249 12 Uen <i>May-98</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	INAP Ericsson CS1+	Ericsson	Ericsson INAP CS1+, Services assumed from TCAP, revision A Ericsson INAP CS1+, Abstract Synthax, revision B	4/155 17-CRT 249 09 Uen <i>Aug-96</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
				171/155 17-CRT 249 12 Uen <i>Jun-03</i>	
SS7	INAP Ericsson V2 / V3 / V4	Ericsson	Ericsson's Protocol for Intelligent Networks, version 4, Formats and Codes	2/155 17-CRT 249 01 Uen D (V2) <i>Jan-96</i> 7/155 17-CRT 249 01 Uen B (V3) <i>Jan-97</i> 12/155 17-CRT 249 01 Uen A (V4) <i>Jan-98</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	INAP Alcatel V3	Alcatel	INAP for E10 Version 3	ALCATEL E10 Version 3 <i>Sep-96</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	INAP Alcatel V4	Alcatel	INAP for E10 Version 5	ALCATEL E10 Version 5 <i>Jan-99</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
SS7	INAP Alcatel CS1	Alcatel	INAP Alcatel CS1	ALCATEL INAP CS1	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	CAMEL Phase 2	ETSI	Digital cellular telecommunications system (Phase 2+); Customised Applications for Mobile network Enhanced Logic (CAMEL); CAMEL Application Part (CAP) specification - GSM 09.78	TS 101 046 V7.0.0 (Release 98) <i>Aug-99</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	CAMEL Phase 3	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Customised Applications for Mobile network Enhanced Logic (CAMEL); CAMEL Application Part (CAP) specification - GSM 29.78	TS 129 078 V5.9.0 (Release 5) <i>Sep-04</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	CAMEL Phase 4	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Customised Applications for Mobile network Enhanced Logic (CAMEL); CAMEL Application Part (CAP) specification - GSM 29.78	TS 129 078 V6.5.0 (Release 6) <i>Jun-06</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	BSSAP (Phase 2+) BSSMAP	ETSI	Digital cellular telecommunications system (Phase 2+); Mobile-services Switching Centre – Base Station System (MSC – BSS) interface; Layer 3 specification - 3GPP TS 08.08	TS 48.008 V12.0.0 (Release 12) Sept-14	RanCC2Cdr RanMMTdr RanSMSTdr RanUSSD SS7BssapTdr
	DTAP		Digital cellular telecommunications system (Phase 2+); Mobile Radio Interface; Layer 3 specification - 3GPP TS 04.08	TS 24.008 V12.7.0 (Release 12) Sept-14	
	SMS		Digital cellular telecommunications system (Phase 2+); Point-to-Point (PP) Short message Service support on mobile radio interface - 3GPP TS 04.11	TS 24.011 V12.0.0 (Release 12) Sept-14	
	SMS SM-TP		Digital cellular telecommunications system (Phase 2+); Technical realization of the short Message Service (SMS) - 3GPP TS 03.40	TS 23.040 V12.2.0 (Release 12) Dec-14	
	Supplementary Services		Digital cellular telecommunications system (Phase 2+); Mobile Radio interface layer 3 supplementary service specification; Formats and Coding - 3GPP TS 04.80	TS 24.080 V12.0.0 (Release 12) Sept-14	

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
SS7	BSSAP+ (Gs Interface)	ETSI	Digital Cellular Telecommunications System (Phase 2+); Universal Mobile Telecommunications System (UMTS); general Packet radio Service (GPRS); Serving GPRS Support Node (SGSN) - Visitor Location register (VLR); Gs Interface layer 3 Specification - 3GPP TS 29.018	TS 29.018 V6.5.0 (Release 6) Dec-06	Ss7GsInterfaceTdr
SS7	GSM MAP	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile Application Part (MAP) specification - 3GPP TS 29.002	TS 29.002 V12.6.0 (Release 12) Sept-14	Ss7HLRVtdr SS7MapTdr SS7MapSudrAccounting SS7MapSmTdr SS7MapMultiLegTdr SS7MapDB SS7Smdr SS7_MAP_Compact_TDR
SS7	IS-41 Révisions B, C, D & E (MAP)	ANSI	Cellular Radiotelecommunications Intersystem Operations	ANSI/TIA/EIA-41-D-1997 Nov-97	SS7IS41DB SS7IS41DE SS7IS41Tdr
	MEID	3GPP2 Telecommunications Industry Association	3G Mobile Equipment identifier (MEID) - Stage 1 MEID Standards Update, version 1.8.4	3GPP2 S.R0048-A Ver 4.0 Jun-05 TIA-MEID Apr-06	
	IS-41-P	Lucent	ANSI -41 Protocol Extensions for Interfaces C and D (HLR - VLR/MSC) - Issue 2.0	IS-41-P Nov-04	
	IS-41-EE	Ericsson	IS-41 Intersystem Call delivery Signalling	IS-41-EE Jan-99	
SS7	ISDN over IUA	ITU-T	ISDN user-network interface layer 3 specification for basic call control	Q.931 May-98	VoIP_Q_931_Cdr
SS7	AIN	ANSI	Signalling System N°7 - Message Transfer Part (MTP)	T1.111-1996 Mar-96	SS7AinTdr
	MTP ANSI Level 2 & 3				
	SCCP ANSI				
	TCAP (IS-41 support)	ANSI	Signalling System Number 7 (SS7) - Transaction Capabilities Application Part (TCAP)	T1.114-2000 Jun-00	
Services - CNAM - ATF - NS 800 - LNP - Flexible Number Rounting	Telcordia	Telcordia Technologies Generic Requirements, GR-1188-CORE: Calling Name Delivery Generic Requirements, Issue 2	GR-1188-CORE Dec-00		

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
		Telcordia	Telcordia Technologies Generic Requirements, GR-533-CORE: Database Services Service Switching Points - Toll-Free Service Generic Requirements, Issue 2	GR-533-CORE <i>Jun-01</i>	
		Telcordia	Telcordia Technologies Generic Requirements, GR-1299-CORE: Switch - Service Control Point (SCP) / Adjunct Interface Generic requirements, Issue 6	GR-1299-CORE <i>Nov-00</i>	
		Telcordia	Telcordia Technologies Generic Requirements, GR-1519-CORE: CCS Network Interface Specification (CCSNIS) Supporting TR-NWT-001188 Calling Name Delivery Generic Requirements, Issue 1A	GR-1519-CORE <i>Oct-94</i>	
		Telcordia	Telcordia Technologies Generic Requirements, GR-2982-CORE: Local Number LNP Capability, Issue 1	GR-2982-CORE <i>Dec-97</i>	
		Telcordia	Telcordia Technologies Generic Requirements, GR-246-CORE: Specification of Signaling System Number 7, Issue 5	GR-246-CORE <i>Dec-00</i>	
		Telcordia	Telcordia Technologies Generic Requirements, GR-2892-CORE: Switching and Signaling Generic Requirements for Toll-Free Service using AIN, Issue 1	GR-2892-CORE <i>Apr-95</i>	
SS7	LIDB	Telcordia	Telcordia Technologies Generic Requirements, GR-1158-CORE : OSSGR Section 22.3: Line Information Database, Issue 4	GR-1158-CORE <i>Dec-00</i>	SS7LidbTdr
			Telcordia Technologies Generic Requirements, GR-1149-CORE - OSSGR Section 10: System Interfaces, Issue 6	GR-1149-CORE <i>Sep-06</i>	
SS7	CLASS	Telcordia	Telcordia Technologies Generic Requirements, GR-1188-CORE: Calling Name Delivery Generic Requirements, Issue 2	GR-1188-CORE <i>Dec-00</i>	SS7ClassTdr
			Telcordia Technologies Generic Requirements, GR-215-CORE: LSSGR: CLASS Feature: Automatic Callback (FSD 01-02-1250), Issue 2	GR-215-CORE <i>Apr-02</i>	
			Telcordia Technologies Generic Requirements, GR-220-CORE: LSSGR: CLASS Feature: Screening List Editing (FSD 30-28-0000), Issue 2	GR-220-CORE <i>Apr-02</i>	
			Telcordia Technologies Generic Requirements, GR-227-CORE: LSSGR: CLASS Feature: Automatic Recall (FSD 01-02-1260), Issue 2	GR-227-CORE <i>Apr-02</i>	
SS7	WIN Services	Telcordia	Wireless Intelligent Network	EIA/TIA IS-771 <i>Jul-99</i>	SS7WinServiceTdr
	IS-771	Telcordia	Wireless Intelligent Network - Addendum 1	EIA/TIA IS-771 <i>Aug-01</i>	

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
		Telcordia	Cellular Radiotelecommunications ntersystem Operations, Revision B to E	EIS/TIA IS-41 <i>Nov-97</i>	
		3GPP2	Win Phase 1, Version 1.0	3GPP2 N.S0013-0 <i>Dec-98</i>	
		3GPP2	Win Phase 2, Version 1.0	3GPP2 N.S0004-0 <i>Apr-01</i>	
		3GPP2	ANSI -41-D Miscellaneous Enhancements, Version 1.0.0, Revision 0	3GPP2 N.S0015 <i>Jan-00</i>	
	IS-826	Telcordia	Wireless Intelligent Network Capabilities for pre-paid Charging	TIA/EIA/IS-826 (1 to 7) <i>Aug-00</i>	
	J-STD-036B	ANSI	Enhanced Wireless SP-3-3890-RV2 9-1-1 Phase II	J-STD-036-B <i>Jan-08</i>	
	IS-843	Telecommunicatio ns Industry Association	Wireless Intelligent network Support for Location Based Services	TIA-843 <i>Aug-04</i>	
	IS-801	Telecommunicatio ns Industry Association	Position Determination Service for cdma2000 Spread Spectrum Systems	TIA-801-A <i>Apr-04</i>	
	IS-881	Telecommunicatio ns Industry Association	TIA/EIA-41-D Location Services Enhancements	TIA-881 <i>Mar-04</i>	
	IS-725	Nortel	TIA/EIA-41-D Enhancements for Over-The- Air Service Provisioning (OTASP) & Parameter Administration (OTAPA), Version 1	TIA/EIA/IS-725-A <i>Mar-99</i>	
	IS-764	Telecommunicatio ns Industry Association	TIA/EIA-41-D Enhancements for Wireless Calling Name - Feature Descriptions	TIA-764 <i>Jan-02</i>	
	IS-756	Telcordia	TIA/EIA-41-D Enhancements for Wireless Number Portability Phase II	TIA/EIA/IS-756-A <i>Dec-98</i>	
SS7	BICC ETSI	ITU-T	Bearer Independant Call Control protocol Signaling System N°7 - ISDN User Part	Q.1901 <i>Apr-02</i> Q.763 <i>Sep-97</i> (Q.761 to Q.764, Q.766 and Q.767)	Ss7BICCetsiCdr

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
SS7	BICC ANSI	ANSI	Specifications of the Bearer Independant Call Control	ANSI T1.BICC.1-2000 to ANSI T1.BICC.7-2000 <i>Jan-00</i>	Ss7BICCAnsiCdr
SS7	SIGTRAN	IETF	Support only for ISUP Family Planned for MAP, INAP and IS-41		IPSctpStats IPSctpSudr SS7M2paStats SS7M2PaSudr Ss7M2uaStats Ss7M2uaSudr SS7M3uaStats Ss7M3uaSudr Ss7SccpSuaSudr Ss7SuaStats SS7_SIGTRAN_Transport_SUDR
	SCTP		Stream Control Transmission Protocol . Used as support for SIGTRAN	RFC 2960 <i>Oct-00</i>	
	M3UA		Signaling System 7 (SS7) Message Transfer Part 3 (MTP3) - User Adaptation Layer (M3UA). SUDR & Statistics	RFC 4666 <i>Sep-06</i>	
	M2UA		Signaling System 7 (SS7) Message Transfer Part 2 (MTP2) - User Adaptation Layer	RFC 3331 <i>Sep-02</i>	
	SUA		Signaling Connection Control Part User Adaptation Layer (SUA)	RFC 3868 <i>Oct-04</i>	
	M2PA		Signaling System 7 (SS7) Message Transfer Part 2 (MTP2) - User Peer-to-Peer Adaptation Layer (M2PA). SUDR & Statistics	RFC 4165 <i>Sep-05</i>	
GPRS / IP	GPRS Gn & Gp	ETSI	Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS);GPRS Tunneling Protocol (GTP) across the Gn and Gp Interface - 3GPP TS 09.60 Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); General Packet Radio Service (GPRS);GPRS Tunneling Protocol (GTP) across the Gn and Gp Interface - 3GPP TS 09.60	TS 101 347 V7.8.0 (Release 98) <i>Sep-01</i> TS 29.060 V12.6.0 (Release 12) <i>Sept-14</i>	GprsGnGpCdr GprsGnGpStats GprsGnGpTdr IP_Sessions_summary_TDR
GPRS	GPRS Gb				GprsGbTdr

PIC 10.2 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
	Network Service (NS)	ETSI	Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) Interface; Network Service - 3GPP TS 48.016	TS 48.016 V7.4.0 (Release 7) <i>Mar-08</i>	
	BSS GPRS Protocol (BSSGP)	ETSI	Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Base Station System (BSS) - Serving GPRS Support Node (SGSN) Interface; BSS GPRS Protocol (BSSGP) - 3GPP TS 48.018	TS 48.018 V7.13.0 (Release 7) <i>Dec-09</i>	
	Logical Link Control (LLC)	ETSI	Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Mobile Station - Serving GPRS Support Node (MS - SGSN) Logical Link Control Layer (LLC) - 3GPP TS 04.64	TS 44.064 V7.3.0 (Release 7) <i>Mar-08</i>	
	GPRS Mobility Management (GMM) GPRS Session Management (GSM)	ETSI	Digital cellular telecommunications system (Phase 2+)(GSM); Mobile Radio Interface; Layer 3 Specification - 3GPP TS 04.08	TS 24.008 V7.12.0 (Release 7) <i>Jun-08</i>	
	SNDCP	ETSI	Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Mobile Station - Serving GPRS Support Node (MS - SGSN); Subnetwork Dependent Convergence Protocol (SNDCP) - 3GPP TS 04.65	TS 24.065 V7.0.0 (Release 7) <i>Dec-06</i>	
	Short Message Service (SMS)	ETSI	Digital cellular telecommunications system (Phase 2+); Point-to-Point (PP) Short Message service (SMS) Support on Mobile Rdio Interface - 3GPP TS 04.11	TS 24.011 V7.1.0 (Release 7) <i>Jun-09</i>	
			Digital cellular telecommunications system (Phase 2+); Technical realization of Short Message Service (SMS) Point-to-Point (PP) - 3GPP TS 03.40	TS 23.040 V7.2.0 (Release 7) <i>Mar-09</i>	
GPRS	GPRS Gr & Gd	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile Application Part (MAP) specification - 3GPP TS 29.002	TS 29.002 V12.6.0 (Release 12) Sept-14	SS7MapTdr SS7_MAP_Compact_TDR

PIC 10.2 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
IP	DNS	IETF	Domain Names - Concepts and Facilities	RFC 1034 Nov-87 Not relevant or supported: RFC1101, RFC1183, RFC1348, RFC1876, RFC1982, RFC2065, RFC2181, RFC2308, RFC2535, RFC4033, RFC4034, RFC4035, RFC4343, RFC4035, RFC4592, RFC5936	IpDnsTdr
			Domain Names - Implementation and Specification	RFC 1035 Nov-87 Not relevant or supported: RFC1101, RFC1183, RFC1348, RFC1876, RFC1982, RFC1995, RFC1996, RFC2065, RFC2136, RFC2181, RFC2137, RFC2308, RFC2535, RFC2845, RFC3425, RFC3658, RFC4033, RFC4034, RFC4035, RFC4343, RFC5936, RFC5966	
IP	DNS ENUM	IETF	E.164 Number and DNS	RFC 2916 Sep-00	IpDnsEnumTdr
IP	RADIUS	IETF	Remote Authentication Dial In User Service (RADIUS)	RFC 2865 Jun-00 RFC2866 Jun-00 Not relevant or supported: RFC2868, RFC3575, RFC5080	IpRadius
IP	DHCP	IETF	Bootstrap protocol (BOOTP)	RFC 951 Sep-85 Not relevant or supported: RFC1395, RFC1497, RFC1532, RFC1542, RFC5494	IpDhcpTdr
	DHCP			RFC 2131 May-97 Not relevant or supported: RFC3396, RFC4361, RFC5494	
IP	WAP	WAP Forum / OMA	Wireless Transaction protocol	WAP-224-WTP-20010710-a Jul-01	IpWapv1Tdr
	WTP				
	WSP				

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
IP	MMS	OMA	Multimedia Messaging Service Encapsulation Protocol Version 1.1	OMA-MMS-ENC-v1_1-20021030-C <i>Oct-02</i>	IpMmsWapv1Tdr IpMmsWapv2Tdr
IP	HTTP	IETF	Hypertext Transfer Protocol - HTTP/1.1	RFC 2616 <i>Jun-99</i> Not relevant or supported: RFC2817, RFC5785, RFC6266	IpHttpTdr
IP	WAP2	IETF WAP Forum / OMA	Hypertext Transfer Protocol - HTTP/1.1 WAP Architecture	RFC 2616 <i>Jun-99</i> Not relevant or supported: RFC2817, RFC5785, RFC6266 WAP-210-WAPArch-20010712 <i>Jul-01</i>	IpWapv2Tdr
IP	POP3	IETF	Post Office protocol - Version 3	RFC 1460 <i>Jun-93</i>	IpPop3Tdr
IP	SMTP	IETF	Simple Mail Transfer Protocol	RFC 2821 <i>Apr-01</i>	IpSmtpTdr
IP	IMAP4	IETF	Internet Message Access Protocol - Version 4rev1	RFC 2060 <i>Mar-03</i>	IpImap4Tdr
IP	FTP	IETF	File Transfer Protocol	RFC 959 <i>Oct-85</i> Not relevant or supported: RFC2228, RFC2640, RFC2773, RFC3659, RFC5797	IpFtpTdr
IP	TCP	IETF	Transmission Control Protocol	RFC 793 <i>Sep-81</i> Not relevant or supported: RFC1122, RFC3168, RFC6093	IpTcpCdr
IP	RTSP	IETF	Real Time Streaming Protocol (RTSP)	RFC 2326 <i>Apr-98</i>	IpRtspTdr
		IETF	SDP:Session Description Protocol	RFC 2327 <i>Apr-98</i>	
IP	SMPP	SMS Forum	Short Message Peer-to-Peer protocol Specification, Version 5.0	SMPP v5.0 <i>Feb-03</i>	IpSmppTdr
IP	UCP	Logica CMG	Short Message Service center; EMI - UCP Interface 4.6	EMI UCP Interface <i>May-05</i>	IpUcpTdr
UMTS	UMTS				

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
	<p>Iu-CS Control Plane over IP</p> <p>Iu-PS Control Plane over IP</p>		<p>Universal Mobile Telecommunications System (UMTS); UTRAN Iu interface Radio Access Network Application Part (RANAP) signalling - 3GPP TS 25.413</p> <p>Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol - 3GPP TS 44.018</p> <p>Digital cellular telecommunications system (Phase 2+); Mobile Radio interface layer 3 supplementary service specification; Formats and Coding - 3GPP TS 04.80</p> <p>Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Technical realization of Short Message Service (SMS) Point-to-Point (PP) - 3GPP TS 24.011</p> <p>Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile radio interface Layer 3 specification; Core network protocols; Stage 3 - 3GPP TS 24.008</p> <p>Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); General Packet Radio Service (GPRS); GPRS Tunneling Protocol (GTP) across the Gn and Gp Interface - 3GPP TS 09.60</p>	<p>TS 25.413 V12.3.0 (Release 12) Dec-14</p> <p>TS 44.018 V12.3.0 (Release 12) Sept-14</p> <p>TS 24.080 V12.0.0 (Release 12) Sept-14</p> <p>TS 24.011 V12.0.0 (Release 12) Sept-14</p> <p>TS 24.008 V12.7.0 (Release 12) Sept-14</p> <p>TS 29.060 V12.6.0 (Release 12) Sept-14</p>	<p>Ran_CC2_Cdr Ran_MM_Tdr Ran_SMS_Tdr Ran_USSD UMTS_Iu_C_TDR UMTS_Iu_P_GMM_TDR UMTS_Iu_P_TDR UMTS_Iu_P_SM_TDR</p>
VoIP	VoIP SIP / SIP-T / SIP-I	IETF	SIP Session Initiation Protocol	<p>RFC 3261 Jun-02</p> <p>Not relevant or supported: RFC3853, RFC4320, RFC4916, RFC5393, RFC5621, RFC5626, RFC5630, RFC5922, RFC5954, RFC6026, RFC6141</p> <p>RFC 3262 Jun-02</p>	<p>VoipSipCdr VoipSiptAnsiCdr VoipSiptIuCdr</p>
		IETF	Reliability of Provisional Responses in the Session Initiation Protocol (SIP)		

PIC 10.2 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
		IETF	Session Initiation Protocol (SIP) - Specific Event Notification	RFC 3265 <i>Jun-02</i> Not relevant or supported: RFC5367, RFC5727, RFC6446	
		IETF	The Session Initiation Protocol (SIP) UPDATE Method	RFC 3311 <i>Sep-02</i>	
		IETF	The Session Initiation Protocol (SIP) Refer Method	RFC 3515 <i>Apr-03</i>	
		IETF	The SIP INFO Method	RFC 2976 <i>Oct-00</i>	
		IETF	Session Initiation Protocol for Telephones (SIP-T): Context and Architectures	RFC 3372 <i>Sep-02</i>	
		IETF	SDP:Session Description Protocol	RFC 2327 <i>Apr-98</i>	
		IETF	Session Description Protocol (SDP) Simple Capability Declaration	RFC 3407	
		ITU-T	Interworking between Session Initiation Protocol (SIP) and Bearer Independent Call Control Protocol or ISDN User Part.	Q.1912-5 <i>Mar-04</i>	
		Nortel	CS2000 SIP/SIP-T Interoperability Specification (Issue 0.82) System Requirement Document	Nortel CS2000 <i>01/10/2003</i>	
			Multiple Dialog Usages in the Session Initiation Protocol	<i>RFC5057</i>	
VoIP	VoIP H.225/Q.931	ITU-T	Serie H: Audiovisual and Multimedia Systems - Call Signalling protocols and media stream packetisation for packet-based multimedia communication systems	H.225.0 <i>Jul-03</i>	VoipQ931Cdr
		ITU-T	ISDN user-network interface layer 3 specification for basic call control	Q.931 <i>Dec-99</i>	
VoIP	VoIP H.225/RAS	ITU-T	Call Signalling protocols and media stream packetisation for packet-based multimedia communication systems	H.225.1 <i>Jul-03</i>	VoipRasTdr
VoIP	VoIP H.245	ITU-T	Control Protocol for multimedia communication	H.245 <i>Jul-03</i>	VoipH245Tdr
VoIP	VoIP RTCP	IETF	RTP: A Transport Protocol for Real-Time Application	RFC 3550, <i>Jul-03</i> RFC3551 <i>Jul-03</i> Not relevant or supported: RFC5506, RFC5761, RFC6051, RFC6222	VoipRtcpStats

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
VoIP	MGCP	IETF	Media Gateway Control Protocol (MGCP) version 1.0	RFC 3435 <i>Jan-03</i> Not relevant or supported: RFC3661	VoipMgcpCdr VoipMgcpTdr
		IETF	Media Gateway Control Protocol (MGCP) Return Code Usage	RFC 3661 <i>Dec-03</i>	
		IETF	Media Gateway Control Protocol (MGCP) Packages	RFC 3660 <i>Dec-03</i>	
VoIP	MEGACO	IETF	Gateway Control Protocol Version 1.0	RFC 3525 <i>Jun-03</i>	VoipMEGACOTdr
VoIP	H.248	ITU-T	Gateway Control Protocol: Version 2	H.248.1 <i>May-02</i> Supported packages H.248.2 until H.248.31	VoipH248Tdr
IMS	Diameter	IETF	Diameter Base Protocol	RFC 3588 <i>Sep-03</i>	ImsDiameterCcTdr ImsDiameterCxTdr ImsDiameterGqTdr ImsDiameterShTdr ImsDiameterTdr LTE_Diameter-TDR
		IETF	Diameter Credit-Control Application	RFC 4006 <i>Aug-05</i>	
	ETSI / 3GPP	3rd Generation Partnership Project; Technical Specification Group Service and System Aspects; Telecommunication management; Charging management;	TS 32.299 V12.6.0 (Release 12) Sept-14		
	ETSI	Diameter charging applications Universal Mobile Telecommunications System (UMTS); Policy control over Gq interface (3GPP TS 29.209 version 6.5.0 Release 6) . Replaced by Rx in LTE	TS 29.209 V6.5.0 (Release 6) <i>Jun-06</i>		
Diameter Gq	ETSI	Diameter over Gq interface (3GPP TS 29.209 version 6.5.0 Release 6) . Replaced by Rx in LTE			
Diameter Cx/Dx	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents 3GPP TS 29.228	TS 29.228 V12.3.0 (Release 12) Sept-14		
	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Cx and Dx interfaces based on the Diameter protocol 3GPP TS 29.229	TS 29.229 V12.3.0 (Release 12) Sept-14		

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
	Diameter Sh	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Diameter applications; 3GPP specific codes and identifiers 3GPP TS 29.230	TS 29.230 V12.6.0 (Release 12) Sept-14	
		ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Sh interface based on the Diameter protocol; 3GPP TS 29.329	TS 29.329 V12.4.0 (Release 12) Sept-14	
LTE	Diameter S6	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Evolved Packet System (EPS); Mobility Management Entity (MME) and Serving GPRS Support Node (SGSN) related interfaces based on Diameter protocol (Release 9)	TS 29.272 V12.6.0 (Release 12) Sept-14	LTE_Diameter_S6_TDR LTE_Diameter_SUDR_Accounting LTE_Diameter-TDR
	Diameter Gx/S7	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Policy and Charging Control over Gx reference point (Release 9)	TS 29.212 V12.6.0 (Release 12) Sept-14	LTE_Diameter_Gx_TDR LTE_Diameter-TDR
	Diameter Rx	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Policy and Charging Control over Rx reference point (Release 9)	TS 29.214 V12.5.0 (Release 12) Sept-14	LTE_Diameter_Rx_TDR LTE_Diameter-TDR
	Diameter Gy	3GPP	3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; Charging management; Diameter charging applications	TS 32.299 V12.6.0 (Release 12) Sept-14	LTE_DIAMETER_Gy_TDR LTE_Diameter-TDR
	Diameter S9	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Policy and Charging Control (PCC) over S9 reference point; Stage 3	TS 29.215 V12.5.0 (Release 12) Sept-14	LTE_DIAMETER_S9_TDR LTE_Diameter-TDR
	Diameter AAA	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Evolved Packet System (EPS); 3GPP EPS AAA interfaces	TS 29.273 V12.5.0 (Release 12) Sept-14	LTE_Diameter_AAA_TDR

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
	Diameter LCS	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Location Services (LCS); Evolved Packet Core (EPC) LCS Protocol (ELP) between the Gateway Mobile Location Centre (GMLC) and the Mobile Management Entity (MME); SLg interface	TS 29.172 V12.4.0 (Release 12) Mar-14	LTE_Diameter_LCS_TDR
			3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Location Services (LCS); Diameter-based SLh interface for Control Plane LCS	TS 29.173 V12.2.0 (Release 12) Sept-14	
	GTPv2	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; 3GPP Evolved Packet System (EPS); Evolved General Packet Radio Service (GPRS) Tunneling Protocol for Control plane (GTPv2-C); Stage 3 (Release 9)	TS 29.274 V12.6.0 (Release 12) Sept-14	LTE_GTP_v2_Tunnel_Management_TDR LTE_GTP_v2_Mobility_Management_TDR LTE_GTP_v2_Sv_TDR
	S1-AP	3GPP	3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP) (Release 9)	TS 36.413 V12.3.0 (Release 12) Sept-14	LTE_S1AP_TDR RAN_ESM_TDR RAN_EMM_TDR
		3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS); Stage 3 (Release 9)	TS 24.301 V12.6.0 (Release 12) (Release 12)Sept-14	
	SGs	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; Mobility Management Entity (MME) – Visitor Location Register (VLR) SGs interface specification (Release 9)	TS 29.118 V12.6.0 (Release 12) Sept-14	LTE_SGsAP_TDR

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Family	Protocol	Organization	Complete Reference	PIC 10.2 standards	Final builder
	LTE User Plane (S5-U, S8-U, S1-U, S12-U)	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; General Packet Radio System (GPRS) Tunnelling Protocol User Plane (GTPv1-U) (Release 9)	TS 29.281 V11.6.0 (Release 11) Mar-13	LTE_GTP_User_Plane_Capture

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Appendix B: My Oracle Support (MOS)

MOS (<https://support.oracle.com>) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at <http://www.oracle.com/us/support/contact/index.html>. When calling, make the selections in the sequence shown below on the Support telephone menu:

1. Select 2 for New Service Request
2. Select 3 for Hardware, Networking and Solaris Operating System Support
3. Select 2 for Non-technical issue

You will be connected to a live agent who can assist you with MOS registration and provide Support Identifiers. Simply mention you are a Tekelec Customer new to MOS.

MOS is available 24 hours a day, 7 days a week, 365 days a year.

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Appendix C: Locate Product Documentation on Oracle Help Center

Oracle customer documentation is available on the web at the Oracle Help Center (OHC) site, <http://docs.oracle.com>. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. Log into Oracle Help Center at <http://docs.oracle.com>.
2. Under Industries, click the link for Oracle Communications documentation.

The Oracle Communications Documentation window opens.

4. Navigate to your product and then the release number.
5. To download a file to your location, right-click the PDF link and select Save Target As.