

**Oracle® Communications  
Performance Intelligence Center**

**Release Notes**

Controlled Availability Release 10.1.5.1

**E66845 Revision 5**

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**ORACLE®**

## Oracle Communications Performance Intelligence Center Release Notes, Release 10.1.5.1

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See more information on MOS in the Appendix section.

## PIC 10.1.5.1 Release Notes

### Oracle communication PIC 10.1.5.1 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.**

## PIC 10.1.5.1 Release Notes

### Content Summary

PIC 10.1.5.1 is only intended for customers that have purchased the Data Broker for Accounting feature.

#### Platform Lifecycle:

This release supports new qualified Hardware with HP Gen9 RMS:

- ✓ Management
  - HP Gen9 RMS (patch 22180475 will backport the feature in 10.1.5.0)

#### PIC Mediation Features / xDR Builder improvement

Addition of new feature 'Oracle Communications Performance Intelligence Center, Mediation Protocol Data Broker ', comprising IS-41, MAP and CAMEL DataBroker builders and Databroker streaming.

### Feature name mapping

<b>Legacy Feature Naming</b>	<b>Oracle Feature Naming</b>
<b>Data Acquisition Layer</b>	<b>Data Acquisition - Integrated</b>
Integrated Message Feeder (IMF)	Oracle Communications Performance Intelligence Center, Integrated Acquisition
<b>Data Acquisition Layer</b>	<b>Data Acquisition - Probed</b>
Probe Message Feeder ( PMF)	Oracle Communications Performance Intelligence Center, Probed Acquisition
<b>Data Acquisition Layer - Options</b>	<b>Data Acquisition - Product Option</b>
MSU data feed at xMF (TADAPT)	Oracle Communications Performance Intelligence Center, Acquisition DataFeed
<b>Data Mediation &amp; Storage Layer, or 'IXP' (Integrated xDR Platform)</b>	<b>Data Mediation</b>
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
<b>Data Mediation - Options</b>	<b>Data Mediation - Product Option</b>
Data feeds	Oracle Communications Performance Intelligence Center, Mediation DataFeed
<b>Applications Layer</b>	<b>Applications</b>
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
<b>Applications Layer -Options</b>	<b>Applications - Product Options</b>
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

## PIC 10.1.5.1 Release Notes

### Load Lineup for the Baseline Release

The software for Oracle Communications Performance Intelligence Center Release 10.1.5.1 is available on Oracle Software Delivery Cloud <https://edelivery.oracle.com/>

<b>PIC 10.1.5.1.0-6.1.0</b>	<b>Software Version</b>	<b>Zip SKU</b>
Mediation Server – IXP	10.1.5.1.0-6.1.0	V100047-01
Management – NSP	10.1.5.1.0-5.1.0	V100049-01
Probed and Integrated Acquisition – xMF	10.1.5.1.0-6.1.0	V100050-01
Mediation Protocol - xDR Builder	10.1.5.1.0-3.1.0	V100046-01
Oracle Database 11g Release 2 Patch Set	11.2.0.4	V73911-01
WebLogic for 64bits JVM support product	10.3.6.0	V77401-01
<b>Platform Components</b>		
TPD Linux HP	7.0.2.0.0-86.28.0	V77391-01
<b>Packages needed for installing PIC</b>		
Java 7	7U91 or later	
Oracle Linux 7 Update 1	7.1.0.0.0	
<b>Firmware</b>		
HP Solutions Firmware Upgrade Pack	2.2.9	

Some other packages are required in the installation MOS notes used for Data Record Storage, Packet Data Unit Storage and Management servers.

Above versions indicated are versions PIC was tested. For the latest

- Java 7 refer to MOS Information Center: Installation & Configuration for Oracle Java SE (Doc ID 1412103.2)
- HP Firmware refer to OTN [http://docs.oracle.com/cd/E57832\\_01/index.htm](http://docs.oracle.com/cd/E57832_01/index.htm)

## PIC 10.1.5.1 Release Notes

### Upgrade and Installation

Upgrade/Installations are supported with the software distributions described in these Release Notes. Documents are available on OTN and MOS

There is no upgrade and migration path from any previous release. **Only fresh install is supported.**

Fresh Install Support: PIC 10.1.5.1

Data Record Storage, Packet Data Unit Storage and Management server's installation guidelines are provided in the following MOS notes:

- Mediation Data Warehouse Server (DWS) on Third-Party Server Installation Guide for Performance Intelligence Center (PIC) products (Doc ID 2028670.1)
- PIC Packet Data Unit Storage (PDU) on Third-Party Server Installation Guide (Doc ID 2034894.1)
- Management Server (NSP) on Third-Party Server Installation Guide for Performance Intelligence Center (PIC) Products (Doc ID 2062544.1)
- Oracle linux on Third-Party Server Installation Guide for Performance Intelligence Center (PIC) Products (Doc ID 2061666.1)
- Oracle ASM and Database on Third-Party Server Installation Guide for Performance Intelligence Center (PIC) Products (Doc ID 2062491.1)

Incremental Upgrade Support: PIC 10.1.5.1 to 10.1.5.1

For patching purpose

Disaster Recovery: PIC 10.1.5.1

For (re-)installation of supported hardware

### Hardware baseline for new projects and supported Hardware

Refer to PIC Hardware installation Guidelines – Release 10.1.5 – E64544-01 available on OTN

### Legacy interoperability

Interoperability with Falco SS7/Gb converter is supported excepted in the new data broker builders introduced in this release.

### EAGLE compatibility

Oracle Communication PIC 10.1.5.1 has been validated with the following EAGLE Releases:

PIC Release Baseline	EAGLE Release Baseline
PIC 10.1.5.1	EAGLE 46.x

## **PIC 10.1.5.1 Release Notes**

### **Documentation Library**

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 NSP Installation Manual for details on how to update user documentation. Additionally, all customer documentation is available on the Oracle Technology Network (OTN). Release Notes are available on OTN with each new release of software. The Release Notes list the PRs that have been resolved in the current release and the Bugs that are known to exist in the current release.

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

- Security Guide
- NSP Security User's Guide
- Alarm Forwarding Administrator's Guide
- ProAlarm Viewer User's Guide
- ProAlarm Configuration User's Guide
- Centralized Configuration Manager Administrator's Guide
- Customer Care User's Guide
- ProTraq User's Guide
- ProPerf User's Guide
- ProPerf Configuration User's Guide
- System Alarms User's Guide
- ProTrace User's Guide
- Data Feed Export User's Guide
- Audit Viewer Administrator's Guide
- ProDiag User's Guide
- SigTran ProDiag User's Guide
- Reference Data User's Guide
- Exported Files User's Guide
- Scheduler User's Guide
- Quick Start User's Guide

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

## PIC 10.1.5.1 Release Notes

### Known Issues

Bug	Title	Workaround
19285045	Filtering using % is not working	In database run these update queries - update COR_DATASRC_PATTERN_COND set PATTERN_CONDITION = 'LIKE~%' where DATASOURCE_ID=5 and PATTERN_ID='%' and PATTERN_CONDITION = 'LIKE'; - update COR_DATASRC_PATTERN_COND set PATTERN_CONDITION = 'NOT LIKE~%' where DATASOURCE_ID=5 and PATTERN_ID='%' and PATTERN_CONDITION = 'NOT LIKE';
19642455	Third party MFP Feed setup is no more displayed in GUI after Migration	Go to acquisition->xMF site->PDU Data Flows-> select the DF you want to use for MFP stream. Click on manage MFP routes and move the application on which you want to configure MFP stream.
	FIPS integrity verification test failed when initiating SSH session	Keep the file /etc/system-fips however you have the message. Erasing the file will make fail the next TPD upgrade.
	hpacucli is not available on TPD 7.0.x	Use hpssacli instead of hpacucli on HP servers.
20980417	NSP_LOG tablespace to fill up	It is recommended to fix the issue generating the high number of alarms. Otherwise tablespace should be increased.
21373845	Cancel change is not working on major upgrade setup	Execute the following commands on NSP Database: INSERT INTO COR_MANAGED_OBJECT(MO_ID, MO_CLASS_ID, NAME, MO_OID, PARENT_ID, RESOURCE_DATA_ID) SELECT DATASOURCE_ID, 37, NAME, OID, NULL, NULL FROM CFG_DATASOURCE WHERE DATASOURCE_ID NOT IN (SELECT MO_ID FROM COR_MANAGED_OBJECT) AND DATA_TYPE=0; COMMIT;
21964119	Dataflow processing[name of DFP] takes wild card characters while creating DFP m	Don't use wildcard character.
22078447	"null" directory created after PIC incremental upgrade	Problem will only occur in case user has performed "Cancel changes" operation.  User has to:  1. Login as MGMT user to MGMT Database 2. Execute following commands  SQL> UPDATE CFG_FEED_PARAMS SET PARAM_VALUE = null WHERE TO_CHAR(PARAM_VALUE) = 'null' AND PARAM_TYPE_ID IN (SELECT PARAM_TYPE_ID FROM CFG_FEED_PARAMTYPE WHERE NAME = 'DIRECTORY'); SQL> COMMIT;



## **PIC 10.1.5.1 Release Notes**

### **Bug**

*There are no bugs fixed in this release.*

## PIC 10.1.5.1 Release Notes

### 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 10.1 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 <i>Jul-87</i>	SS7BtntpCdr
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 <i>Oct-99</i>  PNO-ISC/SPEC/006 <i>Jul-00</i>	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 <i>Jun-05</i>  TICO076E <i>Feb-98</i>	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) <i>Nov-88</i>	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 <i>Apr-99</i>	see ISUP V3
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

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Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
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 Digital 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
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>	

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Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
		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> 171/155 17-CRT 249 12 Uen <i>Jun-03</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
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
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 - <b>GSM 09.78</b>	TS 101 046 V7.0.0 (Release 98) <i>Aug-99</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR

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Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
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 - <b>GSM 29.78</b>	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 - <b>GSM 29.78</b>	TS 129 078 V6.5.0 (Release 6) <i>Jun-06</i>	SS7InapSudrAccounting SS7InapTdr SS7_INAP_Compact_TDR
SS7	<b>BSSAP (Phase 2+) BSSMAP</b>	ETSI	Digital cellular telecommunications system (Phase 2+); Mobile-services Switching Centre – Base Station System (MSC – BSS) interface; Layer 3 specification - <b>3GPP TS 08.08</b>	TS 48.008 V7.13.0 (Release 7) <i>Sep-08</i>	RanCC2Cdr RanMMTdr RanSMSTdr RanUSSD SS7BssapTdr
	<b>DTAP</b>		Digital cellular telecommunications system (Phase 2+); Mobile Radio Interface; Layer 3 specification - <b>3GPP TS 04.08</b>	TS 24.008 V7.12.0 (Release 7) <i>Jun-08</i>	
	<b>SMS</b>		Digital cellular telecommunications system (Phase 2+); Point-to-Point (PP) Short message Service support on mobile radio interface - <b>3GPP TS 04.11</b>	TS 24.011 V7.1.0 (Release 7) <i>Jun-09</i>	
	<b>SMS SM-TP</b>		Digital cellular telecommunications system (Phase 2+); Technical realization of the short Message Service (SMS) - <b>3GPP TS 03.40</b>	TS 23.040 V7.2.0 (Release 7) <i>Mar-09</i>	
	<b>Supplementary Services</b>		Digital cellular telecommunications system (Phase 2+); Mobile Radio interface layer 3 supplementary service specification; Formats and Coding - <b>3GPP TS 04.80</b>	TS 24.080 V7.4.0 (Release 7) <i>Sep-07</i>	
SS7	<b>BSSAP+ (Gs Interface)</b>	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 - <b>3GPP TS 29.018</b>	TS 29.018 V6.5.0 (Release 6) <i>Dec-06</i>	Ss7GsInterfaceTdr

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Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
SS7	GSM MAP	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile Application Part (MAP) specification - <b>3GPP TS 29.002</b>	TS 29.002 V7.14.0 (Release 7) <i>Dec-09</i>	Ss7HLRVTdr SS7MapTdr SS7MapSudrAccounting SS7MapSmTdr SS7MapMultiLegTdr SS7MapDB SS7Smdr SS7_MAP_Compact_TDR
SS7	IS-41 Révisions B, C, D & E (MAP)  MEID  IS-41-P  IS-41-EE	ANSI	Cellular Radiotelecommunications Intersystem Operations	ANSI/TIA/EIA-41-D-1997 <i>Nov-97</i>	SS7IS41DB SS7IS41DE SS7IS41Tdr
		3GPP2	3G Mobile Equipment identifier (MEID) - Stage 1	3GPP2 S.R0048-A Ver 4.0 <i>Jun-05</i>	
		Telecommunications Industry Association	MEID Standards Update, version 1.8.4	TIA-MEID <i>Apr-06</i>	
		Lucent	ANSI -41 Protocol Extensions for Interfaces C and D (HLR - VLR/MSC) - Issue 2.0	IS-41-P <i>Nov-04</i>	
Ericsson	IS-41 Intersystem Call delivery Signalling	IS-41-EE <i>Jan-99</i>			
SS7	ISDN over IUA	ITU-T	ISDN user-network interface layer 3 specification for basic call control	Q.931 <i>May-98</i>	VoIP_Q_931_Cdr
SS7	AIN  MTP ANSI Level 2 & 3  SCCP ANSI  TCAP (IS-41 support)  Services - CNAM - ATF - NS 800 - LNP - Flexible Number Rounting	ANSI	Signalling System N°7 - Message Transfer Part (MTP)	T1.111-1996 <i>Mar-96</i>	SS7AinTdr
		ANSI	Signalling System Number 7 - Signalling Connection Control Part (SCCP)	T1.112-1996 <i>Jan-96</i>	
		ANSI	Signalling System Number 7 (SS7) - Transaction Capabilities Application Part (TCAP)	T1.114-2000 <i>Jun-00</i>	
		Telcordia	Telcordia Technologies Generic Requirements, GR-1188-CORE: Calling Name Delivery Generic Requirements, Issue 2	GR-1188-CORE <i>Dec-00</i>	
		Telcordia	Telcordia Technologies Generic Requirements, GR-533-CORE: Datababase 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>			

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Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
		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>	
<b>SS7</b>	<b>LIDB</b>	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>	
<b>SS7</b>	<b>CLASS</b>	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>	
<b>SS7</b>	<b>WIN Services</b>  <b>IS-771</b>	Telcordia	Wireless Intelligent Network	EIA/TIA IS-771 <i>Jul-99</i>	SS7WinServiceTdr
		Telcordia	Wireless Intelligent Network - Addendum 1	EIA/TIA IS-771 <i>Aug-01</i>	
		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>	

**PIC 10.1.5.1 Release Notes**

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
	<b>IS-826</b>	3GPP2	ANSI -41-D Miscellaneous Enhancements, Version 1.0.0, Revision 0	3GPP2 N.S0015 <i>Jan-00</i>	
	<b>J-STD-036B</b>	Telcordia	Wireless Intelligent Network Capabilities for pre-paid Charging	TIA/EIA/IS-826 (1 to 7) <i>Aug-00</i>	
	<b>IS-843</b>	ANSI	Enhanced Wireless SP-3-3890-RV2 9-1-1 Phase II	J-STD-036-B <i>Jan-08</i>	
	<b>IS-801</b>	Telecommunications Industry Association	Wireless Intelligent network Support for Location Based Services	TIA-843 <i>Aug-04</i>	
	<b>IS-881</b>	Telecommunications Industry Association	Position Determination Service for cdma2000 Spread Spectrum Systems	TIA-801-A <i>Apr-04</i>	
	<b>IS-725</b>	Nortel	TIA/EIA-41-D Location Services Enhancements	TIA-881 <i>Mar-04</i>	
	<b>IS-764</b>	Telecommunications Industry Association	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>	
	<b>IS-756</b>	Telcordia	TIA/EIA-41-D Enhancements for Wireless Calling Name - Feature Descriptions	TIA-764 <i>Jan-02</i>	
			TIA/EIA-41-D Enhancements for Wireless Number Portability Phase II	TIA/EIA/IS-756-A <i>Dec-98</i>	
<b>SS7</b>	<b>BICC ETSI</b>	ITU-T	Bearer Independant Call Control protocol	Q.1901 <i>Apr-02</i>	Ss7BICCEtsiCdr
			Signaling System N°7 - ISDN User Part	Q.763 <i>Sep-97</i> (Q.761 to Q.764, Q.766 and Q.767)	
<b>SS7</b>	<b>BICC ANSI</b>	ANSI	Specifications of the Bearer Independant Call Control	ANSI T1.BICC.1-2000 to ANSI T1.BICC.7-2000 <i>Jan-00</i>	Ss7BICCAnsiCdr



**PIC 10.1.5.1 Release Notes**

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
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 Oct-00	
	M3UA		Signaling System 7 (SS7) Message Transfer Part 3 (MTP3) - User Adaptation Layer (M3UA). SUDR & Statistics	RFC 4666 Sep-06	
	M2UA		Signaling System 7 (SS7) Message Transfer Part 2 (MTP2) - User Adaptation Layer	RFC 3331 Sep-02	
	SUA		Signaling Connection Control Part User Adaptation Layer (SUA)	RFC 3868 Oct-04	
	M2PA		Signaling System 7 (SS7) Message Transfer Part 2 (MTP2) - User Peer-to-Peer Adaptation Layer (M2PA). SUDR & Statistics	RFC 4165 Sep-05	
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 - <b>3GPP TS 09.60</b>	TS 101 347 V7.8.0 (Release 98) Sep-01	GprsGnGpCdr GprsGnGpStats GprsGnGpTdr IP_Sessions_summary_TDR
			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 - <b>3GPP TS 09.60</b>	TS 29.060 V11.6.0 (Release 11) Mar-13	
GPRS	GPRS Gb  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 - <b>3GPP TS 48.016</b>	TS 48.016 V7.4.0 (Release 7) Mar-08	GprsGbTdr

## PIC 10.1.5.1 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
	<b>BSS GPRS Protocol (BSSGP)</b>	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) - <b>3GPP TS 48.018</b>	TS 48.018 V7.13.0 (Release 7) <i>Dec-09</i>	
	<b>Logical Link Control (LLC)</b>	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) - <b>3GPP TS 04.64</b>	TS 44.064 V7.3.0 (Release 7) <i>Mar-08</i>	
	<b>GPRS Mobility Management (GMM) GPRS Session Management (GSM)</b>	ETSI	Digital cellular telecommunications system (Phase 2+)(GSM); Mobile Radio Interface; Layer 3 Specification - <b>3GPP TS 04.08</b>	TS 24.008 V7.12.0 (Release 7) <i>Jun-08</i>	
	<b>SNDCP</b>	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) - <b>3GPP TS 04.65</b>	TS 24.065 V7.0.0 (Release 7) <i>Dec-06</i>	
	<b>Short Message Service (SMS)</b>	ETSI	Digital cellular telecommunications system (Phase 2+); Point-to-Point (PP) Short Message service (SMS) Support on Mobile Rdio Interface - <b>3GPP TS 04.11</b>	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) - <b>3GPP TS 03.40</b>	TS 23.040 V7.2.0 (Release 7) <i>Mar-09</i>	
<b>GPRS</b>	<b>GPRS Gr &amp; Gd</b>	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile Application Part (MAP) specification - <b>3GPP TS 29.002</b>	TS 29.002 V7.14.0 (Release 7) <i>Dec-09</i>	SS7MapTdr SS7_MAP_Compact_TDR
<b>IP</b>	<b>DNS</b>	IETF	Domain Names - Concepts and Facilities	RFC 1034 <i>Nov-87</i> Not relevant or supported: RFC1101, RFC1183, RFC1348, RFC1876, RFC1982, RFC2065, RFC2181, RFC2308, RFC2535, RFC4033, RFC4034, RFC4035, RFC4343, RFC4035, RFC4592, RFC5936	IpDnsTdr

## PIC 10.1.5.1 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
			Domain Names - Implementation and Specification	RFC 1035 <i>Nov-87</i> 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 <i>Sep-00</i>	IpDnsEnumTdr
IP	RADIUS	IETF	Remote Authentication Dial In User Service (RADIUS)	RFC 2865 <i>Jun-00</i> RFC2866 <i>Jun-00</i> Not relevant or supported: RFC2868, RFC3575, RFC5080	IpRadius
IP	DHCP				IpDhcpTdr
	BOOTP	IETF	Bootstrap protocol (BOOTP)	RFC 951 <i>Sep-85</i> Not relevant or supported: RFC1395, RFC1497, RFC1532, RFC1542, RFC5494	
	DHCP	IETF	Dynamic Host Configuration Protocol	RFC 2131 <i>May-97</i> Not relevant or supported: RFC3396, RFC4361, RFC5494	
IP	WAP				IpWapv1Tdr
	WTP	WAP Forum / OMA	Wireless Transaction protocol	WAP-224-WTP-20010710-a <i>Jul-01</i>	
	WSP	WAP Forum / OMA	WAP - Wireless Session Protocol Specification	WAP-230-WSP-20010705-p <i>Jul-01</i>	
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	Hypertext Transfer Protocol - HTTP/1.1	RFC 2616 <i>Jun-99</i> Not relevant or supported: RFC2817, RFC5785, RFC6266	IpWapv2Tdr

**PIC 10.1.5.1 Release Notes**

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
		WAP Forum / OMA	WAP Architecture	WAP-210-WAPArch-20010712 <i>Jul-01</i>	
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  Iu-CS Control Plane over IP Iu-PS Control Plane over IP		Universal Mobile Telecommunications System (UMTS); UTRAN Iu interface Radio Access Network Application Part (RANAP) signalling - <b>3GPP TS 25.413</b>  Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol - <b>3GPP TS 44.018</b>  Digital cellular telecommunications system (Phase 2+); Mobile Radio interface layer 3 supplementary service specification; Formats and Coding - <b>3GPP TS 04.80</b>	TS 25 413 V7.10.0 (Release 7) <i>Mar-09</i>  TS 44 018 V7.17.0 (Release 7) <i>Jun-09</i>  TS 24.080 V7.4.0 (Release 7) <i>Sep-07</i>	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

**PIC 10.1.5.1 Release Notes**

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
	Iu-PS User Plane over IP	ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Technical realization of Short Message Service (SMS) Point-to-Point (PP) - <b>3GPP TS 24.011</b>	TS 24.011 V7.1.0 (Release 7) <i>Jun-09</i>	
			Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Mobile radio interface Layer 3 specification; Core network protocols; Stage 3 - <b>3GPP TS 24.008</b>	TS 24.008 V7.12.0 (Release 7) <i>Jun-08</i>	
			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 - <b>3GPP TS 09.60</b>	TS 29.060 V11.6.0 (Release 11) Mar-13	
VoIP	VoIP SIP / SIP-T / SIP-I	IETF	<b>SIP</b> Session Initiation Protocol	RFC 3261 <i>Jun-02</i> Not relevant or supported: RFC3853, RFC4320, RFC4916, RFC5393, RFC5621, RFC5626, RFC5630, RFC5922, RFC5954, RFC6026, RFC6141	VoipSipCdr VoipSiptAnsiCdr VoipSiptIcuCdr
		IETF	Reliability of Provisional Responses in the Session Initiation Protocol (SIP)	RFC 3262 <i>Jun-02</i>	
		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 ( <b>SIP-T</b> ): 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>	

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Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
		Nortel	CS2000 SIP/SIP-T Interoperability Specification (Issue 0.82) System Requirement Document	Nortel CS2000 01/10/2003	
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 Jul-03	VoipQ931Cdr
		ITU-T	ISDN user-network interface layer 3 specification for basic call control	Q.931 Dec-99	
VoIP	VoIP H.225/RAS	ITU-T	Call Signalling protocols and media stream packetisation for packet-based multimedia communication systems	H.225.1 Jul-03	VoipRasTdr
VoIP	VoIP H.245	ITU-T	Control Protocol for multimedia communication	H.245 Jul-03	VoipH245Tdr
VoIP	VoIP RTCP	IETF	RTP: A Transport Protocol for Real-Time Application	RFC 3550, Jul-03 RFC3551 Jul-03  Not relevant or supported: RFC5506, RFC5761, RFC6051, RFC6222	VoipRtcpStats
VoIP	MGCP	IETF	Media Gateway Control Protocol (MGCP) version 1.0	RFC 3435 Jan-03 Not relevant or supported: RFC3661	VoipMgcpCdr VoipMgcpTdr
		IETF	Media Gateway Control Protocol (MGCP) Return Code Usage	RFC 3661 Dec-03	
		IETF	Media Gateway Control Protocol (MGCP) Packages	RFC 3660 Dec-03	
VoIP	MEGACO	IETF	Gateway Control Protocol Version 1.0	RFC 3525 Jun-03	VoipMEGACOTdr
VoIP	H.248	ITU-T	Gateway Control Protocol: Version 2	H.248.1 May-02 Supported packages H.248.2 until H.248.31	VoipH248Tdr
IMS	Diameter	IETF	Diameter Base Protocol	RFC 3588 Sep-03	ImDiameterCcTdr ImDiameterCxTdr ImDiameterGqTdr ImDiameterShTdr ImDiameterTdr
	Diameter Credit-Control (Cc, Ro,	IETF	Diameter Credit-Control Application	RFC 4006 Aug-05	

**PIC 10.1.5.1 Release Notes**

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
	Rf, Gy, Ga)				
	Diameter Gq	ETSI / 3GPP	3rd Generation Partnership Project; Technical Specification Group Service and System Aspects; Telecommunication management; Charging management;	TS 32.299 V6.12.0 (release 6) Sep-07	
	Diameter Cx/Dx	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) Jun-06	
	Diameter Sh	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 <b>3GPP TS 29.228</b>	TS 29 228 V6.11.0 (Release 6) Jun-06	
		ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Cx and Dx interfaces based on the Diameter protocol <b>3GPP TS 29.229</b>	TS 29 229 V6.8.0 (Release 6) Jun-06	
		ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Diameter applications; 3GPP specific codes and identifiers <b>3GPP TS 29.230</b>	TS 29 230 V6.8.0 (Release 6) Jun-06	
		ETSI	Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Sh interface based on the Diameter protocol; <b>3GPP TS 29.329</b>	TS 29 329 V11.6.0 (Release 6) Mar-13	
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 V9.4.0 (Release 9) Sep-10	LTE_Diameter_S6_TDR LTE_Diameter_SUDR_Accounting
	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 V9.4.0 (Release 9) Sep-10	LTE_Diameter_Gx_TDR

## PIC 10.1.5.1 Release Notes

Family	Protocol	Organization	Complete Reference	PIC 10.1 standards	Final builder
	<b>Diameter Rx</b>	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 V9.4.0 (Release 9) <i>Sep-10</i>	LTE_Diameter_Rx_TDR
	<b>Diameter Gy</b>	3GPP	3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Telecommunication management; Charging management; Diameter charging applications	TS 32.299 V11.7.0 (Release 11) Mar-13	LTE_DIAMETER_Gy_TDR
	<b>Diameter S9</b>	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 V11.8.0 (Release 11) Mar-13	LTE_DIAMETER_S9_TDR
	<b>GTPv2</b>	3GPP	3rd Generation Partnership Project; Technical Specification Group Core Network and Terminals; 3GPP Evolved Packet System (EPS); Evolved General Packet Radio Service (GPRS) Tunnelling Protocol for Control plane (GTPv2-C); Stage 3 (Release 9)	TS 29.274 V9.4.0 (Release 9) <i>Sep-10</i>	LTE_GTP_v2_Tunnel_Management_TDR LTE_GTP_v2_Mobility_Management_TDR
	<b>S1-AP</b>	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 V11.3.0 (Release 11) Mar-13	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 V11.6.0 (Release 11) Mar-13	
	<b>SGs</b>	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 V9.6.0 (Release 9) <i>Dec-12</i>	LTE_SGsAP_TDR
	<b>LTE User Plane (S5-U, S8-U, S1-U, S12-U)</b>	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



## PIC 10.1.5.1 Release Notes

### 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.

## PIC 10.1.5.1 Release Notes

### Appendix C: Locate Product Documentation on the Oracle Technology Network Site

Oracle customer documentation is available on the web at the Oracle Technology Network (OTN) 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](http://www.adobe.com).

1. Access the Oracle Help Center site at <http://docs.oracle.com>.
2. Click Industries.
3. Under the Oracle Communications subheading, click the Oracle Communications documentation link. The Communications Documentation page appears.
4. Under the heading "Network Visibility and Resource Management", click on the Performance Intelligence Center link. The Performance Intelligence Center Documentation page appears. Click on the release. A list of the entire documentation set for the selected release appears.
5. To download a file to your location, right-click the PDF link, select Save target as (or similar command based on your browser), and save to a local folder.