



ZXUN USPP Series SPR Product Description



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Figure 1-1 Location of ZXUN USPP (SPR) in Mobile Network..... 1

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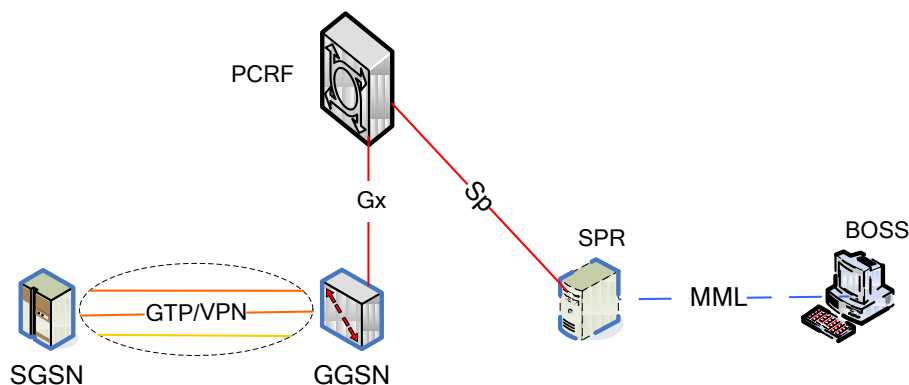
Table 5-1 Typical Capacity Indices of ZXUN USPP (SPR)5

1 Overview

ZXUN USPP (SPR) is designed in accordance with the 3GPP R8 specifications and TISPAN specifications. It is a database that stores user data and provides the user policy information. SPR connects to PCRF in the network. When the user access packet network, PCRF achieves the user policy information from SPR for policy decision, and then according to PCRF's strategy GGSN controls the user services.

Following figure shows the SPR location in the network.

Figure 1-1 Location of ZXUN USPP (SPR) in Mobile Network



ZXUN USPP (SPR) provides the following functions:

- Management and maintenance of user subscription profile information. ZXUN USPP (SPR) provides an external interface for data maintenance.
- Sp Interface: ZXUN USPP (SPR) supports PCRF subscription profile information reading meanwhile PCRF address store, and PCRF deregister, and PCRF dynamic data read and update, and notification when data changed.

The interfaces related to SPR in mobile network as follows:

The Sp interface is between the SPR and the PCRF. It is a diameter interface which allows the PCRF to request subscription information and the SPR to notify the PCRF when the subscription information has been changed.

2 Highlight Features

- Compliant

ZXUN USPP (SPR) is designed in strict accordance with 3GPP R8.

The Sp Interface is based on TISPAN E4 extension.

- Flexible Deployment Ability

ZXUN USPP (SPR) can be deployed in convergence with PCRF or independently.

- Support Flexible User Data

ZXUN USPP (SPR) provides flexible user data.

ZXUN USPP (SPR) supports management of subscribers' subscription information based profile.

3 Functionality

3.1 Sp Interface

- User Data Read (UDR/UDA)

PCRF sends UDR information to SPR to obtain subscription information of designated users. SPR returns UDA information to PCRF, and ports PCRF request data, meanwhile, SPR stores PCRF address to the IMSI record.

- User Data Deregister (UDR/UDA)

PCRF sends UDR information to SPR to cancel subscription information of

designated users. SPR returns UDA information to PCRF, meanwhile, SPR deletes stored PCRF address.

- Notification When Data Change (PNR/PNA)

When users' data or profile changes, SPR sends PNR to PCRF, ports new SI information and User-Type, and notifies PCRF to upgrade user data information.

- Read Dynamic Usage Data (UDR/UDA)

SPR accepts UDR request message from the PCRF. The message requests to read specified user dynamic usage data. SPR returns a UDA message to PCRF, carrying the corresponding needed data.

- Update Dynamic Usage Data (UDR/UDA)

When UE shuts down, PCRF sends a UDR request message to SPR, to update the user's dynamic usage of information.

3.2 Provision

SPR provides local subscriber data administration function and an open remote subscriber data administration interfaces so that the customer centre is enabled to access the SPR for subscription, modification and query of information. This facilitates operators' secondary development of the subscriber data.

Remote Subscriber Data Administration supports MML interface, providing the following MML commands:

- Add SPR user
- Delete SPR user
- Modify SPR user base of information
- Query SPR user base of information
- Set SI and package SI private information

- Delete SI information
- Query SI and package SI private information
- Set Package and its private information
- Delete Package Information
- Query Package and its private information
- Set usage information and package usage information and package SI usage information
- Delete usage information and package usage information and package SI usage information
- Query usage information and package usage information and package SI usage information

3.3 Protocol

SPR provides Diameter protocol function.

4 System Architecture

Please refer to “ZXUN USPP Series UDS Product Description”.

5 Technical Specifications

5.1 Physical Indices

Please refer to “ZXUN USPP Series UDS Product Description”.

5.2 Capacity

The typical capacity indices of ZXUN USPP (SPR) are listed in Table 5-1.

Table 5-1 Typical Capacity Indices of ZXUN USPP (SPR)

Technical features	Parameter	Specific Indices
Capacity	BE subscriber capacity	200,000,000
	Subscriber capacity per Front End	100,000,000
Signaling Per Front End	Number of broadband SCTP links	2048
Interface Capability Per Front End	GE	20 pair

5.3 Performance

Please refer to “ZXUN USPP Series UDS Product Description”.

5.4 Power

Please refer to “ZXUN USPP Series UDS Product Description”.

5.5 Working Environment

Please refer to “ZXUN USPP Series UDS Product Description”.

5.6 Interface Type

Please refer to “ZXUN USPP Series UDS Product Description”.

5.7 Clock Indices

Please refer to “ZXUN USPP Series UDS Product Description”.

5.8 Reliability

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6 Operation and Maintenance

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7 Networking

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8 Acronyms and Abbreviations

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