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1

Introduction

Binding Support Function (BSF) provides a PDU session binding functionality, which ensures that an AF request for a certain PDU Session reaches the relevant PCF holding the PDU Session information. This service:

- Allows Policy Control Function users to register, update, and remove the binding information
- Allows NF consumers to retrieve the binding information

References

This section provides the details of the references for Binding Support Function.

- Binding Support Function Cloud Native Installation and Upgrade Guide

Acronyms

This section provides the details of the acronyms used in the document.

Table 1-1  Acronyms

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF</td>
<td>Application Function</td>
</tr>
<tr>
<td>BSF</td>
<td>Binding Support Function</td>
</tr>
<tr>
<td>FQDN</td>
<td>Fully Qualified Domain Names</td>
</tr>
<tr>
<td>GPSI</td>
<td>Generic Public Subscription Identifier</td>
</tr>
<tr>
<td>HTTP</td>
<td>Hypertext Transfer Protocol</td>
</tr>
<tr>
<td>NEF</td>
<td>Network Exposure Function</td>
</tr>
<tr>
<td>NF</td>
<td>Network Function</td>
</tr>
<tr>
<td>NRF</td>
<td>NF Repository Function</td>
</tr>
<tr>
<td>PCF</td>
<td>Policy Control Function</td>
</tr>
<tr>
<td>OCPM</td>
<td>Oracle Communications Policy Management</td>
</tr>
<tr>
<td>PDU</td>
<td>Protocol Data Unit</td>
</tr>
<tr>
<td>RDBMS</td>
<td>Relational Database Management System</td>
</tr>
<tr>
<td>S-NSSAI</td>
<td>Single Network Slice Selection Assistance Information. An S-NSSAI is comprised of: - A Slice/Service type (SST), which refers to the expected Network Slice behaviour in terms of features and services; - A Slice Differentiator (SD), which is an optional information that complements the Slice/Service type(s) to differentiate amongst multiple Network Slices of the same Slice/Service type.</td>
</tr>
<tr>
<td>SMF</td>
<td>Session Management Function</td>
</tr>
<tr>
<td>SUPI</td>
<td>Subscription Permanent Identifier</td>
</tr>
<tr>
<td>UDSF</td>
<td>Unstructured Data Storage network function</td>
</tr>
<tr>
<td>UE</td>
<td>User Equipment</td>
</tr>
</tbody>
</table>
This section provides information about Binding Support Function Architecture.

The BSF Management Service is an internal service used for the OCPM BSF/PCF to provide a PDU session binding functionality, which ensures that an AF request for a certain PDU Session reaches the relevant PCF holding the PDU Session information.

The service implements the Binding Support Management Service as defined in 3GPP TS 29.521 [4].

The service allows consumers to register, deregister, and discover the binding information.

**Binding Support Function Management Service Architecture**

BSF Management Service is designed as a micro service that can be deployed in a standalone BSF.

**Figure 2-1  Service Management Architecture**
**Note:****

BSF Management Service only supports storing, removing, and querying binding information from RDBMS, and additional storage options. For example, In-memory DB, and UDFS.
Configuring Binding Support Function

This section provides information for configuring Binding Support Function.

Global Configurations

Table 3-1 provides information for configuring global configurations for BSF.

Table 3-1  Global Configurations

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Tracing</td>
<td>Enables tracing.</td>
</tr>
<tr>
<td>Default Value</td>
<td>TRUE</td>
</tr>
<tr>
<td>Data Type</td>
<td>Boolean</td>
</tr>
<tr>
<td>Input</td>
<td>Switch</td>
</tr>
<tr>
<td>Enable Metrics</td>
<td>Enables metrics.</td>
</tr>
<tr>
<td>Default Value</td>
<td>TRUE</td>
</tr>
<tr>
<td>Data Type</td>
<td>Boolean</td>
</tr>
<tr>
<td>Input</td>
<td>Switch</td>
</tr>
</tbody>
</table>

Configuring Service Management

Table 3-2 provides the details for configuring service management.

Table 3-2  Service Management

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Root URL</td>
<td>Indicates the URL for server root.</td>
</tr>
<tr>
<td>Data Type: String</td>
<td></td>
</tr>
<tr>
<td>Input: Text</td>
<td></td>
</tr>
<tr>
<td>Root Log Level</td>
<td>Indicates the status of root log level.</td>
</tr>
<tr>
<td>Default Value: WARN</td>
<td></td>
</tr>
<tr>
<td>Data Type: String</td>
<td></td>
</tr>
<tr>
<td>Input: Select</td>
<td></td>
</tr>
<tr>
<td>Log Level</td>
<td>The available options are:</td>
</tr>
<tr>
<td></td>
<td>• TRACE</td>
</tr>
<tr>
<td></td>
<td>• DEBUG</td>
</tr>
<tr>
<td></td>
<td>• INFO</td>
</tr>
<tr>
<td></td>
<td>• WARN</td>
</tr>
<tr>
<td></td>
<td>• ERROR</td>
</tr>
<tr>
<td></td>
<td>• ALWAYS</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Logger Name</td>
<td>Indicates the name for the logger.</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value</strong>: TRUE</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: String</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Text</td>
</tr>
<tr>
<td>LEVEL</td>
<td><strong>Default Value</strong>: TRUE</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: String</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Select</td>
</tr>
<tr>
<td></td>
<td>The available options are:</td>
</tr>
<tr>
<td></td>
<td>• TRACE</td>
</tr>
<tr>
<td></td>
<td>• DEBUG</td>
</tr>
<tr>
<td></td>
<td>• INFO</td>
</tr>
<tr>
<td></td>
<td>• WARN</td>
</tr>
<tr>
<td></td>
<td>• ERROR</td>
</tr>
<tr>
<td></td>
<td>• ALWAYS</td>
</tr>
</tbody>
</table>

---

### Configuring Diameter Peer

Table 3-3 provides information about the diameter peer configuration.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Indicates the ID of the diameter peer.</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: String</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Text</td>
</tr>
<tr>
<td>Name</td>
<td>Indicates the name of the diameter peer.</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: String</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Text</td>
</tr>
<tr>
<td>Description</td>
<td>Provides the details of diameter peer.</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: String</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Text</td>
</tr>
<tr>
<td>Diameter Realm</td>
<td>Indicates the diameter realm.</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: String</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Text</td>
</tr>
<tr>
<td>Diameter Identity</td>
<td>Indicates the diameter identity.</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: String</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Text</td>
</tr>
<tr>
<td>Initiate Connection</td>
<td>When enabled, initiates connection</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type</strong>: Boolean</td>
</tr>
<tr>
<td></td>
<td><strong>Input</strong>: Switch</td>
</tr>
</tbody>
</table>
### Table 3-3  (Cont.) Diameter Peer Configuration

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watchdog Interval</td>
<td>Indicates the Watchdog interval.</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value:</strong> TRUE</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type:</strong> Boolean</td>
</tr>
<tr>
<td></td>
<td><strong>Input:</strong> Switch</td>
</tr>
<tr>
<td>Transport</td>
<td>Indicates the transport details.</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value:</strong> TRUE</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type:</strong> Boolean</td>
</tr>
<tr>
<td></td>
<td><strong>Input:</strong> Select</td>
</tr>
<tr>
<td></td>
<td>The available options are:</td>
</tr>
<tr>
<td></td>
<td>• TCP</td>
</tr>
<tr>
<td></td>
<td>• SCTP</td>
</tr>
<tr>
<td>Connections</td>
<td>Indicates the number of connections.</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value:</strong> TRUE</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type:</strong> Integer</td>
</tr>
<tr>
<td></td>
<td><strong>Input:</strong> Text</td>
</tr>
<tr>
<td>Max Incoming Streams</td>
<td>Indicates the maximum number of incoming streams.</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value:</strong> TRUE</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type:</strong> Integer</td>
</tr>
<tr>
<td></td>
<td><strong>Input:</strong> Text</td>
</tr>
<tr>
<td>Max Outgoing Streams</td>
<td>Indicates the maximum number of outgoing streams.</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value:</strong> TRUE</td>
</tr>
<tr>
<td></td>
<td><strong>Data Type:</strong> Integer</td>
</tr>
<tr>
<td></td>
<td><strong>Input:</strong> Text</td>
</tr>
</tbody>
</table>

### Configuring Diameter Route Table

Table 3-4 provides the details for configuring the diameter route table.

### Table 3-4  Diameter Route Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Indicates the name of the diameter route table.</td>
</tr>
<tr>
<td>Description</td>
<td>Indicates the description for diameter route table.</td>
</tr>
<tr>
<td>Default Route</td>
<td>When enables, determines the default route.</td>
</tr>
<tr>
<td>User ID Type</td>
<td>Indicates the type of User ID. The available options are:</td>
</tr>
<tr>
<td></td>
<td>• SUPI</td>
</tr>
<tr>
<td></td>
<td>• MSISDN</td>
</tr>
<tr>
<td>User ID</td>
<td>Indicates the User ID.</td>
</tr>
</tbody>
</table>

---

**Chapter 3
Configuring Diameter Route Table**

---
Table 3-4  (Cont.) Diameter Route Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| Action  | Provides the details of the action. The available options are:  
|         | • PROXY   |
|         | • RELAY   |
|         | • LOCAL   |
| Server ID | Indicates the details of Server ID. |
| Save    | Click to Save the Diameter Route Table. |
| Cancel  | Click to Cancel the changes you made to Diameter Route Table |