

IPWorks ENUM SOAP CUDB Interface

INTERWORK DESCRIPTION

Copyright

© Ericsson AB 2015. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

Trademark List

All trademarks mentioned herein are the property of their respective owners. These are shown in the document Trademark Information.



Contents

1	Introduction	1
1.1	Prerequisites	1
1.2	Related Information	1
2	Interface Overview	3
2.1	Interface Role	3
2.2	Services	3
2.3	Encapsulation and Addressing	4
3	Information Model	5
3.1	Notifications Requests	6
3.2	Notifications Responses	7
4	Notification Configuration	9
5	Messages Examples	11
	Reference List	15





1 Introduction

This document describes the SOAP interface between the CUDB and the IPWorks ENUM FE using the reference point described in the following document:

- CUDB SOAP Interface Description, Reference [4]

Scope

This document covers the following topics:

- Description of the interaction between SOAP client (CUDB) and IPWorks ENUM FE.
- Message structures provided by the notification interface, as well as the parameters and their data, refer to CUDB SOAP Interwork Description, Reference [4].

Target Groups

This document is intended for personnel who need to understand the logical entity, including interfaces and protocols, of IPWorks.

1.1 Prerequisites

Not Applicable.

1.2 Related Information

Definition and explanation of acronyms and terminology, trademark information, and typographic conventions can be found in the following documents:

- Glossary of Terms and Acronyms
- Trademark Information
- Typographic Conventions



2 Interface Overview

Figure 1 is the overview of the SOAP interface between the CUDB and IPWorks ENUM FE Sync.

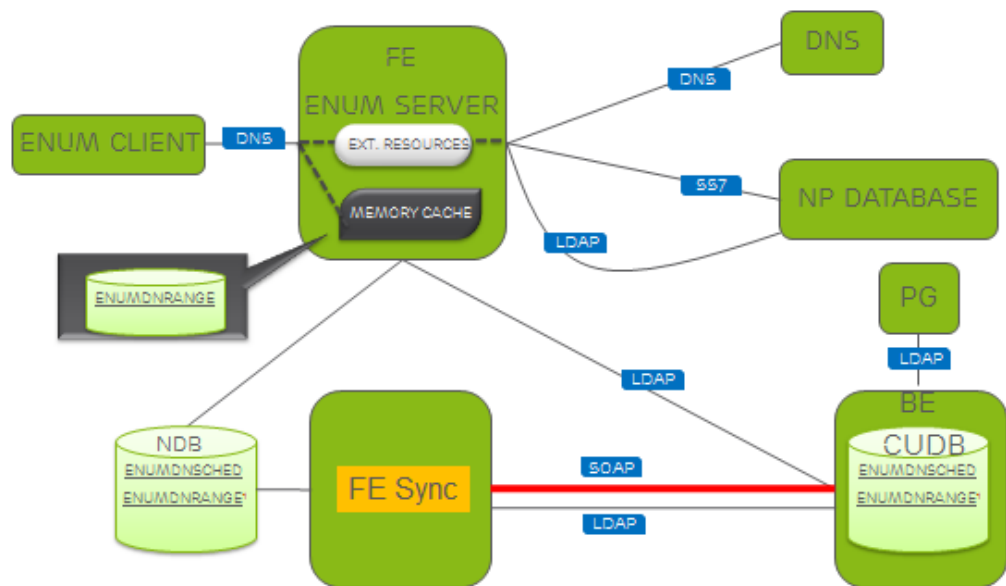


Figure 1 SOAP Interface between CUDB and ENUM FE Sync

2.1 Interface Role

This section describes the role of the IPWorks ENUM FE in the SOAP interface between ENUM FE and CUDB.

IPWorks ENUM FE acts as the SOAP server, and CUDB acts as the SOAP client.

2.2 Services

The service offered by the CUDB SOAP interface is shown in Table 1.

Table 1 Services

Service	Description
Notification	Notifies IPWorks ENUM FE when data is changed in CUDB.



2.3 Encapsulation and Addressing

This section describes what lower level protocol the SOAP Interface is using:

- XML
- RPC
- HTTP



3 Information Model

This section describes the notification interface used for IPWorks ENUM.

Figure 2 shows the SOAP body for IPWorks ENUM.

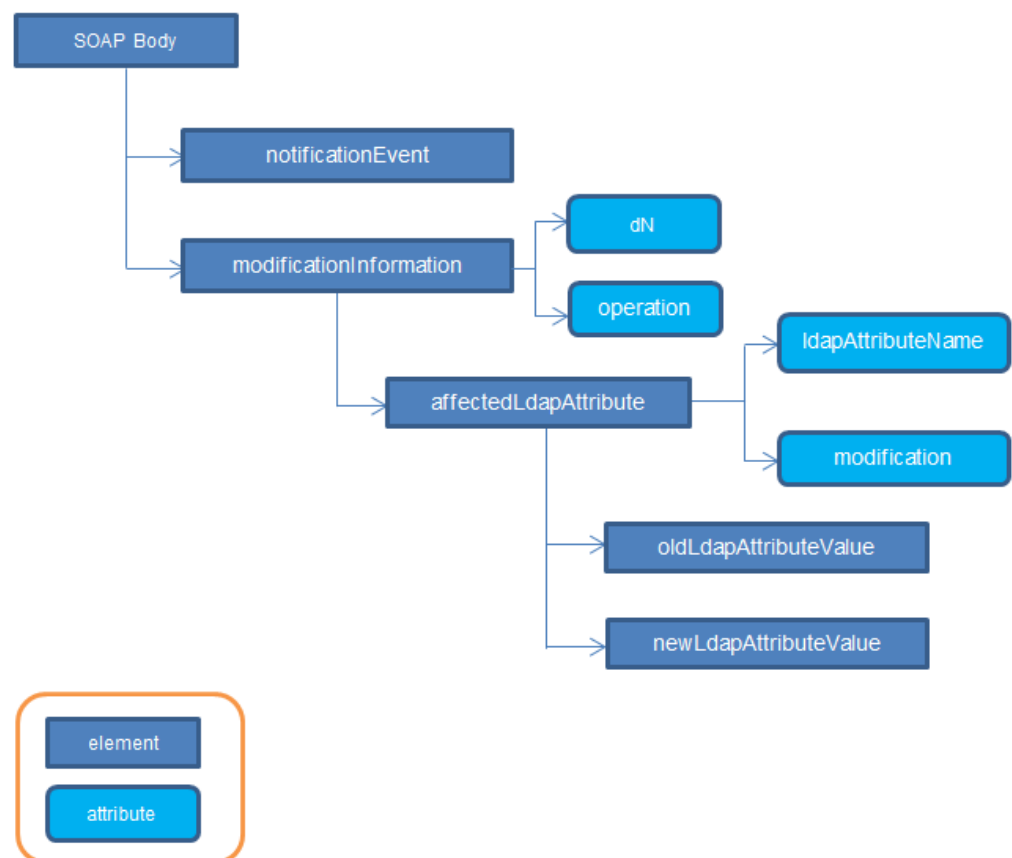


Figure 2 SOAP Body for IPWorks ENUM

The notification interface is described by the following two parts:

- Notifications Requests
- Notifications Responses



3.1 Notifications Requests

3.1.1 notificationEvent Element

This element presents a common value, for example, IPW_ENUMFE_Event in this SOAP message.

3.1.2 additionalInformation Element (Not Used)

This element is not used in SOAP message towards to IPWorks ENUM FE.

3.1.3 modificationInformation Element

The modificationInformation XML element is a structure representing the LDAP object instance whose modification triggers the notification event. This XML element is mandatory for ProvisioningEvent notifications. It indicates what's the target object and what's the corresponding operation in this SOAP message. Two attributes "dN" and "operation" are included: "dN" represents the target object; "operation" represents the corresponding operation.

Table 2 Attribute Description

Attribute Name	Description	Example
dN	It stores the provisioned Distinguished Name (DN) of the LDAP data object.	dN="recordid=1,viewid=0,fqdn=1.2.3.4.5.e164.apar.net,ou=EnumDnSched,serv=enum,ou=servCommonData,dc=o,dc=com"
operation	It indicates the type of this operation: "create" ⁽¹⁾ , "delete" or "modify".	operation="create"

(1) The "Create" operation is only for EnumDnRange of IPWorks

3.1.3.1 affectedLdapAttribute Element

This element indicates that which specified ldapAttributeName is affected in this SOAP message.



Table 3 Attribute Description

Attribute Name	Description	Example
ldapAttributeName	It carries one or more of the name of the LDAP attribute: "viewid", "recordid", "NaptrOrder", "NaptrPreference", "NaptrService", "NaptrFlags", "NaptrTxt", or "NaptrTtl".	ldapAttributeName="NaptrTtl"
modification	This attribute corresponds to "operation", it indicates the type of this operation: "add", "delete" or "replace". This attribute aligns with "operation" in the following way: <ul style="list-style-type: none"> "add" <=> "create" "delete" <=> "delete" "replace" <=> "modify" 	modification="add"

3.1.3.1.1 oldLdapAttributeValue Element

This element is used to indicate the old value of affected attribute when "modify" or "delete" data in CUDB modified by PG.

3.1.3.1.2 newLdapAttributeValue Element

This element is used to indicate the new value of affected attribute when "create" or "modify" data in CUDB modified by PG.

3.2 Notifications Responses

Typically, notification response is replied for each notification request. Because CUDB does not handle the response specified by IPWorks ENUM, no specified information in response message.





4 Notification Configuration

It is possible to configure the data to be monitored to send notifications, as well as the data whose value triggers a sending notification and the data sent into a notification, refer to CUDB Notifications, Reference [5].

Following types of SOAP notification message are introduced:

- create/delete/modify EnumDnSched
- create/delete/modify EnumDnRange





5 Messages Examples

This section provides examples of the notifications requests for EnumDnSched and EnumDnRange.

```
<ns2:notify xmlns:ns2="http://schemas.ericsson.com/udc/1.0/types/">
  <!--Optional:-->
  <notificationEvent>IPW_ENUMFE_Event</notificationEvent>
  <modificationInformation ns2:dN="recordid=1,viewid=0,fqdn=1.2.3.4.5.e164.apar.net,
    ou=EnumDnSched,serv=enum,ou=servCommonData,dc=o,dc=com" ns2:operation="create">
    <affectedLdapAttribute ns2:ldapAttributeName="recordid">
      <newLdapAttributeValue>1</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTxt">
      <newLdapAttributeValue>/^.*$/sip:911@cs87.iptelco.com/</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTtl">
      <newLdapAttributeValue>24</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrOrder">
      <newLdapAttributeValue>100</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrPreference">
      <newLdapAttributeValue>10</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrService">
      <newLdapAttributeValue>E2U+SIP</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrFlags">
      <newLdapAttributeValue>n</newLdapAttributeValue>
    </affectedLdapAttribute>
  </modificationInformation>
</ns2:notify>;
```

Example 1 SOAP - Create EnumDnSched

```
<ns2:notify xmlns:ns2="http://schemas.ericsson.com/udc/1.0/types/">
  <!--Optional:-->
  <notificationEvent>IPW_ENUMFE_Event</notificationEvent>
  <modificationInformation ns2:dN="recordid=1,viewid=0,fqdn=1.2.3.4.5.e164.apar.net,
    ou=EnumDnSched,serv=enum,ou=servCommonData,dc=o,dc=com" ns2:operation="delete">
    <affectedLdapAttribute ns2:ldapAttributeName="recordid">
      <oldLdapAttributeValue>1</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTxt">
      <oldLdapAttributeValue>/^.*$/sip:911@cs87.iptelco.com/</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTtl">
      <oldLdapAttributeValue>24</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrOrder">
      <oldLdapAttributeValue>100</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrPreference">
      <oldLdapAttributeValue>10</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrService">
      <oldLdapAttributeValue>E2U+SIP</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrFlags">
      <oldLdapAttributeValue>n</oldLdapAttributeValue>
    </affectedLdapAttribute>
  </modificationInformation>
</ns2:notify>;
```

Example 2 SOAP - Delete EnumDnSched



```
<ns2:notify xmlns:ns2="http://schemas.ericsson.com/udc/1.0/types/">
  <!--Optional:-->
  <notificationEvent>IPW_ENUMFE_Event</notificationEvent>
  <modificationInformation ns2:dN="recordid=1,viewid=0,fqdn=1.2.3.4.5.e164.apar.net,
ou=EnumDnSched,serv=enum,ou=servCommonData,dc=o,dc=com" ns2:operation="modify">
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTtl">
      <oldLdapAttributeValue>3600</oldLdapAttributeValue>
      <newLdapAttributeValue>1800</newLdapAttributeValue>
    </affectedLdapAttribute>
  </modificationInformation>
</ns2:notify>;
```

Example 3 SOAP - Modify EnumDnSched

```
<ns2:notify xmlns:ns2="http://schemas.ericsson.com/udc/1.0/types/">
  <!--Optional:-->
  <notificationEvent>IPW_ENUMFE_Event</notificationEvent>
  <modificationInformation ns2:dN="recordid=1,viewid=0,fqdn=*.5.6.7.8.9.0.3.3.1.e164.apar.net,
ou=EnumDnRange,serv=enum,ou=servCommonData,dc=o,dc=com" ns2:operation="create">
    <affectedLdapAttribute ns2:ldapAttributeName="recordid">
      <newLdapAttributeValue>1</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTxt">
      <newLdapAttributeValue>/^.*$/sip:911@cs87.iptelco.com/</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTtl">
      <newLdapAttributeValue>24</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrOrder">
      <newLdapAttributeValue>10</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrPreference">
      <newLdapAttributeValue>10</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrService">
      <newLdapAttributeValue>E2U+SIP</newLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrFlags">
      <newLdapAttributeValue>n</newLdapAttributeValue>
    </affectedLdapAttribute>
  </modificationInformation>
</ns2:notify>;
```

Example 4 SOAP - Create EnumDnRange



```
<ns2:notify xmlns:ns2="http://schemas.ericsson.com/udc/1.0/types/">
  <!--Optional:-->
  <notificationEvent>IPW_ENUMFE_Event</notificationEvent>
  <modificationInformation ns2:dN="recordid=1,viewid=0,fqdn=*.5.6.7.8.9.0.3.3.1.e164.apar.net,
    ou=EnumDnRange,serv=enum,ou=servCommonData,dc=o,dc=com" ns2:operation="delete">
    <affectedLdapAttribute ns2:ldapAttributeName="recordid">
      <oldLdapAttributeValue>1</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTxt">
      <oldLdapAttributeValue>/^.*$/sip:911@cs87.iptelco.com/</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTtl">
      <oldLdapAttributeValue>24</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrOrder">
      <oldLdapAttributeValue>100</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrPreference">
      <oldLdapAttributeValue>10</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrService">
      <oldLdapAttributeValue>E2U+SIP</oldLdapAttributeValue>
    </affectedLdapAttribute>
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrFlags">
      <oldLdapAttributeValue>n</oldLdapAttributeValue>
    </affectedLdapAttribute>
  </modificationInformation>
</ns2:notify>;
```

Example 5 SOAP - Delete EnumDnRange

```
<ns2:notify xmlns:ns2="http://schemas.ericsson.com/udc/1.0/types/">
  <!--Optional:-->
  <notificationEvent>IPW_ENUMFE_Event</notificationEvent>
  <modificationInformation ns2:dN="recordid=1,viewid=0,fqdn=*.5.6.7.8.9.0.3.3.1.e164.apar.net,
    ou=EnumDnRange,serv=enum,ou=servCommonData,dc=o,dc=com" ns2:operation="modify">
    <affectedLdapAttribute ns2:ldapAttributeName="NaptrTtl" ns2:modification="replace">
      <oldLdapAttributeValue>3600</oldLdapAttributeValue>
      <newLdapAttributeValue>1800</newLdapAttributeValue>
    </affectedLdapAttribute>
  </modificationInformation>
</ns2:notify>;
```

Example 6 SOAP - Modify EnumDnRange

Note: No specified information in response message.

```
<?xml version='1.0' encoding='UTF-8'?>
  <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
    <soapenv:Body>
      <ns1:notifyResponse xmlns:ns1="http://schemas.ericsson.com/udc/1.0/type" />
    </soapenv:Body>
  </soapenv:Envelope>
```

Example 7 SOAP (EnumDnRange Response)





Reference List

- [1] Glossary of Terms and Acronyms
- [2] Trademark Information
- [3] Typographic Conventions
- [4] CUDB SOAP Interface Description, 3/15519-HDA 104 03/6 Uen C
- [5] CUDB Notifications, 9/15534-HDA10403/7 Uen C