

Layered IPWorks/AAA Provisioning over CAI3G

Ericsson Dynamic Activation 1

INTERFACE DESCRIPTION

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1 Introduction

This document describes the interface exposed by Ericsson™ Dynamic Activation (EDA) for provisioning of Authentication and Authorization data in layered IPWorks Authentication, Authorization, and Accounting (AAA). The interface exposes a number of Customers Service Orders (CSOs) that enables management of AAA data, stored in a Consolidated User Data Base (CUDb).

The exposed interface can be used by a Customer Administration System (CAS) or any other provisioning system.

1.1 Purpose and Scope

This document describes the supported Customers Service Orders (CSOs) in the CAI3G interface which is used for provisioning of AAA data in IPWorks.

CAI3G is an Ericsson propriety interface which enables provisioning of user and subscriber data in telecommunication and IT networks. It is a web service interface based on Simple Object Access Protocol (SOAP) 1.1. This document is not a tutorial of CAI3G, the document must be read together with the Generic CAI3G specification, which is described in *Generic CAI3G Interface 1.2*, Reference [2]

1.2 Target Group

The target groups for this document are as follows:

- System Integrator

For more information about other target groups, see *Library Overview*, Reference [3].

1.3 Typographic Conventions

Typographic conventions are described in *Library Overview*, Reference [3].

In addition, this document uses the following to indicate operations:

C	Create
S	Set
G	Get
D	Delete

1.4 Prerequisites

To use this document fully, users must meet the following prerequisites:

- Basic knowledge about the Dynamic Activation product
- Knowledge about *Generic CAI3G Interface 1.2*, Reference [2].

1.5 Namespaces

The following namespaces are referred to in this document:

- CAI3G 1.2 Namespace:

`http://schemas.ericsson.com/cai3g1.2/`

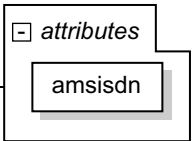
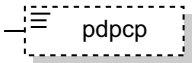

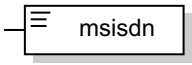
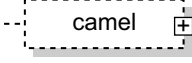
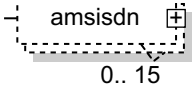
- AAA Provisioning Namespace:

`http://schemas.ericsson.com/ma/IPWORKS/`

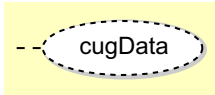
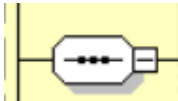
1.6 Legends

The following table shows the legends used in XML schema figures in this specification.

Table 1 Legends Used in XML Schema Figures in This Specification

Legend	Description
	XML attribute
	Optional XML element
	Choice icon
	Mandatory XML element
	Structured element
	Subobject element The occurrence of this element is 0–15.



Legend	Description
	<p>User-defined type</p> <p>This is not a standard XML schema type. It is introduced to describe MO schema structure more clearly. In practice, this type is to be replaced by the corresponding elements.</p>
	<p>Sequence icon</p> <p>A list of elements, the sequence order must be followed.</p>

1.7 Operations

See the following table for the operations, or Managed Objects (MOs), and valid operations covered in this document.

Table 2 AAA Data Provisioning CSOs

MO	Operations			
	Create	Get	Set	Delete
AAAUUser	x	x	x	x
AAAGroup	x	x	x	
AAAPolicy	x	x	x	

1.8 Web Service Interface

The Web Services Definition Language (WSDL) and XML Schema Definition Language (XSD) files that describe the provisioning interface can be found in `/home/dveinstaller/ma/`. It is also possible to download the files and view or store them in an appropriate area by following below instruction:

1. Save the zip file, [Dynamic Activation WSDL and XSD files.zip](#), to a local folder.
2. Unpack the zip file.

1.9 MOType

MOType is a plain text string based on the type `xs:string`. An MO type consists of two parts. One is the namespace of the MO, and the other is the MO name string that is always starting with an alphabetical character in either upper or lower case, followed by zero or more alphabetical characters, digits or underscores.

Those two parts are connected with symbol @. The syntax of the MOType string is `MO_Name@MO_Namespace`. The name string of an MO type must follow the regular expression: `[A-Za-z][A-Za-z0-9]*`



The MO name together with the MO namespace must be globally unique.

1.10 MOId

MOId is an Extensible Markup Language (XML) fragment containing the MOId parameter-value pairs that are used to identify an MO instance in the interface data model. CAI3G 1.2 standard supports compound MO identifiers or multiple MO identifier. The following is an example of an MOId:

```
<MOId>
  <msisdn>46455395000</msisdn>
  <imsi>46234563545000</imsi>
</MOId>
```

Example 1 Example of MOId

The MOId is defined as a sequence of `xs:any` element in CAI3G schema file. It is the developers responsibility to define the real schema for this parameter.

The MOId is also the key attributes that must be defined in the top-level element, `CreateMODefinition` or `SetMODefinition`, within `MOAttributes` parameter.

Each implementation of CAI3G interface is to define own logic relationship of MOId. It is also the CAI3GAgents responsibility to interpret this parameter correctly by either the hard-coded logic or the dynamic parsing of the schema.



2 Create AAA User

This section covers the `CreateAAAUser` command.

The `CreateAAAUser` creates an AAA user in the CUDB.

MOType

`AAAUser@http://schemas.ericsson.com/ma/IPWORKS/`

2.1 Request Data

2.1.1 Parameters

MOId

Table 3 Create AAA User MOId

Parameter	Type	Description
aaaUserName	String Min Length = 1 Max Length = 253	The name of the user.

MOAttributes

The parameters that are used in the operation are shown in Figure 1.

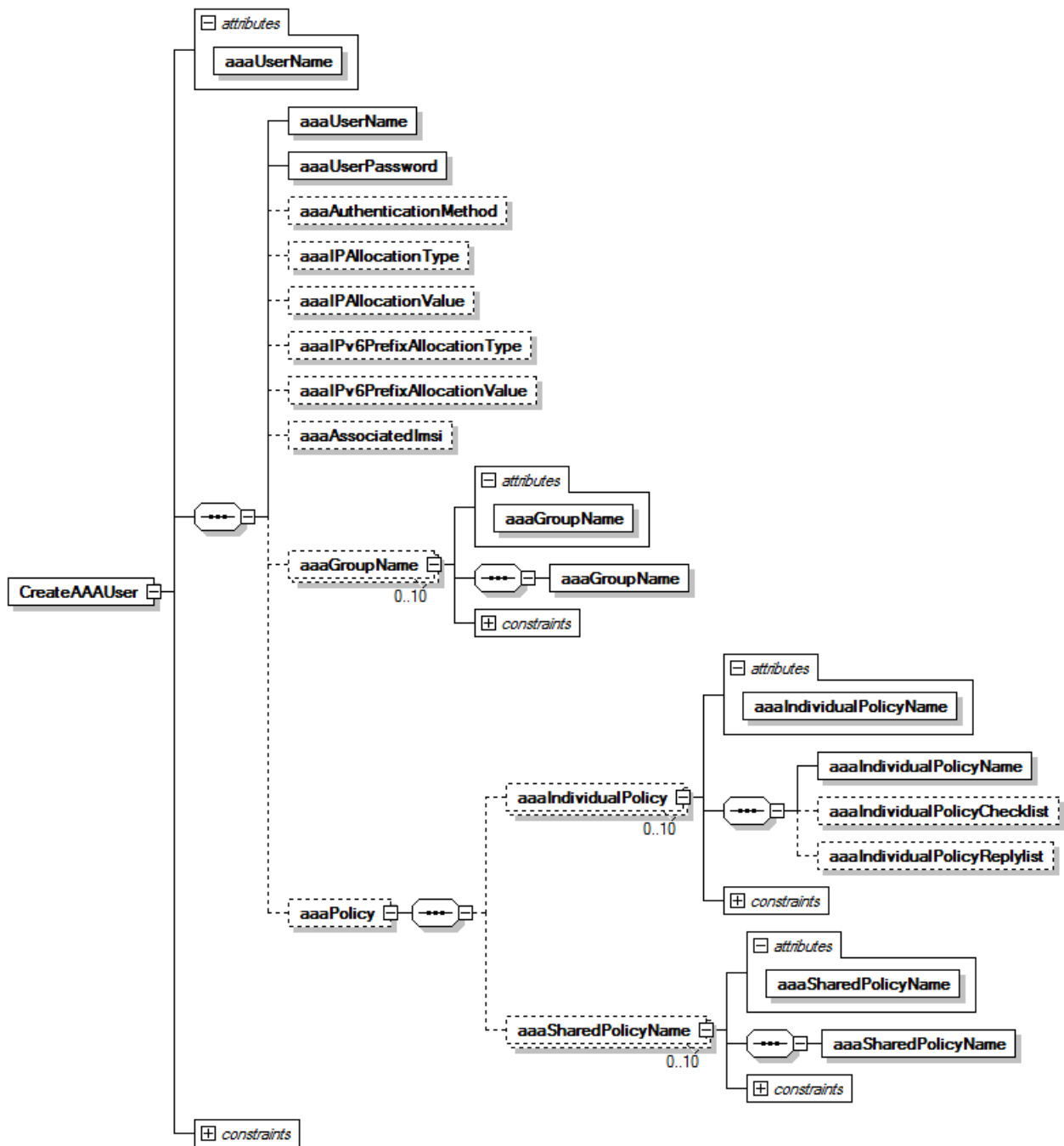


Figure 1 Parameters in Create AAA User

The following table covers the parameters that can be used in a CreateAAAUser request.



Table 4 Create AAA User Parameters

Parameter	Type	Occurrence	Description
aaaUserName	String Min Length = 1 Max Length = 253	Mandatory	The name of the user.
aaaUserPassword	String Min Length = 1 Max Length = 256	Mandatory	The password of the user.
aaaAssociatedImsi	String Length = 15	Optional (0-1)	If the secure SSID feature is used by a non-SIM Wi-Fi subscription, an associated IMSI is needed for IPWorks AAA to download the user profile from HLR. This user profile is used for checking the Wi-Fi subscription for authorization. The associated IMSI must be available as an IMSI identity in CUDB.
aaaAuthenticationMethod	String Enumeration value = "NONE" Enumeration value = "EAP-MD5" Enumeration value = "EAP-SIM" Enumeration value = "EAP-AKA" Enumeration value = "EAP-TLS" Enumeration value = "EAP-TTLS" Enumeration value = "LEAP" Enumeration value = "PEAP" Enumeration value = "EAP-MSCHAP2"	Optional (0-1)	The authentication method used for this user. It can be: <ul style="list-style-type: none"> • eap-md5 • eap-sim • eap-aka • eap-tls • eap-itls • leap • peap • eap-mschap2



Parameter	Type	Occurrence	Description
aaaIPAllocationType	Integer Min Inclusive = 0 Max Inclusive = 3	Optional (0-1)	<p>The policy of IP address allocation. There are 4 types:</p> <ul style="list-style-type: none">• 0: Default value. Assign IP address from the RADIUS client-related IP address pool(s) if the field Framed-IP-Address is contained in Access-Request message when the user is authenticated successfully, otherwise, do not assign IP address.• 1: Static assignment - The field aaaIPAllocationValue is to be set using a static IP address. This IP is assigned each time to the user when the user is authenticated successfully.• 2: Assign IP from a specific IP address pool - The field aaaIPAllocationValue is to be set using an existent AAAIPPool. One available IP address from the specific IP pool is assigned when the user is authenticated successfully.• 3: Assign IP from the RADIUS client related IP address pool(s) - The field aaaIPAllocationValue does not need any value (even if configured, server do not care). An address is assigned from one of the pools associated with the RADIUS client when a user is authenticated successfully.
aaaIPAllocationValue	String Min Length = 1 Max Length = 128	Optional (0-1)	<p>The content of the policy that defines the IP address is allocated from which pool or address. Refer to description of the aaaIPAllocationType field.</p>



Parameter			Type	Occurrence	Description
aaaIPv6PrefixAllocationType			Integer Min Inclusive = 0 Max Inclusive = 3	Optional (0-1)	<ul style="list-style-type: none"> 0: Default value - Assign IPv6 prefix from the RADIUS client-related IPv6 prefix pool(s) if the field Framed-IPv6-Prefix is contained in the Access-Request message when the user is authenticated successfully, otherwise do not assign IPv6 prefix. 1: Static assignment - The field aaaIPv6PrefixAllocationValue is to be set using a static IPv6 prefix. This IPv6 prefix is assigned each time to the user when authenticated successfully. 2: Assign IPv6 prefix from a specific IPv6 prefix pool - The field aaaIPv6PrefixAllocationValue is to be set using an existent AAAIPv6PrefixPool. One available IPv6 prefix from this specific IPv6 prefix pool is assigned when the user is authenticated successfully. 3: Assign IPv6 prefix from the RADIUS client-related IPv6 prefix pool(s) - The field aaaIPv6PrefixAllocationValue does not need any value (even if configured, the server excludes the configured value). An IPv6 prefix is assigned from one of the pools associated with the RADIUS client based on APN selection when a user is authenticated successfully.
aaaIPv6PrefixAllocationValue			String Min Length = 1 Max Length = 128	Optional (0-1)	The content of the policy that defines the IP address is allocated from which pool or address specified in the aaaIPv6PrefixAllocationType field.
aaaGroupName			Sub-MO	Optional (0-10)	The list of the groups. The user can belong to multiple groups.
	aaaGroupName		String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the group.
aaaPolicy			Sub-MO	Optional (0-1)	
	aaaIndividualPolicy		Sub-MO	Optional (0-10)	List of the individual policies. The user can have multiple policies.
		aaaIndividualPolicyName	String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the policy.



Parameter			Type	Occurrence	Description
		aaaIndividualPolicyChecklist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The checklist is a check rule of the policy. It is used to check whether the coming AVPs are matched with this check rule. All the AVP names are to conform to the AVP name in RFC, except the build-in AVPs such as System-Time.
		aaaIndividualPolicyReplylist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The reply list is a reply rule of the policy. If the Access-Request message is authorized successfully, the reply rule is added to the Access-Accept message
	aaaSharedPolicyName		Sub-MO	Optional (0-10)	List of the shared policies. The user can have multiple shared policies.
		aaaSharedPolicyName	String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the policy.

(1) This parameter is mandatory if the Sub-MO, to which the parameter belongs, is selected.

2.2 Examples

Request Example

This section gives an example of a `CreateAAAUser` request message, as shown in Example 2.



```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Create>
      <cai3:MOType>AAAUser@http://schemas.ericsson.com/ma/IPWORKS</cai3:MOType>
      <cai3:MOId>
        <ipw:aaaUserName>User1</ipw:aaaUserName>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ipw:CreateAAAUser aaaUserName="User1">
          <ipw:aaaUserName>User1</ipw:aaaUserName>
          <ipw:aaaUserPassword>Password</ipw:aaaUserPassword>
          <ipw:aaaAuthenticationMethod>EAP-MD5</ipw:aaaAuthenticationMethod>
          <ipw:aaaIPAllocationType>0</ipw:aaaIPAllocationType>
          <ipw:aaaIPAllocationValue>Localhost</ipw:aaaIPAllocationValue>
          <ipw:aaaAssociatedImsi>123456789000000</ipw:aaaAssociatedImsi>
          <ipw:aaaGroupName aaaGroupName="Group1">
            <ipw:aaaGroupName>Group1</ipw:aaaGroupName>
          </ipw:aaaGroupName>
          <ipw:aaaPolicy>
            <ipw:aaaIndividualPolicy aaaIndividualPolicyName="Inpolicy1">
              <ipw:aaaIndividualPolicyName>Inpolicy1</ipw:aaaIndividualPolicyName>
              <ipw:aaaIndividualPolicyChecklist>System-Time &gt;= &quot;10:00
+0800&quot; &amp;&amp; System-Time &lt;= &quot;20:00 +0800&quot;
&amp;&amp; ( User-Name = &quot;Faxin Zhong&quot; &amp;&amp;
( Service-Type = 1 || Service-Type = 2 ) )
</ipw:aaaIndividualPolicyChecklist>
              <ipw:aaaIndividualPolicyReplylist>User-Name = $REQUEST,
Login-IP-Host = 10.170.4.169</ipw:aaaIndividualPolicyReplylist>
            </ipw:aaaIndividualPolicy>
            <ipw:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy1">
              <ipw:aaaSharedPolicyName>Shpolicy1</ipw:aaaSharedPolicyName>
            </ipw:aaaSharedPolicyName>
          </ipw:aaaPolicy>
        </ipw:CreateAAAUser>
      </cai3:MOAttributes>
    </cai3:Create>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 2 Create AAA User Request Message

An AAA user with User1 as name belonging to Group1 is initiated, who has individual policy1 and shared policy1 associated. Password, Authentication method, IPAllocation type, IPAllocation values, and Associated IMSI are assigned to it.

Response Example

This section gives an example of a CreateAAAUser response message, as shown in Example 3.



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:CreateResponse xmlns:ns2=
      "http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <ipw:aaaUserName xmlns:ipw=
          "http://schemas.ericsson.com/ma/IPWORKS/">User1
        </ipw:aaaUserName>
      </ns2:MOId>
    </ns2:CreateResponse>
  </S:Body>
</S:Envelope>
```

Example 3 Create AAA User Response Message



3 Get AAA User

This section covers the `GetAAAUser` command.

The `GetAAAUser` retrieves an AAA user in the CUDb.

MOType

`AAAUser@http://schemas.ericsson.com/ma/IPWORKS/`

3.1 Request Data

3.1.1 Parameters

The following table covers the parameters that can be received in a `GetAAAUser` request.

Table 5 Get AAA User Parameters

Parameter	Type	Description
aaaUserName	String Min Length = 1 Max Length = 253	The name of the user.

3.2 Response Data

3.2.1 Parameters

MOId

Table 6 Get AAA User Parameters

Parameter	Type	Description
aaaUserName	String Min Length = 1 Max Length = 253	The name of the user.

MOAttributes

The parameters that are used in the operation are shown in Figure 2.

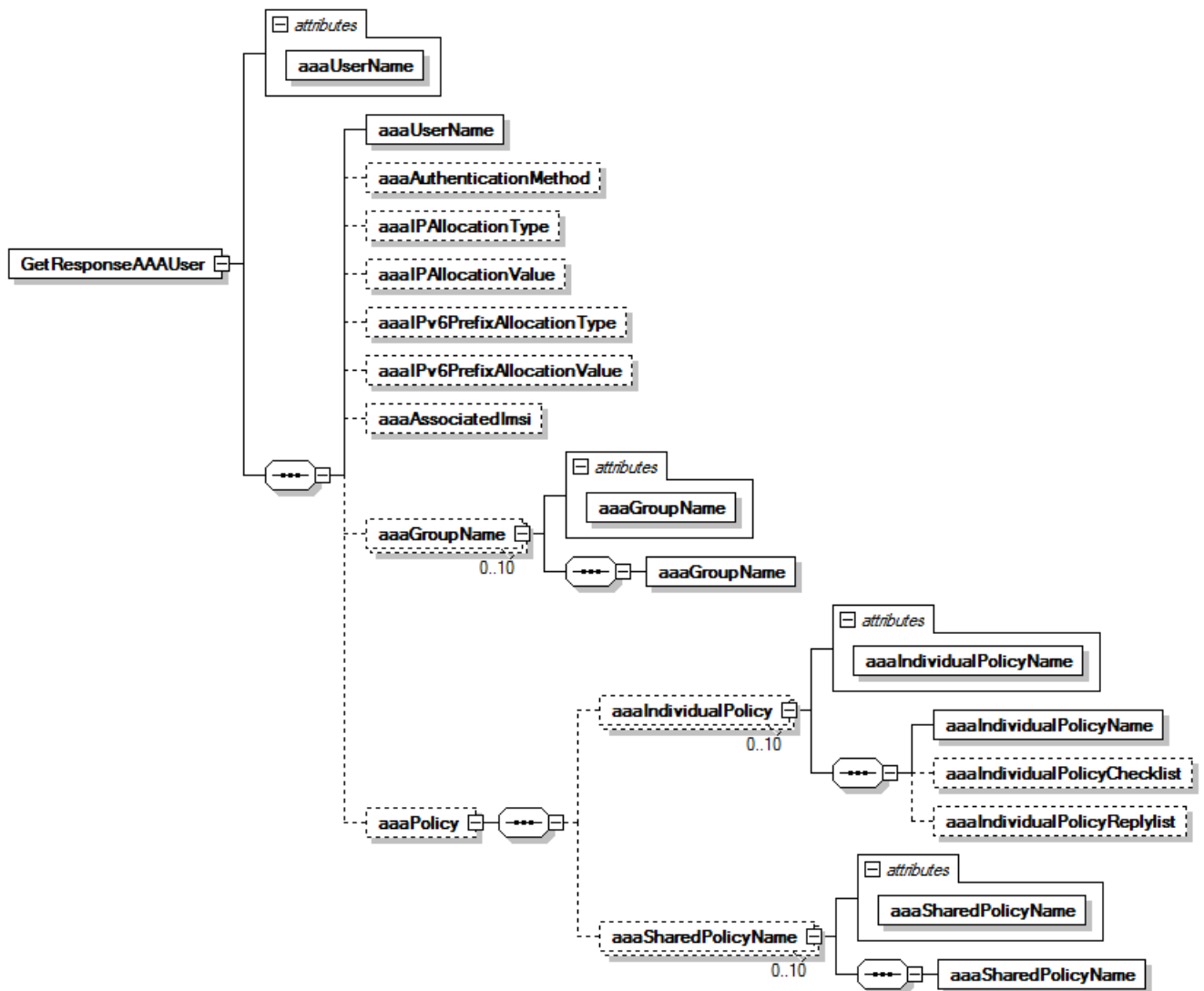


Figure 2 Parameters in Get AAA User

The following table covers the parameters that can be received in a `GetAAAUser` response.

Table 7 Get AAA User Parameters

Parameter	Type	Occurrence	Description
aaaUserName	String Min Length = 1 Max Length = 253	Mandatory	The name of the user.
aaaUserPassword	String Min Length = 1 Max Length = 256	Mandatory	The password of the user.



Parameter	Type	Occurrence	Description
aaaAssociatedImsi	String Length = 15	Optional (0-1)	If the secure SSID feature is used by a non-SIM Wi-Fi subscription, an associated IMSI is needed for IPWorks AAA to download the user profile from HLR. This user profile is used for checking the Wi-Fi subscription for authorization. The associated IMSI must be available as an IMSI identity in CUDB.
aaaAuthenticationMethod	String Enumeration value = "NONE" Enumeration value = "EAP-MD5" Enumeration value = "EAP-SIM" Enumeration value = "EAP-AKA" Enumeration value = "EAP-TLS" Enumeration value = "EAP-TTLS" Enumeration value = "LEAP" Enumeration value = "PEAP" Enumeration value = "EAP-MSCHAP2"	Optional (0-1)	The authentication method used for this user. It can be: <ul style="list-style-type: none"> • eap-md5 • eap-sim • eap-aka • eap-tls • eap-itls • leap • peap • eap-mschap2



Parameter	Type	Occurrence	Description
aaaIPAllocationType	Integer Min Inclusive = 0 Max Inclusive = 3	Optional (0-1)	<p>The policy of IP address allocation. There are 4 types:</p> <ul style="list-style-type: none">• 0: Default value. Assign IP address from the RADIUS client-related IP address pool(s) if the field Framed-IP-Address is contained in Access-Request message when the user is authenticated successfully, otherwise, do not assign IP address.• 1: Static assignment - The field aaaIPAllocationValue is to be set using a static IP address. This IP is assigned each time to the user when the user is authenticated successfully.• 2: Assign IP from a specific IP address pool - The field aaaIPAllocationValue is to be set using an existent AAAIPPool. One available IP address from the specific IP pool is assigned when the user is authenticated successfully.• 3: Assign IP from the RADIUS client related IP address pool(s) - The field aaaIPAllocationValue does not need any value (even if configured, server do not care). An address is assigned from one of the pools associated with the RADIUS client when a user is authenticated successfully.
aaaIPAllocationValue	String Min Length = 1 Max Length = 128	Optional (0-1)	<p>The content of the policy that defines the IP address is allocated from which pool or address. Refer to description of the aaaIPAllocationType field.</p>



Parameter			Type	Occurrence	Description
aaaIPv6PrefixAllocationType			Integer Min Inclusive = 0 Max Inclusive = 3	Optional (0-1)	<ul style="list-style-type: none"> 0: Default value - Assign IPv6 prefix from the RADIUS client-related IPv6 prefix pool(s) if the field Framed-IPv6-Prefix is contained in the Access-Request message when the user is authenticated successfully, otherwise do not assign IPv6 prefix. 1: Static assignment - The field aaaIPv6PrefixAllocationValue is to be set using a static IPv6 prefix. This IPv6 prefix is assigned each time to the user when authenticated successfully. 2: Assign IPv6 prefix from a specific IPv6 prefix pool - The field aaaIPv6PrefixAllocationValue is to be set using an existent AAAIPv6PrefixPool. One available IPv6 prefix from this specific IPv6 prefix pool is assigned when the user is authenticated successfully. 3: Assign IPv6 prefix from the RADIUS client-related IPv6 prefix pool(s) - The field aaaIPv6PrefixAllocationValue does not need any value (even if configured, the server excludes the configured value). An IPv6 prefix is assigned from one of the pools associated with the RADIUS client based on APN selection when a user is authenticated successfully.
aaaIPv6PrefixAllocationValue			String Min Length = 1 Max Length = 128	Optional (0-1)	The content of the policy that defines the IP address is allocated from which pool or address specified in the aaaIPv6PrefixAllocationType field.
aaaGroupName			Sub-MO	Optional (0-10)	The list of the groups. The user can belong to multiple groups.
	aaaGroupName		String Min Length = 1 Max Length = 64	Mandatory	The name of the group.
aaaPolicy			Sub MO	Optional (0-1)	
	aaaIndividualPolicy		Sub-MO	Optional (0-10)	List of the individual policies. The user can have multiple policies.
		aaaIndividualPolicyName	String Min Length = 1 Max Length = 64	Mandatory	The name of the policy.



Parameter			Type	Occurrence	Description
		aaaIndividualPolicyChecklist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The checklist is a check rule of the policy. It is used to check whether the coming AVPs are matched with this check rule. All the AVP names are to conform to the AVP name in RFC, except the build-in AVPs such as System-Time.
		aaaIndividualPolicyReplylist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The reply list is a reply rule of the policy. If the Access-Request message is authorized successfully, the reply rule is added to the Access-Accept message
	aaaSharedPolicyName		Sub-MO	Optional (0-10)	List of the shared policies. The user can have multiple shared policies.
		aaaSharedPolicyName	String Min Length = 1 Max Length = 64	Mandatory	The name of the policy.

3.3 Examples

Request Example

This section gives an example of a GetAAAUser request message, as shown in Example 4.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>AAAUser@http://schemas.ericsson.com/ma/IPWORKS/
    </cai3:MOType>
      <cai3:MOId>
        <ipw:aaaUserName>User1</ipw:aaaUserName>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 4 Get AAA User Request Message

Response Example

This section gives an example of a GetAAAUser response message, as shown in Example 5.



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a</cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:GetResponse xmlns:ns2="http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOAttributes>
        <ns:GetResponseAAAUser aaaUserName="User1"
          xmlns:ns="http://schemas.ericsson.com/ma/IPWORKS/">
          <ns:aaaUserName>User1</ns:aaaUserName>
          <ns:aaaAuthenticationMethod>EAP-MD5</ns:aaaAuthenticationMethod>
          <ns:aaaIPAllocationType>0</ns:aaaIPAllocationType>
          <ns:aaaIPAllocationValue>Localhost</ns:aaaIPAllocationValue>
          <ns:aaaAssociatedImsi>123456789000000</ns:aaaAssociatedImsi>
          <ns:aaaIPv6PrefixAllocationType>1</ns:aaaIPv6PrefixAllocationType>
          <ns:aaaIPv6PrefixAllocationValue>2607:f0d0:1002:51::4
          </ns:aaaIPv6PrefixAllocationValue>
          <ns:aaaGroupName aaaGroupName="Group1">
            <ns:aaaGroupName>Group1</ns:aaaGroupName>
          </ns:aaaGroupName>
          <ns:aaaGroupName aaaGroupName="Group2">
            <ns:aaaGroupName>Group2</ns:aaaGroupName>
          </ns:aaaGroupName>
          <ns:aaaPolicy>
            <ns:aaaIndividualPolicy aaaIndividualPolicyName="Inpolicy1">
              <ns:aaaIndividualPolicyName>Inpolicy1
              </ns:aaaIndividualPolicyName>
              <ns:aaaIndividualPolicyChecklist>System-Time &gt;=
                &quot;10:00 +0800&quot;; &amp;&amp; System-Time &lt;=
                &quot;20:00 +0800&quot;; &amp;&amp; ( User-Name = &quot;
                ;Faxin Zhong&quot;; &amp;&amp; ( Service-Type = 1 ||
                Service-Type = 2 ) )</ns:aaaIndividualPolicyChecklist>
              <ns:aaaIndividualPolicyReplylist>User-Name = $REQUEST,
                Login-IP-Host = 10.170.4.169</ns:aaaIndividualPolicyReplylist>
            </ns:aaaIndividualPolicy>
            <ns:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy1">
              <ns:aaaSharedPolicyName>Shpolicy1</ns:aaaSharedPolicyName>
            </ns:aaaSharedPolicyName>
            <ns:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy2">
              <ns:aaaSharedPolicyName>Shpolicy2</ns:aaaSharedPolicyName>
            </ns:aaaSharedPolicyName>
          </ns:aaaPolicy>
        </ns:GetResponseAAAUser>
      </ns2:MOAttributes>
    </ns2:GetResponse>
  </S:Body>
</S:Envelope>
```

Example 5 Get AAA User Response Message

The AAA User1 is printed.





4 Set AAA User

This section covers the `SetAAAUser` command.

The `SetAAAUser` modifies an AAA user in the CUDB.

MOType

`AAAUser@http://schemas.ericsson.com/ma/IPWORKS/`

4.1 Request Data

4.1.1 Parameters

MOId

Table 8 Set AAA User MOId

Parameter	Type	Description
aaaUserName	String Min Length = 1 Max Length = 253	The name of the user.

MOAttributes

The parameters that are used in the operation are shown in Figure 3.

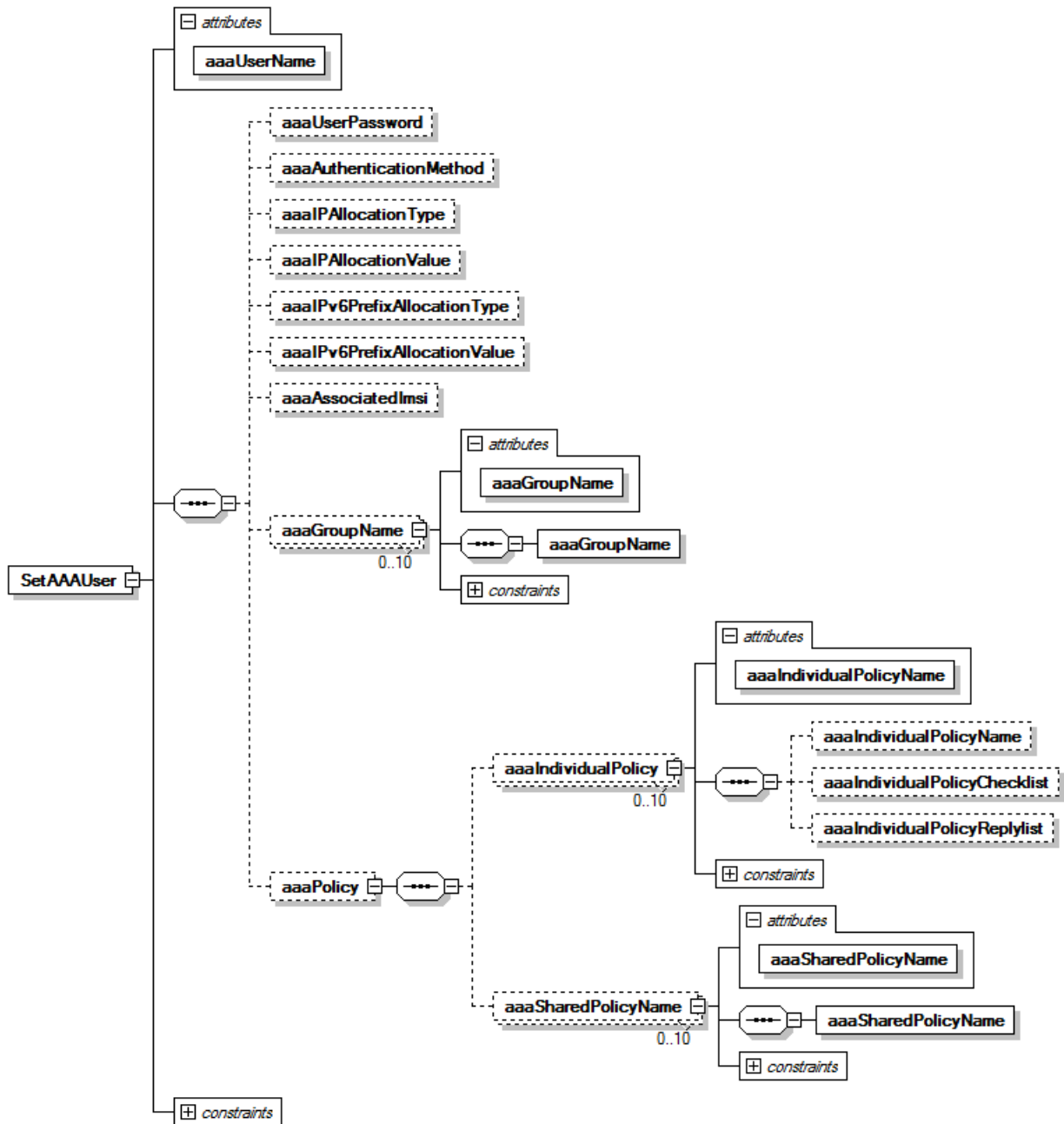


Figure 3 Parameters in Set AAA User, Part 1

The following table covers the parameters that can be used in a SetAAAUser request.



Table 9 Set AAA User Parameters

Parameter	Type	Occurrence	Description
aaaUserName	String Min Length = 1 Max Length = 253	Mandatory	The name of the user.
aaaUserPassword	String Min Length = 1 Max Length = 256	Mandatory	The password of the user.
aaaAssociatedImsi	String Length = 15	Optional (0-1)	If the secure SSID feature is used by a non-SIM Wi-Fi subscription, an associated IMSI is needed for IPWorks AAA to download the user profile from HLR. This user profile is used for checking the Wi-Fi subscription for authorization. The associated IMSI must be available as an IMSI identity in CUDB.
aaaAuthenticationMethod	String Enumeration value = "NONE" Enumeration value = "EAP-MD5" Enumeration value = "EAP-SIM" Enumeration value = "EAP-AKA" Enumeration value = "EAP-TLS" Enumeration value = "EAP-TTLS" Enumeration value = "LEAP" Enumeration value = "PEAP" Enumeration value = "EAP-MSCHAP2"	Optional (0-1)	The authentication method used for this user. It can be: <ul style="list-style-type: none"> • eap-md5 • eap-sim • eap-aka • eap-tls • eap-itls • leap • peap • eap-mschap2



Parameter	Type	Occurrence	Description
aaaIPAllocationType	Integer Min Inclusive = 0 Max Inclusive = 3	Optional (0-1)	The policy of IP address allocation. There are 4 types: <ul style="list-style-type: none">• 0: Default value. Assign IP address from the RADIUS client-related IP address pool(s) if the field Framed-IP-Address is contained in Access-Request message when the user is authenticated successfully, otherwise, do not assign IP address.• 1: Static assignment - The field aaaIPAllocationValue is to be set using a static IP address. This IP is assigned each time to the user when the user is authenticated successfully.• 2: Assign IP from a specific IP address pool - The field aaaIPAllocationValue is to be set using an existent AAAIPPool. One available IP address from the specific IP pool is assigned when the user is authenticated successfully.• 3: Assign IP from the RADIUS client related IP address pool(s) - The field aaaIPAllocationValue does not need any value (even if configured, server do not care). An address is assigned from one of the pools associated with the RADIUS client when a user is authenticated successfully.
aaaIPAllocationValue	String Min Length = 1 Max Length = 128	Optional (0-1)	The content of the policy that defines the IP address is allocated from which pool or address. Refer to description of the aaaIPAllocationType field.



Parameter			Type	Occurrence	Description
aaaIPv6PrefixAllocationType			Integer Min Inclusive = 0 Max Inclusive = 3	Optional (0-1)	<ul style="list-style-type: none"> 0: Default value - Assign IPv6 prefix from the RADIUS client-related IPv6 prefix pool(s) if the field Framed-IPv6-Prefix is contained in the Access-Request message when the user is authenticated successfully, otherwise do not assign IPv6 prefix. 1: Static assignment - The field aaaIPv6PrefixAllocationValue is to be set using a static IPv6 prefix. This IPv6 prefix is assigned each time to the user when authenticated successfully. 2: Assign IPv6 prefix from a specific IPv6 prefix pool - The field aaaIPv6PrefixAllocationValue is to be set using an existent AAAIPv6PrefixPool. One available IPv6 prefix from this specific IPv6 prefix pool is assigned when the user is authenticated successfully. 3: Assign IPv6 prefix from the RADIUS client-related IPv6 prefix pool(s) - The field aaaIPv6PrefixAllocationValue does not need any value (even if configured, the server excludes the configured value). An IPv6 prefix is assigned from one of the pools associated with the RADIUS client based on APN selection when a user is authenticated successfully.
aaaIPv6PrefixAllocationValue			String Min Length = 1 Max Length = 128	Optional (0-1)	The content of the policy that defines the IP address is allocated from which pool or address specified in the aaaIPv6PrefixAllocationType field.
aaaGroupName			Sub-MO	Optional (0-10)	The list of the groups. The user can belong to multiple groups.
	aaaGroupName		String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the group.
aaaPolicy			Sub-MO	Optional (0-1)	
	aaaIndividualPolicy		Sub-MO	Optional (0-10)	List of the individual policies. The user can have multiple policies.
		aaaIndividualPolicyName	String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the policy.



Parameter			Type	Occurrence	Description
		aaaIndividualPolicyChecklist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The checklist is a check rule of the policy. It is used to check whether the coming AVPs are matched with this check rule. All the AVP names are to conform to the AVP name in RFC, except the build-in AVPs such as System-Time.
		aaaIndividualPolicyReplylist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The reply list is a reply rule of the policy. If the Access-Request message is authorized successfully, the reply rule is added to the Access-Accept message
	aaaSharedPolicyName		Sub-MO	Optional (0-10)	List of the shared policies. The user can have multiple shared policies.
		aaaSharedPolicyName	String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the policy.

(1) This parameter is mandatory if the Sub-MO, to which the parameter belongs, is selected.

4.2 Examples

Request Example

This section gives an example of a SetAAAUser request message, as shown in Example 6.



```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3gl.2/"
  xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Create>
      <cai3:MOType>AAAUser@http://schemas.ericsson.com/ma/IPWORKS/
      </cai3:MOType>
      <cai3:MOId>
        <ipw:aaaUserName>User1</ipw:aaaUserName>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ipw:SetAAAUser aaaUserName="User1">
          <ipw:aaaUserPassword>Password</ipw:aaaUserPassword>
          <ipw:aaaAuthenticationMethod>EAP-MD5</ipw:aaaAuthenticationMethod>
          <ipw:aaaIPAllocationType>0</ipw:aaaIPAllocationType>
          <ipw:aaaIPAllocationValue>Localhost</ipw:aaaIPAllocationValue>
          <ipw:aaaAssociatedImsi>123456789000000</ipw:aaaAssociatedImsi>
          <ipw:aaaGroupName aaaGroupName="Group1">
            <ipw:aaaGroupName>Group1</ipw:aaaGroupName>
          </ipw:aaaGroupName>
          <ipw:aaaGroupName aaaGroupName="Group2" xsi:nil="true"/>
          <ipw:aaaPolicy>
            <ipw:aaaIndividualPolicy aaaIndividualPolicyName="Inpolicy1">
              <ipw:aaaIndividualPolicyName>Inpolicy1
              </ipw:aaaIndividualPolicyName>
              <ipw:aaaIndividualPolicyChecklist>System-Time &gt;=
                &quot;10:00 +0800&quot; &amp;&amp; System-Time &lt;=
                &quot;20:00 +0800&quot; &amp;&amp; ( User-Name = &quot;
                ;Faxin Zhong&quot; &amp;&amp; ( Service-Type = 1 ||
                Service-Type = 2 ) )</ipw:aaaIndividualPolicyChecklist>
              <ipw:aaaIndividualPolicyReplylist>User-Name = $REQUEST,
                Login-IP-Host = 10.170.4.169</ipw:aaaIndividualPolicyReplylist>
            </ipw:aaaIndividualPolicy>
            <ipw:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy1">
              <ipw:aaaSharedPolicyName>Shpolicy1</ipw:aaaSharedPolicyName>
            </ipw:aaaSharedPolicyName>
            <ipw:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy2"
              xsi:nil="true">
            </ipw:aaaSharedPolicyName>
          </ipw:aaaPolicy>
        </ipw:SetAAAUser>
      </cai3:MOAttributes>
    </cai3:Create>
  </soapenv:Body>
</soapenv:Envelope>

```

Example 6 Set AAA User Request Message

The AAA User1 belongs to a new Group1 and does not belong to old Group2. It has a new individual policy1 and shared policy1 associated, removed an old shared policy2 association. New password, Authentication method, IPAllocation type, IPAllocation values, and Associated IMSI are set to it.

Response Example

This section gives an example of a SetAAAUser response message, as shown in Example 7.



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:SetResponse xmlns:ns2=
      "http://schemas.ericsson.com/cai3g1.2/" />
    </S:Body>
</S:Envelope>
```

Example 7 Set AAA User Response Message



5 Delete AAA User

This section covers the `DeleteAAAUser` command.

The `DeleteAAAUser` deletes an AAA user in the CUDB.

MOType

`AAAUser@http://schemas.ericsson.com/ma/IPWORKS/`

5.1 Request Data

5.1.1 Parameters

MOId

Table 10 Delete AAA User MOId

Parameter	Type	Description
aaaUserName	String Min Length = 1 Max Length = 253	The name of the user.

MOAttributes

N/A

5.2 Examples

Request Example

This section gives an example of a `DeleteAAAUser` request message, as shown in Example 8.



```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Delete>
      <cai3:MOType>AAAUser@http://schemas.ericsson.com/ma/IPWORKS/
      </cai3:MOType>
      <cai3:MOId>
        <ipw:aaaUserName>User1</ipw:aaaUserName>
      </cai3:MOId>
    </cai3:Delete>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 8 Delete AAA User Request Message

The AAA User1 is deleted.

Response Example

This section gives an example of a DeleteAAAUser response message, as shown in Example 9.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:DeleteResponse xmlns:ns2=
      "http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <ipw:aaaUserName xmlns:ipw=
          "http://schemas.ericsson.com/ma/IPWORKS/">User1
        </ipw:aaaUserName>
      </ns2:MOId>
    </ns2:DeleteResponse>
  </S:Body>
</S:Envelope>
```

Example 9 Delete AAA User Response Message



6 Create AAA Group

This section covers the `CreateAAAGroup` command.

The `CreateAAAGroup` creates an AAA group in the CUDB.

MOType

`AAAGroup@http://schemas.ericsson.com/ma/IPWORKS/`

6.1 Request Data

6.1.1 Parameters

MOId

Table 11 Create AAA Group MOId

Parameter	Type	Description
aaaUserName	String Min Length = 1 Max Length = 253	The name of the group.

MOAttributes

The parameters that are used in the operation are shown in Figure 4.

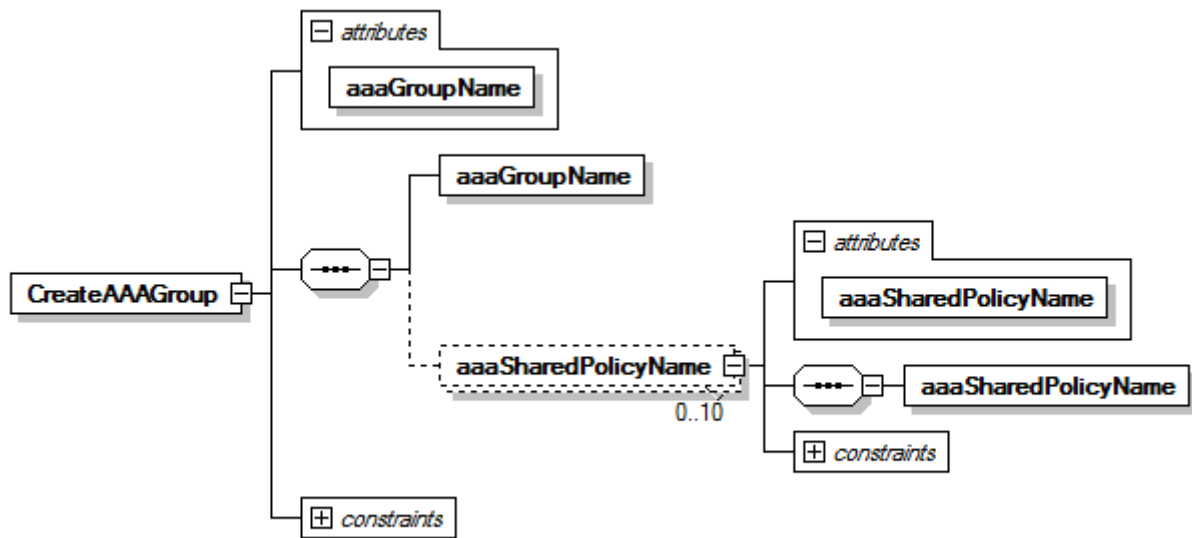


Figure 4 Parameters in Create AAA Group

The following table covers the parameters that can be used in a CreateAAAGroup request.

Table 12 Create AAA Group Parameters

Parameter		Type	Occurrence	Description
aaaGroupName		String Min Length = 1 Max Length = 64	Mandatory	The name of the group.
aaaSharedPolicyName		Sub-MO	Optional (0-10)	The list of the shared policies. The group can have multiple shared policies.
	aaaSharedPolicyName	String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the shared policy.

(1) This parameter is mandatory if the Sub-MO, to which the parameter belongs, is selected.

6.2 Examples

Request Example

This section gives an example of a CreateAAAGroup request message, as shown in Example 10.



```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
  xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Create>
      <cai3:MOType>AAAGroup</cai3:MOType>
      <cai3:MOId>
        <ipw:aaaGroupName>Group1</ipw:aaaGroupName>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ipw:CreateAAAGroup aaaGroupName="Group1">
          <ipw:aaaGroupName>Group1</ipw:aaaGroupName>
          <ipw:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy1">
            <ipw:aaaSharedPolicyName>Shpolicy1</ipw:aaaSharedPolicyName>
          </ipw:aaaSharedPolicyName>
          <ipw:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy2">
            <ipw:aaaSharedPolicyName>Shpolicy2</ipw:aaaSharedPolicyName>
          </ipw:aaaSharedPolicyName>
        </ipw:CreateAAAGroup>
      </cai3:MOAttributes>
    </cai3:Create>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 10 Create AAA Group Request Message

An AAA group with name Group1 is initiated. The group have two shared policies associated, policy1 and policy2.

Response Example

This section gives an example of a CreateAAAGroup response message, as shown in Example 11.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:CreateResponse xmlns:ns2=
      "http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <ipw:aaaGroupName xmlns:ipw=
          "http://schemas.ericsson.com/ma/IPWORKS/">Group1
        </ipw:aaaGroupName>
      </ns2:MOId>
    </ns2:CreateResponse>
  </S:Body>
</S:Envelope>
```

Example 11 Create AAA Group Response Message





7 Get AAA Group

This section covers the `GetAAAGroup` command.

The `GetAAAGroup` retrieves an AAA group in the CUDB.

MOType

`AAAGroup@http://schemas.ericsson.com/ma/IPWORKS/`

7.1 Request Data

7.1.1 Parameters

The following table covers the parameters that can be received in a `GetAAAGroup` request.

Table 13 Get AAA Group Parameters

Parameter	Type	Description
aaaGroupName	String Min Length = 1 Max Length = 64	The name of the group.

7.2 Response Data

7.2.1 Parameters

MOId

Table 14 Get AAA Group Parameters

Parameter	Type	Description
aaaGroupName	String Min Length = 1 Max Length = 64	The name of the group.

MOAttributes

The parameters that are used in the operation are shown in Figure 5.

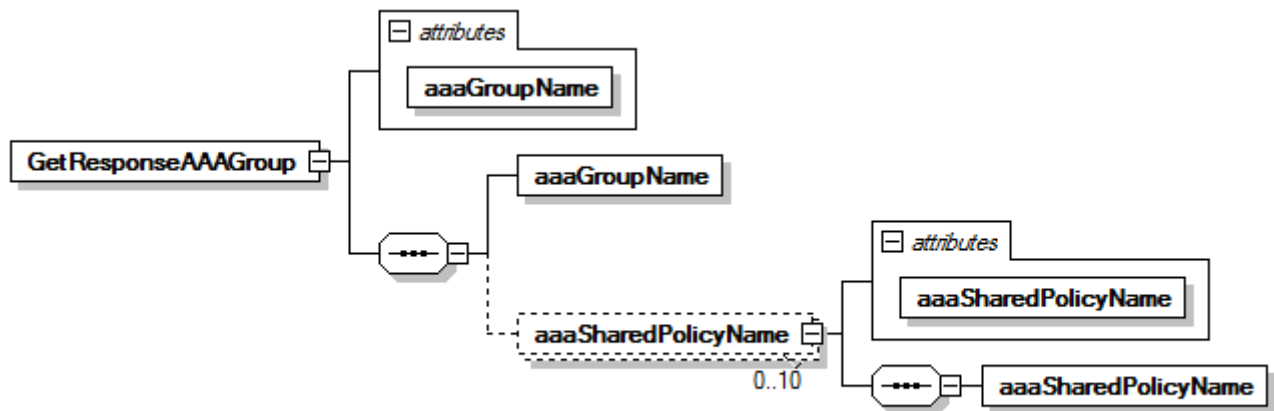


Figure 5 Parameters in Get AAA Group

The following table covers the parameters that can be received in a GetAAAGroup response.

Table 15 Get AAA Group Parameters

Parameter	Type	Occurrence	Description
aaaGroupName	String Min Length = 1 Max Length = 64	Mandatory	The name of the group.
aaaSharedPolicyName	Sub-MO	Optional (0-10)	The list of the shared policies. The group can have multiple shared policies.
	aaaShar edPolicy Name	String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾ The name of the shared policy.

(1) This parameter is mandatory if the Sub-MO, to which the parameter belongs, is selected.

7.3 Examples

Request Example

This section gives an example of a GetAAAGroup request message, as shown in Example 12.



```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
  xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>AAAGroup@http://schemas.ericsson.com/
        ma/IPWORKS/</cai3:MOType>
      <cai3:MOId>
        <ipw:aaaGroupName>Group1</ipw:aaaGroupName>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 12 Get AAA Group Request Message

Response Example

This section gives an example of a GetAAAGroup response message, as shown in Example 13.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:GetResponse xmlns:ns2=
      "http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOAttributes>
        <ns:GetResponseAAAGroup aaaGroupName="Group1"
          xmlns:ns="http://schemas.ericsson.com/ma/IPWORKS/">
          <ns:aaaGroupName>Group1</ns:aaaGroupName>
          <ns:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy1">
            <ns:aaaSharedPolicyName>Shpolicy1</ns:aaaSharedPolicyName>
          </ns:aaaSharedPolicyName>
          <ns:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy2">
            <ns:aaaSharedPolicyName>Shpolicy2</ns:aaaSharedPolicyName>
          </ns:aaaSharedPolicyName>
        </ns:GetResponseAAAGroup>
      </ns2:MOAttributes>
    </ns2:GetResponse>
  </S:Body>
</S:Envelope>
```

Example 13 Get AAA Group Response Message

The AAA Group1 is printed.



8 Set AAA Group

This section covers the `SetAAAGroup` command.

The `SetAAAGroup` modifies AAA Group in the CUDb.

MOType

`AAAGroup@http://schemas.ericsson.com/ma/IPWORKS/`

8.1 Request Data

8.1.1 Parameters

MOLD

Table 16 Set AAA Group MOLD

Parameter	Type	Description
aaaGroupName	String Min Length = 1 Max Length = 64	The name of the Group.

MOAttributes

The parameters that are used in the operation are shown in Figure 6.

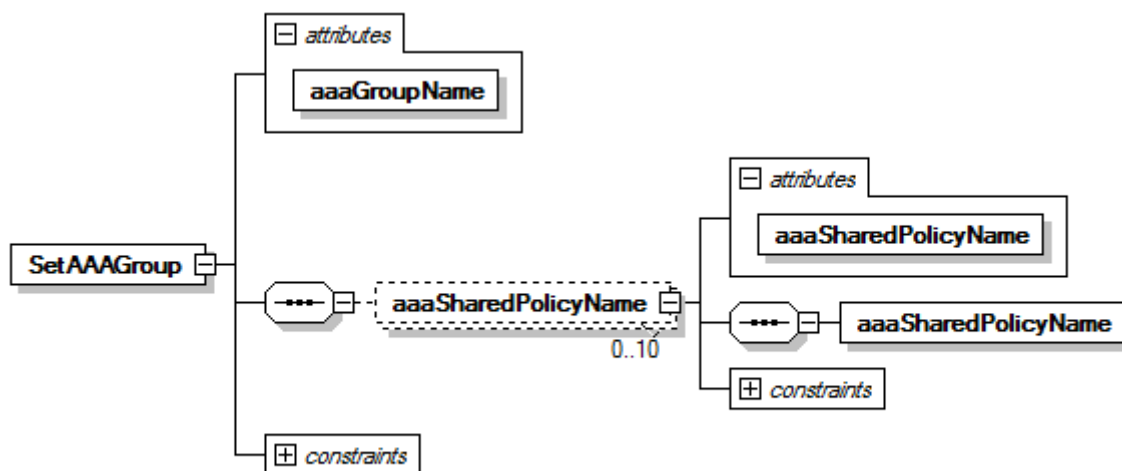


Figure 6 Parameters in Set AAA Group



The following table covers the parameters that can be used in a `SetAAAGroup` request.

Table 17 Set AAA Group Parameters

Parameter		Type	Occurrence	Description
aaaGroupName		String Min Length = 1 Max Length = 64	Mandatory	The name of the group.
aaaSharedPolicyName		Sub-MO	Optional (0-10)	The list of the shared policies. The group can have multiple shared policies.
	aaaSharedPolicyName	String Min Length = 1 Max Length = 64	Mandatory ⁽¹⁾	The name of the shared policy.

(1) This parameter is mandatory if the Sub-MO, to which the parameter belongs, is selected.

8.2

Examples

Request Example

This section gives an example of a `SetAAAGroup` request message, as shown in Example 14.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
  xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Set>
      <cai3:MOType>AAAGroup@http://schemas.ericsson.com/ma/IPWORKS/</cai3:MOType>
      <cai3:MOId>
        <ipw:aaaGroupName>Group1</ipw:aaaGroupName>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ipw:SetAAAGroup aaaGroupName="Group1">
          <ipw:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy1">
            <ipw:aaaSharedPolicyName>Shpolicy1</ipw:aaaSharedPolicyName>
          </ipw:aaaSharedPolicyName>
          <ipw:aaaSharedPolicyName aaaSharedPolicyName="Shpolicy2"
            xsi:nil="true"/>
          </ipw:SetAAAGroup>
        </cai3:MOAttributes>
      </cai3:Set>
    </soapenv:Body>
  </soapenv:Envelope>
```

Example 14 Set AAA Group Request Message

The AAA Group1 has been extended with a new shared policy1 associated and an old shared policy2 association has been removed.



Response Example

This section gives an example of a SetAAAGroup response message, as shown in Example 15.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:SetResponse xmlns:ns2="
    http://schemas.ericsson.com/cai3g1.2/" />
  </S:Body>
</S:Envelope>
```

Example 15 Set AAA Group Response Message



9 Create AAA Policy

This section covers the `CreateAAAPolicy` command.

The `CreateAAAPolicy` creates an AAA policy request.

MOType

`AAAPolicy@http://schemas.ericsson.com/ma/IPWORKS/`

9.1 Request Data

9.1.1 Parameters

MOId

Table 18 Create AAA Policy MOId

Parameter	Type	Description
aaaPolicyName	String Min Length = 1 Max Length = 64	The name of the policy.

MOAttributes

The parameters that are used in the operation are shown in Figure 7.

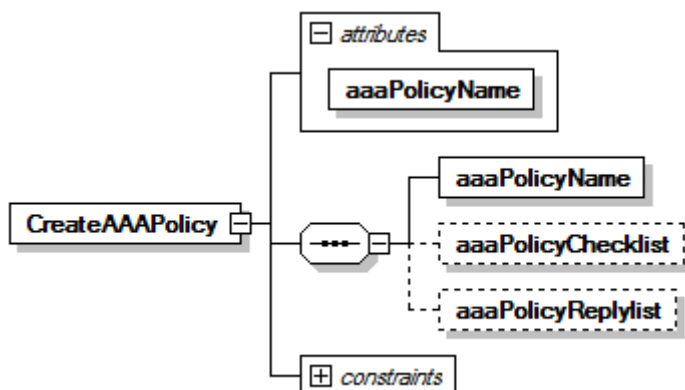


Figure 7 Parameters in Create AAA Policy

The following table covers the parameters that can be used in a `CreateAAAPolicy` request.

**Table 19 Create AAA Policy Parameters**

Parameter	Type	Occurrence	Description
aaaPolicyName	String Min Length = 1 Max Length = 64	Mandatory	The name of the policy.
aaaPolicyChecklist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The checklist is a check rule of the policy. It is used to check whether the coming AVPs are matched with this check rule. All the AVP names are to conform to the AVP name in RFC, except the build-in AVPs such as System-Time
aaaPolicyReplylist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The reply list is a reply rule of the policy. If the Access-Request message is authorized successfully, the reply rule is added to the Access-Accept message.

9.2

Examples

Request Example

This section gives an example of a CreateAAAPolicy request message, as shown in Example 16.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a</cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Create>
      <cai3:MOTYPE>AAAPolicy@http://schemas.ericsson.com/ma/IPWORKS/</cai3:MOTYPE>
      <cai3:MOId>
        <ipw:aaaPolicyName>Policy1</ipw:aaaPolicyName>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ipw:CreateAAAPolicy aaaPolicyName="Policy1">
          <ipw:aaaPolicyName>Policy1</ipw:aaaPolicyName>
          <ipw:aaaPolicyChecklist>System-Time &gt;= &quot;
            10:00 +0800&quot;; &amp;&amp; System-Time &lt;= &quot;20:00
            +0800&quot;; &amp;&amp; ( User-Name = &quot;Faxin Zhong&quot;;
            &amp;&amp; ( Service-Type = 1 || Service-Type = 2 ) )
          </ipw:aaaPolicyChecklist>
          <ipw:aaaPolicyReplylist>User-Name = $REQUEST, Login-IP-Host
            = 10.170.4.169</ipw:aaaPolicyReplylist>
        </ipw:CreateAAAPolicy>
      </cai3:MOAttributes>
    </cai3:Create>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 16 Create AAA Policy Request Message

An AAA policy with name Policy1 is initiated with specific policy checklist and reply list.



Response Example

This section gives an example of a CreateAAAPolicy response message, as shown in Example 17.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:CreateResponse xmlns:ns2=
      "http://schemas.ericsson.com/cai3g1.2/">
      <ns2:MOId>
        <ipw:aaaPolicyName xmlns:ipw= "http://schemas.ericsson.com
          /ma/IPWORKS/">Policy1
        </ipw:aaaPolicyName>
      </ns2:MOId>
    </ns2:CreateResponse>
  </S:Body>
</S:Envelope>
```

Example 17 Create AAA Policy Response Message





10 Get AAA Policy

This section covers the `GetAAAPolicy` command.

The `GetAAAPolicy` retrieves an AAA policy in the CUDB.

MOType

`AAAPolicy@http://schemas.ericsson.com/ma/IPWORKS/`

10.1 Request Data

10.1.1 Parameters

The following table covers the parameters that can be received in a `GetAAAPolicy` request.

Table 20 Get AAA Policy Parameters

Parameter	Type	Description
aaaPolicyName	String Min Length = 1 Max Length = 64	The name of the policy.

10.2 Response Data

10.2.1 Parameters

MOId

Table 21 Get AAA Policy Parameters

Parameter	Type	Description
aaaPolicyName	String Min Length = 1 Max Length = 64	The name of the policy.

MOAttributes

The parameters that are used in the operation are shown in Figure 8.

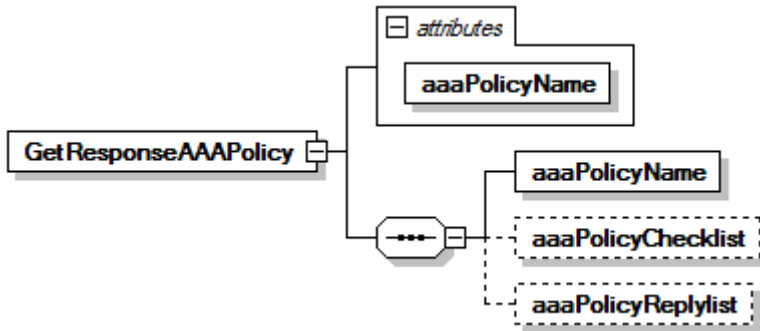


Figure 8 Parameters in Get AAA Policy

The following table covers the parameters that can be received in a GetAAAPolicy response.

Table 22 Get AAA Policy Parameters

Parameter	Type	Occurrence	Description
aaaPolicyName	String Min Length = 1 Max Length = 64	Mandatory	The name of the policy.
aaaPolicyChecklist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The checklist is a check rule of the policy. It is used to check whether the coming AVPs are matched with this check rule. All the AVP names are to conform to the AVP name in RFC, except the build-in AVPs such as System-Time
aaaPolicyReplylist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The reply list is a reply rule of the policy. If the Access-Request message is authorized successfully, the reply rule is added to the Access-Accept message.

10.3 Examples

Request Example

This section gives an example of a GetAAAPolicy request message, as shown in Example 18.



```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3="http://schemas.ericsson.com/cai3gl.2/"
  xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Get>
      <cai3:MOType>AAAPolicy@http://schemas.ericsson.com
        /ma/IPWORKS/</cai3:MOType>
      <cai3:MOId>
        <ipw:aaaPolicyName>Policy1
        </ipw:aaaPolicyName>
      </cai3:MOId>
    </cai3:Get>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 18 Get AAA Policy Request Message

Response Example

This section gives an example of a GetAAAPolicy response message, as shown in Example 19.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3gl.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:GetResponse xmlns:ns2="http://schemas.ericsson.com
      /cai3gl.2/">
      <ns2:MOAttributes>
        <ns:GetResponseAAAPolicy aaaPolicyName="Group1"
          xmlns:ns="http://schemas.ericsson.com/ma/IPWORKS/">
          <ns:aaaPolicyName>Policy1</ns:aaaPolicyName>
          <ns:aaaPolicyChecklist>System-Time &gt;= &quot;10:00
            +0800&quot; &amp;&amp; System-Time &lt;= &quot;20:00
            +0800&quot; &amp;&amp; ( User-Name = &quot;Faxin Zhong&quot;
              &amp;&amp; ( Service-Type = 1 || Service-Type = 2 ) )
          </ns:aaaPolicyChecklist>
          <ns:aaaPolicyReplylist>User-Name = $REQUEST, Login-IP-Host =
            10.170.4.169</ns:aaaPolicyReplylist>
        </ns:GetResponseAAAPolicy>
      </ns2:MOAttributes>
    </ns2:GetResponse>
  </S:Body>
</S:Envelope>
```

Example 19 Get AAA Policy Response Message

The AAA Policy1 is printed.



11 Set AAA Policy

This section covers the `SetAAAPolicy` command.

The `SetAAAPolicy` modifies AAA policy in the CUDB.

MOType

`AAAPolicy@http://schemas.ericsson.com/ma/IPWORKS/`

11.1 Request Data

11.1.1 Parameters

MOId

Table 23 Set AAA Policy MOId

Parameter	Type	Description
aaaPolicyName	String Min Length = 1 Max Length = 64	The name of the policy.

MOAttributes

The parameters that are used in the operation are shown in Figure 9.

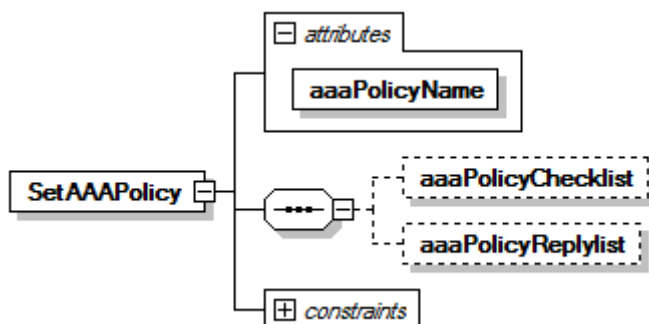


Figure 9 Parameters in Set AAA Policy

The following table covers the parameters that can be used in a `SetAAAPolicy` request.

**Table 24 Set AAA Policy Parameters**

Parameter	Type	Occurrence	Description
aaaPolicyName	String Min Length = 1 Max Length = 64	Mandatory	The name of the policy.
aaaPolicyChecklist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The checklist is a check rule of the policy. It is used to check whether the coming AVPs are matched with this check rule. All the AVP names should conform to the AVP name in RFC, except the build-in AVPs such as System-Time
aaaPolicyReplylist	String Min Length = 1 Max Length = 1024	Optional (0-1)	The reply list is a reply rule of the policy. If the Access-Request message is authorized successfully, the reply rule will be added to the Access-Accept message.

11.2 Examples

Request Example

This section gives an example of a SetAAAPolicy request message, as shown in Example 20.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3="http://schemas.ericsson.com/cai3g1.2/"
xmlns:ipw="http://schemas.ericsson.com/ma/IPWORKS/">
  <soapenv:Header>
    <cai3:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3:SessionId>
  </soapenv:Header>
  <soapenv:Body>
    <cai3:Set>
      <cai3:MOType>AAAPolicy@http://schemas.ericsson.com/ma/IPWORKS/
      </cai3:MOType>
      <cai3:MOId>
        <ipw:aaaPolicyName>Policy1</ipw:aaaPolicyName>
      </cai3:MOId>
      <cai3:MOAttributes>
        <ipw:SetAAAPolicy aaaPolicyName="Policy1">
          <ipw:aaaPolicyChecklist>System-Time >= &quot;10:00
            +0800&quot; &amp;&amp; System-Time &lt;= &quot;20:00 +0800&quot;
            &amp;&amp; ( User-Name = &quot;Faxin Zhong&quot; &amp;&amp;
              ( Service-Type = 1 || Service-Type = 2 ) )</ipw:aaaPolicyChecklist>
          <ipw:aaaPolicyReplylist>User-Name = $REQUEST, Login-IP-Host
            = 10.170.4.169</ipw:aaaPolicyReplylist>
        </ipw:SetAAAPolicy>
      </cai3:MOAttributes>
    </cai3:Set>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 20 Set AAA Policy Request Message

The AAA Policy1 is set to the new policy checklist and reply list.



Response Example

This section gives an example of a SetAAAPolicy response message, as shown in Example 21.

```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>d78e0fd9ff6c436984bd4d998633487a
    </cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:SetResponse xmlns:ns2=
    "http://schemas.ericsson.com/cai3g1.2/" />
  </S:Body>
</S:Envelope>
```

Example 21 Set AAA Policy Response Message





12 Faults and Errors

The generic structure for fault responses is covered in *Generic CAI3G Interface 1.2*, Reference [2]. That document also covers the generic fault codes, which are applicable to all CAI3G operations.

This section covers the subordinate CAI3G errors. They can appear in the `errorcode` element in the error message.

Only AAA specific error codes are described in this section. These error codes are included in the Fault type `PGFault`.

For generic error codes, and information about the different Fault types, see *CAI3G Implementation*, Reference [4].

12.1 Subordinate AAA Error Codes

The following table covers the subordinate error codes for AAA commands over the CAI3G interface

Table 25 Subordinate AAA Error Codes

Error Code	Error Message	Error Details	MO	Operation
18001	AAA USER DATA ALREADY EXISTS	AAA User data exists	AAAUUser	C
18002	AAA USER NOT DEFINED	AAA User does not exist	AAAUUser	G/S/D
18003	INCOMPLETE AAA USER DATA IN CUDB	Inconsistency AAA data in CUDB, manually rollback needed	AAAUUser	G/S/D
18004	AAA GROUP DATA ALREADY EXISTS	AAA Group data exists	AAAGroup	C
18005	AAA GROUP NOT DEFINED	AAA Group does not exist	AAAGroup	G/S
18006	INCOMPLETE AAA GROUP DATA IN CUDB	Inconsistency AAA data in CUDB, manually rollback needed	AAAGroup	G/S
18007	AAA REQUEST VALIDATION ERROR	AAA Request Validation Failure	AAAUUser/A AAPolicy	C/G/S
18008	AAA POLICY DATA ALREADY EXISTS	AAA Policy data exists	AAA Policy data exists	G
18009	AAA POLICY NOT DEFINED	AAA Policy does not exist	AAA Policy does not exist	G/S

12.2 CAI3G Error Message Example

The following, shown in Example 22, is an example of a CAI3G error message:



```
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:cai3g="http://schemas.ericsson.com/cai3g1.2/">
  <S:Header>
    <cai3g:SessionId>c9b002ea2cbb45d097a1ca5e7c9da32e</cai3g:SessionId>
  </S:Header>
  <S:Body>
    <ns2:Fault xmlns:ns2="http://schemas.xmlsoap.org/soap/envelope/"
      xmlns:ns3="http://www.w3.org/2003/05/soap-envelope">
      <faultcode>ns2:Server</faultcode>
      <faultstring>This is a server fault</faultstring>
      <detail>
        <Cai3gFault:Cai3gFault xmlns="http://schemas.ericsson.com/cai3g1.2/"
          xmlns:Cai3gFault="http://schemas.ericsson.com/cai3g1.2/">
          <faultcode>4006</faultcode>
          <faultreason>
            <reasonText>External error.</reasonText>
          </faultreason>
          <faultrole>MF</faultrole>
          <details>
            <PGFault:PGFault xmlns="http://schemas.ericsson.com/pg/1.0"
              xmlns:PGFault="http://schemas.ericsson.com/pg/1.0">
              <errorcode>18002</errorcode>
              <errormessage>AAA USER NOT DEFINED</errormessage>
              <errordetails>AAA User does not exist -
                [Processed by PG Node: vmx1771]</errordetails>
            </PGFault:PGFault>
          </details>
        </Cai3gFault:Cai3gFault>
      </detail>
    </ns2:Fault>
  </S:Body>
</S:Envelope>
```

Example 22 CAI3G Error Message



Reference List

Ericsson Documents

- [1] *Glossary of Terms and Acronyms*, 0033-CSH 109 628 Uen
- [2] *Generic CAI3G Interface 1.2 Specification*, 2/155 19-FAY 302 0003 Uen
- [3] *Library Overview*, 18/1553-CSH 109 628 Uen
- [4] *CAI3G Implementation*, 26/155 19-CSH 109 628 Uen