

New and Changed Information in Unified CM Release 12.0

Calling Device Name

Highlighted is where you would see calling device name in the call route request

```
<Request xmlns="urn:oasis:names:tc:xacml:2.0:context:schema:os">
  <Subject SubjectCategory="urn:oasis:names:tc:xacml:1.0:subject-
category:access-subject">
    <Attribute AttributeId="urn:oasis:names:tc:xacml:2.0:subject:role-id"
DataType="http://www.w3.org/2001/XMLSchema#string" Issuer="requestor">
      <AttributeValue>[string]</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:Cisco:uc:1.0:callingnumber"
DataType="http://www.w3.org/2001/XMLSchema#string">
      <AttributeValue>[number]</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:Cisco:uc:1.0:callednumber"
DataType="http://www.w3.org/2001/XMLSchema#string">
      <AttributeValue>[number]</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:Cisco:uc:1.0:transformedcgpn"
DataType="http://www.w3.org/2001/XMLSchema#string">
      <AttributeValue>[number]</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:Cisco:uc:1.0:transformedcdpn"
DataType="http://www.w3.org/2001/XMLSchema#string">
      <AttributeValue>[number]</AttributeValue>
    </Attribute>
    <Attribute AttributeId="urn:Cisco:uc:1.0:callingdevicename"
DataType="http://www.w3.org/2001/XMLSchema#string">
      <AttributeValue>[string]</AttributeValue>
    </Attribute>
  </Subject>
  <Resource>
    . . .
  </Resource>
  <Action>
    . . .
  </Action>
  <Environment>
    . . .
  </Environment>
</Request>
```

Call Routing Request – Description, Format, Parameters & Example

Description

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Unified CM sends the eXtensible Access Control Markup Language (XACML) based routing request over HTTP or HTTPS using the POST method. The XACML requests comply with XACML v2.0 standard.

Note:

For more information on XACML, refer to XACML 2.0 Core: eXtensible Access Control Markup Language (XACML) V at http://docs.oasis-open.org/xacml/2.0/access_control-xacml-2.0-core-spec-os.pdf

The XACML request contains the following information about the call:

- The calling and called numbers
- The transformed calling and called numbers, that is, the results of the calling and called number transformation applied at the trigger point.
- The calling device name
- The type of trigger point. The three trigger points supported in Unified CM 10.0 are translation pattern, route pattern, and directory number. Prior to Unified CM 10.0, translation pattern was the only trigger point type supported.

Format

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The following is the call routing request format:

```
1  POST <Request-URI> HTTP/1.1
2  Host: <route server>:<port>
3  Accept: */*
4  Content-type: text/xml; charset=ISO-8859-1
5  methodName: <string>
6  User-Agent: CiscoUCM-HttpClient/1.0
7  Connection:Keep-Alive
8  Content-Length: <length>
9  <?xml encoding="UTF-8" version="1.0"?>
10 <Request xmlns="urn:oasis:names:tc:xacml:2.0:context:schema:os">
11   <Subject SubjectCategory="urn:oasis:names:tc:xacml:1.0:subject-category:access-sub
12     <Attribute AttributeId="urn:oasis:names:tc:xacml:2.0:subject:role-id" DataType
13     Issuer="requestor">
14       <AttributeValue>[string]</AttributeValue>
15     </Attribute>
16     <Attribute AttributeId="urn:Cisco:uc:1.0:callingnumber" DataType="http://www.w
17     <AttributeValue>[number]</AttributeValue>
18     </Attribute>
19     <Attribute AttributeId="urn:Cisco:uc:1.0:callednumber" DataType="http://www.w3
20     <AttributeValue>[number]</AttributeValue>
21     </Attribute>
22     <Attribute AttributeId="urn:Cisco:uc:1.0:transformedcgpn" DataType="http://www
23     <AttributeValue>[number]</AttributeValue>
24     </Attribute>
25     <Attribute AttributeId="urn:Cisco:uc:1.0:transformedcdpn" DataType="http://www
26     <AttributeValue>[number]</AttributeValue>
```

```

25         </Attribute>
26         <Attribute AttributeId="urn:Cisco:uc:1.0:callingdevicename" DataType="http://w
27         <AttributeValue>[string]</AttributeValue>
28     </Subject>
29     <Resource>
30         <Attribute AttributeId="urn:oasis:names:tc:xacml:1.0:resource:resource-id"
31     DataType="http://www.w3.org/2001/XMLSchema#anyURI">
32         <AttributeValue>[string]</AttributeValue>
33     </Attribute>
34 </Resource>
35 <Action>
36     <Attribute AttributeId="urn:oasis:names:tc:xacml:1.0:action:action-id" DataTyp
37     <AttributeValue>[URI]</AttributeValue>
38 </Attribute>
39 </Action>
40 <Environment>
41     <Attribute AttributeId="urn:cisco:1.0:triggerpointtype" DataType="http://www.w
42     <AttributeValue>[string]</AttributeValue>
43 </Attribute>
</Environment>
</Request>

```

Parameters

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This section provides the description of various parameters in the request format.

| Parameters | Description |
|----------------------------|---|
| HTTP POST Message | |
| Request-URI | You can provision the Request-URI in an external call control profile. The Cisco Unified CM administrator can customize the URI for a particular web service in a deployment. For example, when an XACML 2.0 compliant policy server provides the web service, the Request-URI can be set to /pdp/AuthorizationEndPoint |
| Host:<route server>:<port> | The host and port of the web service to which the request is sent. For example, Host:cepm1.cisco.com:8080 |
| methodName | The name of the method. Currently, methodName will be isRoleAccessAllowed. |
| User-Agent | The User-Agent field is set to CiscoUCM-HttpClient/1.0 |
| Content-Length | The Content-Length field indicates the size of the entity-body in octets. |
| XACML Message | |
| role-id | The static role configured in the web service. |
| callingnumber | The telephone number or the directory number of the calling party. It depends on the dial plan configured on Unified CM and the transformations provisioned on the trigger point. The number is represented by the regular expression [+]?[0-9A-D*#]{1,48}. It can be in E.164 number format. |

| | |
|-------------------|--|
| callednumber | The telephone number or the directory number of called party. It depends on the dial plan configured on Unified CM and the transformations provisioned on the trigger point. The number is represented by the regular expression <code>[+]?[0-9A-D*#]{1,48}</code> . It can be in E.164 number format. |
| transformedcgpn | The transformed calling number. The result of the calling number transformation applied at the trigger point. |
| transformedcdpn | The transformed called number. The result of the called number transformation applied at the trigger point. |
| callingdevicename | The name of the calling device. |
| resource-id | The name of the resource to which the dynamic roles are mapped and for which the authorization decision is to be made. |
| action-id | The action a subject is permitted to perform on a resource. |
| triggerpointtype | Specifies where the external call control is triggered. For Unified CM 10.0(1), TranslationPattern, RoutePattern, and DirectoryNumber is supported. Prior to release 10.0(1), only TranslationPattern is supported. |

Example

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The following is an example call request scenario:

User A with directory number 9725550101 calls user B by dialing 50102. Cisco Unified CM is configured to allow five digit dialing for internal calls.

The dialed number, 50102, is transformed into +19725550102 on the translation pattern 5XXXX.

Unified CM sends an XACML call routing request to the web service when processing the dialed digits on the translation pattern.

The call routing request is as follows:

```

1
2  POST /pdp/AuthorizationEndPoint HTTP/1.1
3  Host: 10.89.81.55:8080
4  Accept: */*
5  Content-type: text/xml; charset=ISO-8859-1
6  methodName: isRoleAccessAllowed
7  User-Agent: CiscoUCM-HttpClient/1.0
8  Connection:Keep-Alive
9  Content-Length: 1704
10 <?xml version="1.0" encoding="UTF-8"?>
11 <Request xmlns="urn:oasis:names:tc:xacml:2.0:context:schema:os">
12   <Subject SubjectCategory="urn:oasis:names:tc:xacml:1.0:subject-category:access-sub
13     <Attribute AttributeId="urn:oasis:names:tc:xacml:1.0:subject:role-id"
14     Issuer="requestor">
15       <AttributeValue>CISCO:UC:UCMPolicy</AttributeValue>
16     </Attribute>
17     <Attribute AttributeId="urn:Cisco:uc:1.0:callingnumber" DataType="
18       <AttributeValue>+19725550101</AttributeValue>
19     </Attribute>
     <Attribute AttributeId="urn:Cisco:uc:1.0:callednumber" DataType="http://www.w3

```

```
20         <AttributeValue>50102</AttributeValue>
21     </Attribute>
22     <Attribute AttributeId="urn:Cisco:uc:1.0:transformedcgpn" DataType="
23         <AttributeValue>+19725550101</AttributeValue>
24     </Attribute>
25     <Attribute AttributeId="urn:Cisco:uc:1.0:transformedcdpn" DataType="
26         <AttributeValue>+19725550102</AttributeValue>
27     </Attribute>
28     <Attribute AttributeId="urn:Cisco:uc:1.0:callingdevicename" DataType="
29         <AttributeValue>SEP123456780000</AttributeValue>
30 </Subject>
31 <Resource>
32     <Attribute AttributeId="urn:oasis:names:tc:xacml:1.0:resource:resource-id"
33         <AttributeValue>CISCO:UC:VoiceOrVideoCall</AttributeValue>
34 </Attribute>
35 </Resource>
36 <Action>
37     <Attribute AttributeId="urn:oasis:names:tc:xacml:1.0:action:action-id"
38         <AttributeValue>any</AttributeValue>
39 </Attribute>
40 </Action>
41 <Environment>
42     <Attribute AttributeId="urn:Cisco:uc:1.0:triggerpointtype" DataType="
43         <AttributeValue>translationpattern</AttributeValue>
44 </Attribute>
</Environment>
</Request>
```