

3GPP TSG CN Plenary Meeting #20
04-06 June 2003. Hämeenlinna, FINLAND

NP-030245

Source: CN5 (OSA)
Title: Rel-5 CR 29.198-14 OSA API Part 14: Presence and Availability Management (PAM)
Agenda item: 8.2
Document for: APPROVAL

| Doc-1st-Level | Spec | CR | R | Ph | Subject | Ca t | Ver- Curr | Doc-2nd- Level | WI |
|---------------|-----------|-----|---|-------|---|---------|--------------|-------------------|------|
| NP-030245 | 29.198-14 | 004 | - | Rel-5 | Make TpPAMCapability extensible by changing its type to TpString | F | 5.1.0 | N5-030259 | OSA2 |
| NP-030245 | 29.198-14 | 006 | - | Rel-5 | Clarify use of askerData parameter to getAuthToken method in each PAM SCF | F | 5.1.0 | N5-030263 | OSA2 |
| NP-030245 | 29.198-14 | 007 | - | Rel-5 | Add authToken parameter to computeAvailability method | F | 5.1.0 | N5-030267 | OSA2 |
| NP-030245 | 29.198-14 | 008 | - | Rel-5 | Replace use of IpInterfaceRef in PAM with actual application interfaces | F | 5.1.0 | N5-030268 | OSA2 |
| NP-030245 | 29.198-14 | 009 | - | Rel-5 | Add expiration time for PAM event registrations | F | 5.1.0 | N5-030269 | OSA2 |
| NP-030245 | 29.198-14 | 010 | - | Rel-5 | Send subscription notification cancellation to watchers | F | 5.1.0 | N5-030270 | OSA2 |
| NP-030245 | 29.198-14 | 012 | - | Rel-5 | Move Access Control Mechanism to Manager Interface | F | 5.1.0 | N5-030295 | OSA2 |

CHANGE REQUEST

⌘ **29.198-14 CR 004** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Make TpPAMCapability extensible by changing its type to TpString | | |
| Source: | ⌘ Teltier (Guda Venkatesh) | | |
| Work item code: | ⌘ OSA2 | Date: | ⌘ 22/05/2003 |
| Category: | ⌘ F | Release: | ⌘ REL-5 |
| | Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) |

| | | | |
|--------------------------------------|---|--|--|
| Reason for change: | ⌘ TpPAMCapability to be extensible to handle evolving communication modes | | |
| Summary of change: | ⌘ TpPAMCapability definition changed from enumeration type to string type | | |
| Consequences if not approved: | ⌘ Frequent change requests for new capabilities | | |

| | | | | | | | | | | | |
|------------------------------|--|---|---|---|---|---|---|---|---|---|--|
| Clauses affected: | ⌘ 11.3.1 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications | Y | N | ⌘ | X | ⌘ | X | ⌘ | X | ⌘ | |
| Y | N | | | | | | | | | | |
| ⌘ | X | | | | | | | | | | |
| ⌘ | X | | | | | | | | | | |
| ⌘ | X | | | | | | | | | | |
| Other comments: | ⌘ | | | | | | | | | | |

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

1. Introduction

TpPAMCapability is a data type defined to designate the communication capability for which availability is requested. Currently the data type consists of four pre-defined values for Voice, SMS, IM and MMS. This data type definition is fine in the 3GPP subset of the PAM specifications since there are no methods to create, change or delete capabilities. However, this conflicts with the provisioning PAM SCF which contains methods to create new capabilities and to assign attributes to capabilities. In addition, the capabilities are identified by TpString in the Capability Management Interface which is inconsistent with the use of TpPAMCapability and TpPAMCapabilityList anywhere in the specifications. So the result is that the capability management interface is useless as it exists since the capabilities created via those interfaces cannot be used in any context in the specifications nor is it possible to assign some attributes to the pre-defined capabilities.

This contribution proposes a change to the type definition of TpPAMCapability to TpString.

2. Proposal

11.3.1 TpPAMCapability

[This defines the extensible communication capabilities. This data type is identical to a TpString, and is defined as a string of characters that specify the communication capabilities. The following strings are pre-defined.](#)

| <u>Character String Value</u> | <u>Description</u> |
|-------------------------------|---|
| <u>P_PAM_VOICE</u> | <u>Capability for voice calls</u> |
| <u>P_PAM_SMS</u> | <u>Capability for SMS</u> |
| <u>P_PAM_IM</u> | <u>Capability for Instant Messaging</u> |
| <u>P_PAM_MMS</u> | <u>Capability for Multi-media messaging</u> |

~~This defines the communication capabilities.~~

| Name | Value | Description |
|----------------------|------------------|---|
| PAM_VOICE | 0 | Capability for voice calls |
| PAM_SMS | 1 | Capability for SMS |
| PAM_IM | 2 | Capability for Instant Messaging |
| PAM_MMS | 3 | Capability for Multi-media messaging |

CHANGE REQUEST

⌘ **29.198-14 CR 006** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

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Proposed change affects: UICC apps ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Clarify use of askerData parameter to getAuthToken method in each PAM SCF | | |
| Source: | ⌘ Teltier (Guda Venkatesh) | | |
| Work item code: | ⌘ OSA2 | Date: | ⌘ 22/05/2003 |
| Category: | ⌘ F | Release: | ⌘ REL-5 |
| | Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) |

| | | | |
|--------------------------------------|---|--|--|
| Reason for change: | ⌘ Current description omits to specify a reserved attribute name in askerData | | |
| Summary of change: | ⌘ A statement added to the descriptions of askerData | | |
| Consequences if not approved: | ⌘ Confusion and potential lack of inter-operability | | |

| | | | | | | | | | | | |
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| Clauses affected: | ⌘ 8.1, 8.2 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> | Y | N | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Other core specifications Test specifications O&M Specifications | ⌘ |
| Y | N | | | | | | | | | | |
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| Other comments: | ⌘ | | | | | | | | | | |

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1. Introduction

The `getAuthToken` method present in each of the top level managers in the PAM SCFs takes a `askerData` parameter to identify the entity for whom the authentication token is to be generated. Currently it is defined as a list of unspecified attributes since the data available on the asker can vary from application to application. However, one of the attributes must identify who the asker is if the name is known. For inter-operability, the name of this attribute must be fixed just as it is done in the description of `askerData` member of `TpPAMContext` for exactly the same reason.

This contribution is a change request to include the same wording as used in `TpPAMContext` be included near all descriptions of `getAuthToken`.

2. Proposal

8.1.1.1 Method `getAuthToken()`

Get an authentication token for access to the interface methods.

Returns an implementation-dependent authentication credential that can be verified.

Parameters

`askerData` : in `TpAttributeList`

Specifies information about the asker. Can be an empty array. [The exact attributes in this list are dependent on the application. PAM reserves the attribute “name” with type `TpPAMFQName` to contain the identity of the asker if known.](#)

Returns

`TpPAMCredential`

Raises

`TpCommonExceptions`, `P_PAM_INVALID_CREDENTIAL`

8.2.1.1 Method `getAuthToken()`

Get an authentication token for access to the interface methods.

Returns an implementation-dependent authentication credential that can be verified.

Parameters

`askerData` : in `TpAttributeList`

Specifies information about the asker. Can be an empty array. [The exact attributes in this list are dependent on the application. PAM reserves the attribute “name” with type `TpPAMFQName` to contain the identity of the asker if known.](#)

Returns

`TpPAMCredential`

Raises

`TpCommonExceptions`, `P_PAM_INVALID_CREDENTIAL`

CHANGE REQUEST

⌘ **29.198-14 CR 007** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

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Proposed change affects: UICC apps ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Add authToken parameter to computeAvailability method | | |
| Source: | ⌘ Teltier (Guda Venkatesh) | | |
| Work item code: | ⌘ OSA2 | Date: | ⌘ 22/05/2003 |
| Category: | ⌘ F | Release: | ⌘ REL-5 |
| | Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) |

| | | | |
|--------------------------------------|--|--|--|
| Reason for change: | ⌘ Missing parameter in computeAvailability method | | |
| Summary of change: | ⌘ The authToken parameter from getAvailability is passed to the computeAvailability method where it will be used | | |
| Consequences if not approved: | ⌘ computeAvailability cannot be used to fully enforce privacy requirements | | |

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| Clauses affected: | ⌘ 8.1.4 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> | Y | N | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other core specifications Test specifications O&M Specifications | ⌘ |
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| Other comments: | ⌘ | | | | | | | | | | |

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1. Introduction

The `getAvailability` method takes an authentication token parameter that optionally provides the credentials of the entity requesting the information. The availability returned by the method may need to take into account information about the asking entity to determine the type of availability information is returned.

The availability determination is done via an external application interface registered with the availability management interface using the `setPreference` method. This external application interface needs to get access to the `authToken` parameter provided to the `getAvailability` method. Currently this parameter is missing (inadvertantly) from the `computeAvailability` method in this application interface and hence the external availability computation module may not be able to determine the identity of the person requesting the information. This is a serious omission in the specification.

This contribution is a change request to add the missing parameter to the `computeAvailability` method.

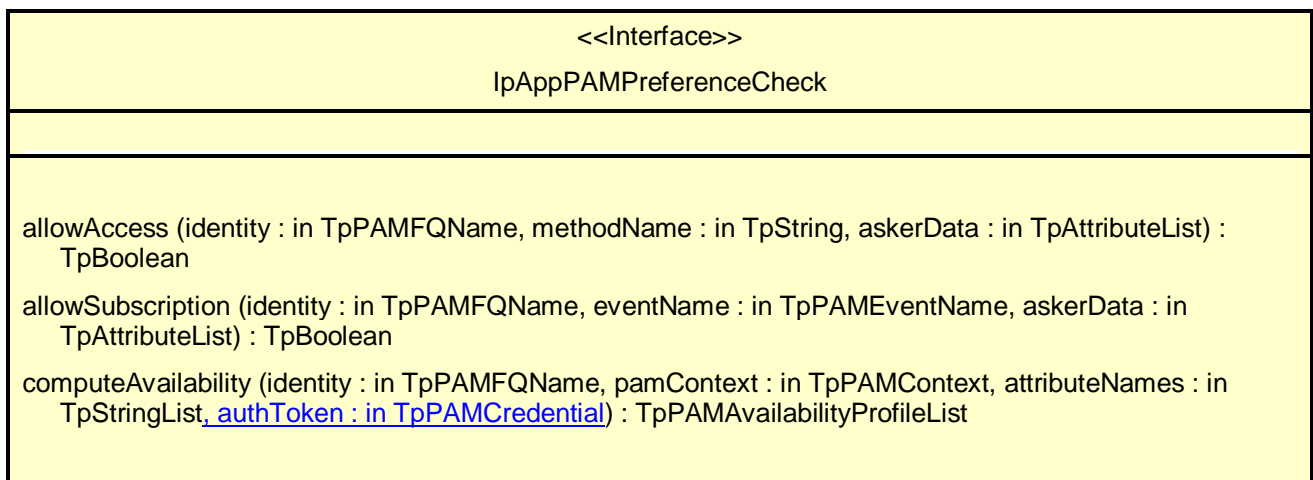
2. Proposal

The changes apply to the `IpAppPAMPreferenceCheck` interface.

Interface Class `IpAppPAMPreferenceCheck`

Inherits from: `IpInterface`.

The purpose of this interface is to provide methods to be called by the PAM service to check for access control or to compute availability using an implementation provided by an application. Instances of this interface are registered using the `setPreference()` method in the availability management interface.



Method `computeAvailability()`

Compute the availability for an identity for a given context. The data provided is the same as the data provided for the `getAvailability` call. The application implementing this interface uses the identity presence interface to get the current presence data and maintains its own user preferences to compute the availability.

Returns a value containing a list of attributes as available to the asker in the requested context. If no information is available to the asker an empty list is returned.

Parameters

identity : in TpPAMFQName

Specifies the identity for which the availability is being requested.

pamContext : in TpPAMContext

specifies the context for which the availability is requested.

attributeNames : in TpStringList

specifies the attributes of interest. Can be an empty list to indicate all attributes.

[authToken : in TpPAMCredential](#)
[of the entity who wishes to do this operation.](#)

Returns

TpPAMAvailabilityProfileList

CHANGE REQUEST

⌘ **29.198-14 CR 008** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

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Proposed change affects: UICC apps ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Replace use of IpInterfaceRef in PAM with actual application interfaces | | |
| Source: | ⌘ Teltier (Guda Venkatesh) | | |
| Work item code: | ⌘ OSA2 | Date: | ⌘ 22/05/2003 |
| Category: | ⌘ F | Release: | ⌘ REL-5 |
| | Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) |

| | | | |
|--------------------------------------|---|--|--|
| Reason for change: | ⌘ Invalid interfaces can now be passed to certain methods | | |
| Summary of change: | ⌘ Parameters of type IpInterface that require a specific type of interface are strongly typed to the expected type | | |
| Consequences if not approved: | ⌘ Potential runtime errors or inefficient implementations if they need to check for valid interfaces at every call. | | |

| | | | | | | | | | | | |
|------------------------------|--|---|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--|---|
| Clauses affected: | ⌘ 11, 8.2.3, 11.8.5 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> | Y | N | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other core specifications Test specifications O&M Specifications | ⌘ |
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1. Introduction

There are 2 method signatures where IpInterfaceRef is used as an input parameter when reference to a specific application interface derived from IpInterface and defined within the PAM specifications is meant to be passed in. Passing any other interface reference is an error but this will not be caught until runtime.

This proposal is to tighten the signature to specify the exact interface reference expected so that errors can be caught at runtime. There is no backward compatibility issue here since all of the interfaces derive from IpInterfaceRef

2. Proposal

First two new interface definitions are defined for the two Application interfaces in Section 11

IpAppPAMEventHandlerRef

Defines a Reference to type IpAppPAMEventHandler.

IpAppPAMPreferenceCheckRef

Defines a Reference to type IpAppPAMPreferenceCheck.

Next we replace the use of IpInterfaceRef in two places. In section 8.2.3

| <<Interface>> IpPAMEventHandler |
|---|
| <p>isRegistered (clientID : in TpPAMClientID, authToken : in TpPAMCredential) : TpBoolean</p> <p>registerAppInterface (appInterface : in IpInterfaceRefIpAppPAMEventHandlerRef, authToken : in TpPAMCredential) : TpPAMClientID</p> <p>registerForEvent (clientID : in TpPAMClientID, eventList : in TpPAMEventInfoList, authToken : in TpPAMCredential) : TpPAMEventID</p> <p>deregisterAppInterface (clientID : in TpPAMClientID, authToken : in TpPAMCredential) : void</p> <p>deregisterFromEvent (eventID : in TpPAMEventID, authToken : in TpPAMCredential) : void</p> |

And then in 11.8.5

11.8.5 TpPAMPreferenceData

This is a **tagged choice of data elements** that specifies the preference data. The data depends on the type of preference being specified.

| | Tag Element Type | |
|--|---------------------|--|
| | TpPAMPreferenceType | |

| Tag Element Value | Choice Element Type | Choice Element Name |
|----------------------|--|--------------------------|
| PAM_ACCESS_LIST | TpPAMAccessControlData | AccessControl |
| PAM_EXTERNAL_CONTROL | IpInterfaceRef IpAppPAMPreferenceCheckRef | ExternalControlInterface |

CHANGE REQUEST

⌘ **29.198-14 CR 009** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

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Proposed change affects: UICC apps ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Add expiration time for PAM event registrations | | |
| Source: | ⌘ Teltier (Guda Venkatesh) | | |
| Work item code: | ⌘ OSA2 | Date: | ⌘ 22/05/2003 |
| Category: | ⌘ F | Release: | ⌘ REL-5 |
| | Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) |

| | | | |
|--------------------------------------|---|--|--|
| Reason for change: | ⌘ Current event registrations have no valid duration requiring explicit cancellations | | |
| Summary of change: | ⌘ A parameter added to registerForEvent method to specify valid duration | | |
| Consequences if not approved: | ⌘ Unneeded event registrations accumulating in presence service as watchers go away without explicitly cancelling affecting performance | | |

| | | | | | | | | | | | |
|------------------------------|--|---|---|---|---|---|---|---|---|---|--|
| Clauses affected: | ⌘ 8.2.3 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications | Y | N | ⌘ | X | ⌘ | X | ⌘ | X | ⌘ | |
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| Other comments: | ⌘ | | | | | | | | | | |

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

1. Introduction

Watchers subscribe to presence information via the PAM Event SCF interfaces. Currently, a subscription can be one time (i.e., removed after immediate notification) or kept until explicitly removed by the watcher. This is too much of a burden on the watcher when they need the registration for a fixed period of time. The change request is to add a parameter while registering for an event so that watchers can specify a valid duration for the registration after which the registration is automatically cancelled.

2. Proposal

Since this feature is common to all allowed event registrations, the proposal is to introduce a “valid for” parameter while registering for an event in section 8.2.3.

| |
|---|
| <<Interface>> IpPAMEventHandler |
| <pre> isRegistered (clientID : in TpPAMClientID, authToken : in TpPAMCredential) : TpBoolean registerAppInterface (appInterface : in IpInterfaceRef, authToken : in TpPAMCredential) : TpPAMClientID registerForEvent (clientID : in TpPAMClientID, eventList : in TpPAMEventInfoList, <u>validFor: in TpDuration,</u> authToken : in TpPAMCredential) : TpPAMEventID deregisterAppInterface (clientID : in TpPAMClientID, authToken : in TpPAMCredential) : void deregisterFromEvent (eventID : in TpPAMEventID, authToken : in TpPAMCredential) : void </pre> |

8.2.3.3 Method registerForEvent()

Register a client application's interest in one or more events.

Returns an ID returned by the service that uniquely identifies this registration for the event.

Parameters

clientID : in TpPAMClientID

specifies the registration ID provided at registration.

eventList : in TpPAMEventInfoList

specifies the events of interest.

validFor : in TpDuration

specifies the interval in milliseconds until which the subscription is held and notifications provided. A time interval of 0 or negative values indicate a subscription that never expires until explicitly canceled.

authToken : in TpPAMCredential

Credential of the entity who wishes to do this operation.

Returns

TpPAMEventID

Raises

TpCommonExceptions, P_PAM_NOT_REGISTERED, P_PAM_INVALID_CREDENTIAL

CHANGE REQUEST

⌘ **29.198-14 CR 010** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Send subscription notification cancellation to watchers | | |
| Source: | ⌘ Teltier (Guda Venkatesh) | | |
| Work item code: | ⌘ OSA2 | Date: | ⌘ 22/05/2003 |
| Category: | ⌘ F | Release: | ⌘ REL-5 |
| | Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) |

| | | | |
|--------------------------------------|--|--|--|
| Reason for change: | ⌘ Currently watchers are not notified if presence service cancels subscriptions for any reason | | |
| Summary of change: | ⌘ An error notification code added to denote subscription cancellation | | |
| Consequences if not approved: | ⌘ Faulty applications where watchers assume their subscription is valid while it has been cancelled. | | |

| | | | | | | | | | | | |
|------------------------------|--|---|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--|---|
| Clauses affected: | ⌘ 11.13.1 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> | Y | N | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other core specifications Test specifications O&M Specifications | ⌘ |
| Y | N | | | | | | | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | |
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| Other comments: | ⌘ | | | | | | | | | | |

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

1. Introduction

Watchers subscribe to presence information via the PAM Event SCF interfaces. Currently, if a subscription is cancelled by the presence service for any reason (e.g., change in access control rules that do not permit that subscription anymore) no notification is sent to the watcher who had subscribed.

2. Proposal

Currently the presence service communicates notifications via the IpAPPAMEventHandler interface which already contains an eventNotifyErr method for informing the watcher of exception conditions.

| |
|--|
| <<Interface>> IpAppPAMEventHandler |
| eventNotify (eventID : in TpPAMEventID, eventInfo : in TpPAMNotificationInfoList) : void eventNotifyErr (eventID : in TpPAMEventID, errorInfo : in TpPAMErrorInfo) : void |

The proposal is to send the event cancellation notification for any event using the eventNotifyErr. This requires an extension to the error codes sent.

11.13.1 TpPAMErrorCause

This defines the types of errors reported by PAM.

| Name | Value | Description |
|--|-------------------|--|
| P_PAM_CAUSE_UNDEFINED | 0 | Undefined. |
| P_PAM_CAUSE_INVALID_ADDRESS | 1 | The request cannot be handled because the address specified is not valid. |
| P_PAM_CAUSE_SYSTEM_FAILURE | 2 | System failure. The request cannot be handled because of a general problem in the service or in the underlying network. |
| P_PAM_CAUSE_INFO_UNAVAILABLE | 3 | The information is currently not available. |
| P_PAM_CAUSE_EVENT_REGISTRATION_CANCELLED | 4 | The registration for the event has been cancelled by the service. |

11.13.2 TpPAMErrorInfo

This is a [Sequence of Data Elements](#) to specify the error notification data.

| Sequence Element Name | Sequence Element Type | Description |
|-----------------------|---------------------------------------|--|
| Cause | TpPAMErrorCause | Contains information about the reason for the error |
| ErrorData | TpPAMNotificationInfo | Contains information relevant to each error such as the identity for which the error exists and/or the attributes for which the error exists |

CHANGE REQUEST

⌘ **29.198-14 CR 012** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

| | | | |
|------------------------|---|-----------------|---|
| Title: | ⌘ Move Access Control Mechanism to Manager Interface | | |
| Source: | ⌘ Teltier (Guda Venkatesh) | | |
| Work item code: | ⌘ OSA2 | Date: | ⌘ 22/05/2003 |
| Category: | ⌘ F | Release: | ⌘ REL-5 |
| | Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 . | | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) |

| | | | |
|--------------------------------------|---|--|--|
| Reason for change: | ⌘ Currently access control included in only one SCF to apply across multiple SCFs | | |
| Summary of change: | ⌘ Access control mechanism moved from availability interface to separate management interfaces for each SCF | | |
| Consequences if not approved: | ⌘ Inability to use access control functionality in PAM Event SCF | | |

| | | | | | | | | | | | |
|------------------------------|--|---|---|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--|---|
| Clauses affected: | ⌘ 8.1.1, 8.2.1, 8.1.4 | | | | | | | | | | |
| Other specs affected: | <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> | Y | N | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Other core specifications Test specifications O&M Specifications | ⌘ |
| Y | N | | | | | | | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | | | |
| Other comments: | ⌘ | | | | | | | | | | |

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1. Introduction

PAM provides for two types of privacy controls. One is an access control mechanism to control access to any data maintained by the Presence Service. The other is the availability management mechanism itself that determines what presence data (including the value of the data) is provided to the asker. These privacy controls can be created, deleted or modified at any time using the SetPreference method in the Availability Management interface.

The current mechanism is problematic for several reasons. One, it is not a feasible design to specify access controls for all interfaces in each of the 3 SCFs via one method in a single interface. Second, it complicates the treatment of preferences that are used primarily for availability management.

This contribution proposes moving the access control mechanism to separate methods in each of the top level manager interfaces in the PAM SCFs

2. Proposal

First the option to specify access control list is removed in the definition of TpPAMPreferenceData.

11.8.5 TpPAMPreferenceData

This is a **tagged choice of data elements** that specifies the preference data. The data depends on the type of preference being specified.

| | Tag Element Type | |
|--|---------------------|--|
| | TpPAMPreferenceType | |

| Tag Element Value | Choice Element Type | Choice Element Name |
|----------------------|------------------------|--------------------------|
| PAM_ACCESS_LIST | TpPAMAccessControlData | AccessControl |
| PAM_EXTERNAL_CONTROL | IpInterfaceRef | ExternalControlInterface |

Next two new methods are introduced into each top level manager interfaces in sections 8.1.1, and 8.2.1. The signatures and semantics are the same in all three sections.

8.1.1 Interface Class IpPAMPresenceAvailabilityManager

Inherits from: IpService.

The purpose of this interface is to supply the various interfaces available in this service to the application and to provide the authentication credentials. This interface is the only discoverable interface from the framework.

All PAM methods optionally use an authentication token as a parameter since the outcome of the operations may depend on the entity requesting the operation. To enable this, the getAuthToken() method is used to obtain an implementation dependent token. An application that has authenticated itself with the OSA framework, can get an authentication token for itself. Alternatively, if the application is requesting PAM operations on behalf of multiple entities, authentication tokens may be requested for each such entity after providing any available data about the asker. These tokens can then be used repeatedly for operations within a session without further need to identify the asker.

| |
|---|
| <<Interface>> IpPAMPresenceAvailabilityManager |
| <pre> getAuthToken (askerData : in TpAttributeList) : TpPAMCredential obtainInterface (interfaceName : in TpPAMPresenceAvailabilityInterfaceName) : IpInterfaceRef getAccessControl (identity : in TpPAMFQName, authToken : in TpPAMCredential) : TpPAMAccessControlData setAccessControl (identity : in TpPAMFQName, operation : in TpPAMPreferenceOp, newAccessControl : in TpPAMAccessControlData, authToken : in TpPAMCredential) : void </pre> |

8.2.1 Interface Class IpPAMEventManager

Inherits from: IpService.

The purpose of this interface is to supply the various interfaces available in this service to the application and to provide the authentication credentials. This interface is the only discoverable interface from the framework.

All PAM methods use an authentication token as a parameter since the outcome of the operations may depend on the entity requesting the operation. To enable this, the getAuthToken() method is used to obtain an implementation dependent token. An application that has authenticated itself with the OSA framework, can get an authentication token for itself. Alternatively, if the application is requesting PAM operations on behalf of multiple entities, authentication tokens may be requested for each such entity after providing any available data about the asker. These tokens can then be used repeatedly for operations within a session without further need to identify the asker.

| |
|---|
| <<Interface>> IpPAMEventManager |
| <pre> getAuthToken (askerData : in TpAttributeList) : TpPAMCredential obtainInterface (interfaceName : in TpPAMEventManagerInterfaceName) : IpInterfaceRef getAccessControl (identity : in TpPAMFQName, authToken : in TpPAMCredential) : TpPAMAccessControlData setAccessControl (identity : in TpPAMFQName, operation : in TpPAMPreferenceOp, newAccessControl : in TpPAMAccessControlData, authToken : in TpPAMCredential) : void </pre> |

[Method getAccessControl\(\)](#)

[Get the access control associated with the data belonging to an identity. The data associated with an identity includes the static and dynamic attributes of an identity as well as data about agents associated with an identity.](#)

[This method should be used in conjunction with the setAccessControl method.](#)

[Returns the access control if previously specified for the identity. Is null if there is no access control associated.](#)

Parameters**identity : in TpPAMFQName**

specifies the identity of interest.

authToken : in TpPAMCredential

of the entity who wishes to do this operation.

Returns**TpPAMAccessControlData**Raises**TpCommonExceptions, P_PAM_UNKNOWN_IDENTITY, P_PAM_INVALID_CREDENTIAL****Method setAccessControl()**

Set the access controls for the data associated with the specified identity. If the identity is Null, the access control is set for all identities (if authorized to do so). The data associated with an identity includes the static and dynamic attributes of an identity as well as data about agents associated with an identity.

Any existing access control will be modified based on the operation.

If the new access control is specified as Null for replace operation , an existing access control will be removed.

Parameters**identity : in TpPAMFQName**

specifies the identity of interest.

operation : in TpPAMPreferenceOp

specifies the operation to be performed with the specified preference

newAccessControl : in TpPAMAccessControlData

specifies the access controls to add.

authToken : in TpPAMCredential

of the entity who wishes to do this operation.

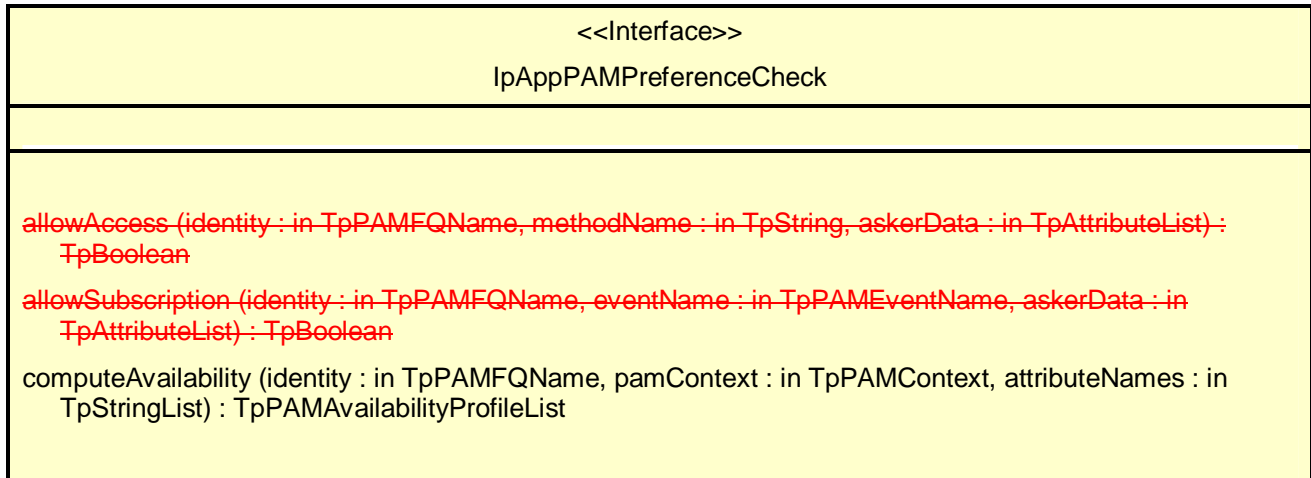
Raises**TpCommonExceptions, P_PAM_UNKNOWN_IDENTITY, P_PAM_INVALID_CREDENTIAL**

Two methods are removed in the IpAppPAMPreferenceCheck that are no longer needed because of the new access control mechanism.

8.1.4 Interface Class IpAppPAMPreferenceCheck

Inherits from: IpInterface.

The purpose of this interface is to provide methods to be called by the PAM service to check for access control or to compute availability using an implementation provided by an application. Instances of this interface are registered using the setPreference() method in the availability management interface.



8.1.4.1 Method allowAccess()

Check the access permission for the asker for the specified method.

Returns True if the access is allowed, false if denied.

Parameters

identity : in TpPAMFQName

specifies the identity for which the access is being requested.

methodName : in TpString

specifies the method being requested.

askerData : in TpAttributeList

specifies the asker.

Returns

TpBoolean

8.1.4.2 Method allowSubscription()

Check the access permission for the asker to register for the specified event.

Returns True if the subscription is allowed, false if denied.

Parameters

identity : in TpPAMFQName

specifies the identity for which the access is being requested.

eventName : in TpPAMEventName

specifies the event being registered to.

~~askerData : in TpAttributeList~~

~~specifies the asker.~~

Returns

~~TpBoolean~~