eXtensible Resource Provisioning Management

Revision History

Version	**Draft 01 – v03**
Date	02 August 2001
Editor	Jeff Bohren, Tony Gullotta, Gavenraj Sodhi, John Aisien
Comments	First Draft Includes the following: Primary Use Cases Updated Object Model w/ Description Future Use Cases for next version Glossary

XRPM Use Cases

Purpose

This document describes the requirements and use cases for eXtensible Resource Provisioning Management (XRPM)

Introduction

This document provides an initial set of use cases for the eXtensible Resource Provisioning Management, XRPM, Working Group. XRPM's objective is to provide an XML standard for the open interoperability between provisioning systems and resources in order for access rights to be provisioned.

Primary Use Cases

This section contains a set of primary use cases for XRPM. Each use case consists of a description, actors involved, pre-conditions, steps involved, post-conditions, and finally many use cases contain a diagram depicting the actions occurring. We have attempted to address a good majority of use cases that would cover the workings of the group and it is understood that there are other use cases which XRPM may have not yet addressed (e.g., Modify, Suspend, Restore), which may be added to future use case list as stated in this draft.

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Use Case 1: Add Organization

Description

New organization is added to provisioning system A. Provisioning system A could be used to provision a single organization or multiple organizations. Each organization should be associated with a domain name (e.g., acme.com) that is unique to all the provisioning systems that collaborate.

The information that should be provided to add an organization:

- Organization name
- Unique domain name for the organization

Actors

This use case uses the flowing actors:

- Provisioning System A – Provisioning system that is used to provision the organization.
- Organization – The organization to be added to Provisioning System A

Pre-Conditions

- There exists an organization for which there is a domain name that can be considered unique across all provisioning system in a collaborative network
- There exists a provisioning system that can provision an organization.

Steps

1. The organization is added to provisioning system A.

Post-Conditions

- The organization has an identity in provisioning system A.
- The organization is associated in provisioning system A with its unique domain name.
- The organization can be known to all other provisioning system that collaborate with provisioning system A by its unique domain name.

Use Case 2: Add Party to Provisioning System A

Description

Requesting authority (may be a party or a system) requests that a party within an organization with an identity in provisioning system B be added to provisioning system A.

The information that should be provided to create a party's identity:

- User ID (unique to the organization)
- Password
- Full name
- First name
- Last name
- Work number
- Email

Actors

This use case uses the flowing actors

- Requesting Authority – Party or system that is authorized to request a service for the party.
- Provisioning System A – Provisioning system that the requesting authority has access to.

Pre-Conditions

- A level of trust is established between the provisioning systems

Steps

1. Request is made to provisioning system A to add an identity representing the party.
2. The requesting authority is notified of the request fulfillment.

Post-Conditions

- The party has an identity in provisioning system A.

Use Case 3: Propagate Party to Provisioning System B from Provisioning System A

Description

Requesting authority (may be a party or a system) requests that a party who has an identity in provision system A be added to the provision systems B.

Actors

This use case uses the flowing actors:

- Requesting Authority – Party or system that is authorized to request a service for the party.
- Provisioning System A – Provisioning system that the requesting authority has access to, and in which the party has an identity.
- Provisioning System B – Collaborative provisioning system can provision services of interest to the Requesting Authority or the Party.

Pre-Conditions

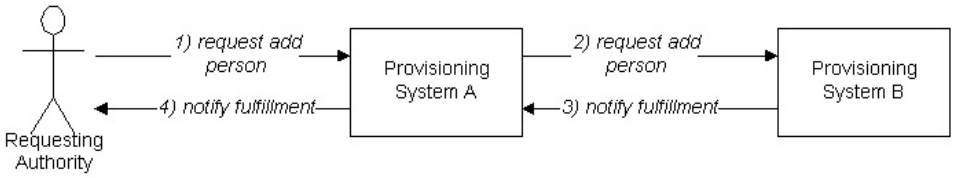
- A level of trust is established between the provisioning systems.

Steps

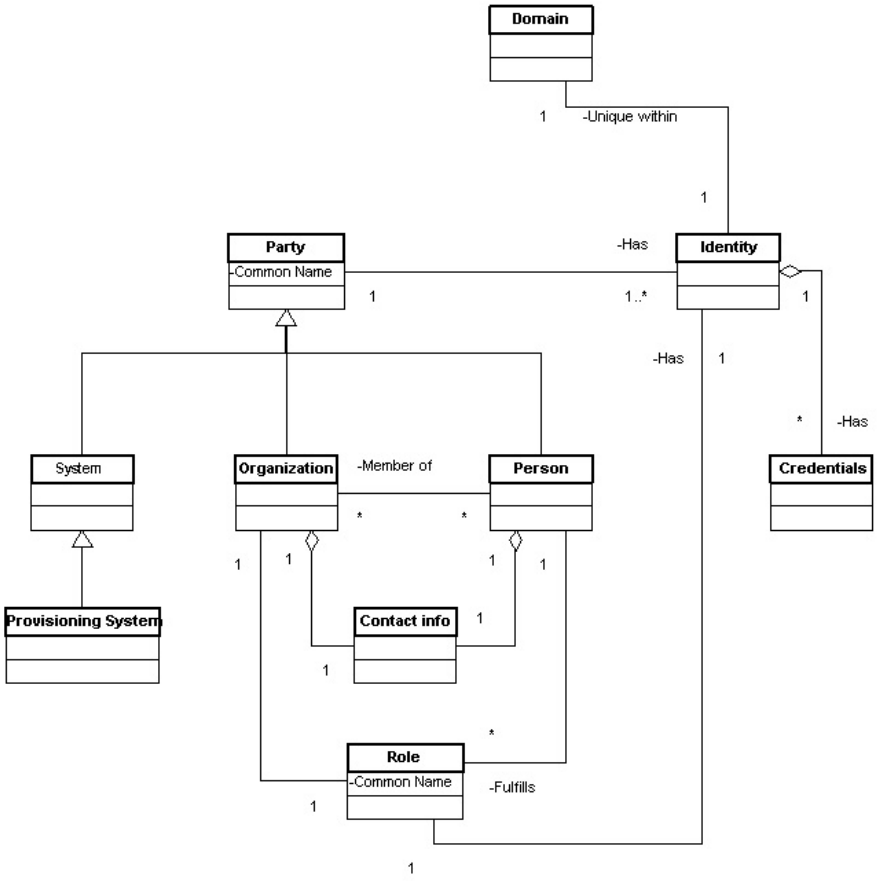
1. Request is made to provisioning system A to add an identity representing the party.
2. Provisioning system A makes a request to provisioning system B to add an identity representing the party.
3. Provisioning system B notifies provisioning system A that the party's identity has been added.
4. The requesting authority is notified of the request fulfillment.

Post-Conditions

- The party has an identity in provisioning system A and provisioning system B.



Main Object Model



Main Object Model Description

This object model represents the top-level classes. The Party class generalizes all entities that collaborate in the system. The Party class is specialized by the System, Organization, and Person classes. All instances of the Party class have ay least one Identity.

The Organization class is a specialization of the Party class that represents an organization of persons. All organizations have contact information.

The Person class is a specialization of the Party class that represents an individual Person. Each person instance has contact information. Each person has zero or more roles that that person fulfills, and can be a member of zero or more organizations.

The System class is a specialization of the Party class that represents computing entities. The Provisioning System class is a specialization of the System class that supports provisioning as defined by XRPM.org.

The Role class represents roles that a person can fulfill within an organization. Roles have a single identity. Globally defined roles will be represented by instances of the Role class that have a predefined identity within the XRPM domain. All other roles are defined with a identity unique to the domain of the provisioning System that defined them.

The Identity class represents the unique identity of an element with respect to a defining domain. All globally unique identities are defined within the XRPM domain. Each identity can have zero or more credentials.

Future Use Cases

Use Case 4: Manually Provision Service

Description

Requesting authority (may be a party or a system) requests that a party be provisioned with a service consisting of an Application Account, and an Operating System Account. The provisioning request is done in provisioning system A, and provisioning system B controls the resources.

The information that should be provided to the service is:

- User ID (unique to the organization)
- Password

Actors

This use case uses the flowing actors:

- Requesting Authority – Person or system that is authorized to request a service for the party.
- Party – The entity the service is being requested for.
- Provisioning System A – Provisioning system that the requesting authority and the party have access to.
- Provisioning System B – Provisioning system that controls the Operating System Account and Application Account.

Deleted: providers

Pre-Conditions

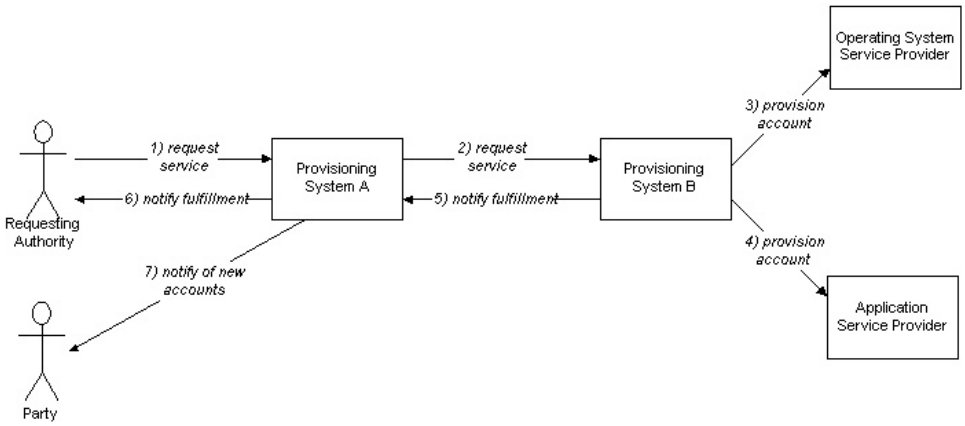
- Party is known in both provisioning systems.
- A level of trust is established between the provisioning systems.

Steps

- Request is made to provisioning system A for the service.
- Provisioning system A makes a request to provisioning system B to provision the service for the party.
- Provisioning system B provisions the Operating System account for the party, using the party's unique user ID, password, and full name.
- Provisioning system B provisions the Application account for the party, using the party's unique user ID, password, first name, last name, full name, primary position, work number, and e-mail.
- Provisioning system B notifies provisioning system A that the service was provisioned.
- The requesting authority is notified of the message fulfillment.
- The party is notified of the new accounts that are available for use.

Post-Conditions

- The party can now use both the Operating System account and the Application account.



Use Case 5: De-provision Service

Description

Requesting authority (may be a party or a system) requests that a party be de-provisioned from a service consisting of an Application Account, and an Operating System Account. The de-provisioning request is done in provisioning system A, and provisioning system B controls the resources.

Actors

This use case uses the flowing actors:

- Requesting Authority – Party or system that is authorized to request a service for the party.
- Provisioning System A – Provisioning system that the requesting authority and the party have access to.
- Provisioning System B – Provisioning system that controls the Operating System Account and Application Account.

Deleted: service providers

Pre-Conditions

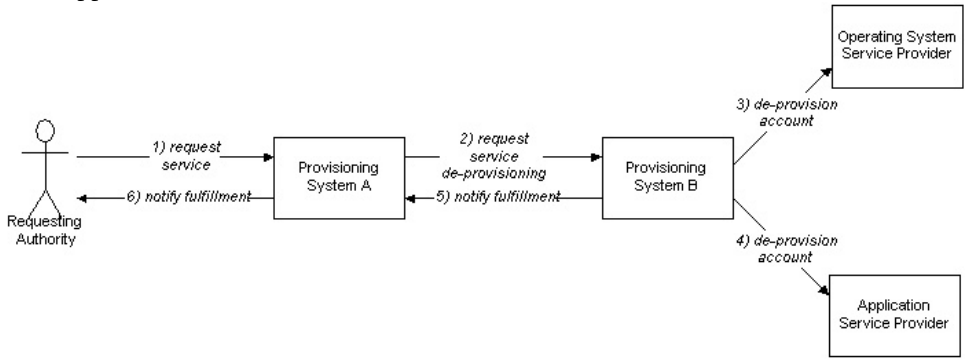
- Party has been provisioned with the service.

Steps

- Request is made to provisioning system A for the service to be de-provisioned.
- Provisioning system A makes a request to provisioning system B to de-provision the service.
- Provisioning system B de-provisions the Operating System account for the party.
- Provisioning system B de-provisions the Application account for the party.
- Provision system B notifies system A that the service has been de-provisioned.
- The requesting authority is notified of the message fulfillment.

Post-Conditions

- The party can no longer use either the Operating System account or the Application account.



Use Case 6: Synchronize Provisioned Service

Description

Since parties access services directly, over time, the profiles for those parties may change without Provisioning System A's knowledge. In order to periodically synchronize the profile information, Provisioning system A requests a synchronization from provisioning system B.

Actors

This use case uses the flowing actors:

- Provisioning System A.
- Provisioning System B.

Pre-Conditions

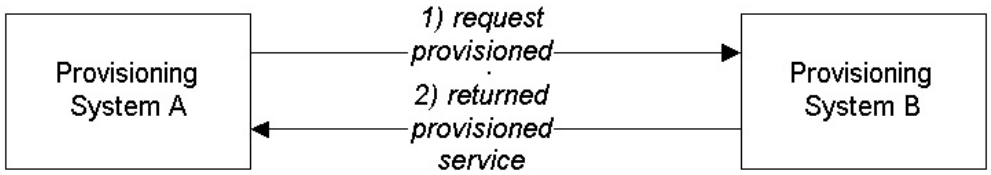
- A level of trust is established between the provisioning systems.

Steps

1. Provisioning system A makes a request to provisioning system B to search for provisioned services for a party controlled by provisioning system A.
2. Provisioning system B sends provisioning system A a set of provisioned services for the appropriate parties

Post-Conditions

- Provisioning system A and provisioning system B are synchronized with respect to provisioning system A.



Glossary

Modification Log

Date	By Whom	What
11 April 2001 v01	Gavenraj Sodhi	Created
23 May 2001 v02	Gavenraj Sodhi	Added various terms based on new use cases inserted

Account	A set of parameters that define a user's access to a service. Every service will require a different set of information to give a user access; therefore, the parameters of accounts will differ by service type.
Actor	An entity (i.e. person or system entity) utilizing provisioning, user administrative, services. Examples of actors include application programs, security services, any computing or non-computing services, etc. Perhaps actor is effectively synonymous with system or person entity
Application Account	An example of a Resource
Authorized	A system entity or actor is "authorized" if it is granted a right or a permission or a capability to access a system resource
Domain Name	The name assigned to a numerical **IP Address**, functioning as part of a **URL**. (e.g., acme.com)
Identity	A representation uniquely mapped to an entity (e.g., Organization or Party).
Managed Resource	An abstraction of a product or service that users are provisioned which is controlled
Organization	A body of users and resources which is fairly independent. An organization may be a group, company, affiliation, or an exchange
Operating System Account	An example of a Resource.
Party	Refers to any person who interacts with the system and/or the network the system is managing.
Requesting Authority	Person or system that is authorized to request a resource for the user.
Resource	An abstraction of a product or service that users are provisioned.
Service	A specific type of resource that is not physically obtained by a user, but is accessed periodically by the user. A user will be provisioned a service and their profile for using that service will be represented as

	an account. The service could be provided locally by the customer or could be leased by an external service provider.

Document History

- 23 May 2001 First version for Draft 01
- 27 June 2001 Made following changes and updates:
  - Modified Use cases 4, 5, 6 to future use cases for next version of XRPM
  - Added Object Model Diagrams for Party and Provisioning System
- 02 August 2001 Made following changes and updates:
  - John Aisien edited some changes for consideration.
  - Update object model based on comments
  - Added object model description