

EVIDEN

Identity and Access Management

DirX Identity

Configuring User-specific Proposal Lists for Role Parameters

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Preface

This document presents a use case that describes how to configure user-specific proposal lists for role parameters. This feature has been implemented in DirX Identity in response to a customer request. It consists of the following chapters:

- [Chapter 1](#) provides an overview of the use case.
- [Chapter 2](#) explains how to configure and run the use case.

DirX Identity Documentation Set

The DirX Identity document set consists of the following manuals:

- [DirX Identity Introduction](#). Use this book to obtain a description of DirX Identity architecture and components.
- [DirX Identity Release Notes](#). Use this book to understand the features and limitations of the current release. This document is shipped with the DirX Identity installation as the file **release-notes.pdf**.
- [DirX Identity History of Changes](#). Use this book to understand the features of previous releases. This document is shipped with the DirX Identity installation as the file **history-of-changes.pdf**.
- [DirX Identity Tutorial](#). Use this book to get familiar quickly with your DirX Identity installation.
- [DirX Identity Provisioning Administration Guide](#). Use this book to obtain a description of DirX Identity provisioning architecture and components and to understand the basic tasks of DirX Identity provisioning administration using DirX Identity Manager.
- [DirX Identity Connectivity Administration Guide](#). Use this book to obtain a description of DirX Identity connectivity architecture and components and to understand the basic tasks of DirX Identity connectivity administration using DirX Identity Manager.
- [DirX Identity User Interfaces Guide](#). Use this book to obtain a description of the user interfaces provided with DirX Identity.
- [DirX Identity Application Development Guide](#). Use this book to obtain information how to extend DirX Identity and to use the default applications.
- [DirX Identity Customization Guide](#). Use this book to customize your DirX Identity environment.
- [DirX Identity Integration Framework](#). Use this book to understand the DirX Identity framework and to obtain a description how to extend DirX Identity.
- [DirX Identity Web Center Reference](#). Use this book to obtain reference information about the DirX Identity Web Center.
- [DirX Identity Web Center Customization Guide](#). Use this book to obtain information how to customize the DirX Identity Web Center.
- [DirX Identity Meta Controller Reference](#). Use this book to obtain reference information about the DirX Identity meta controller and its associated command-line programs and files.
- [DirX Identity Connectivity Reference](#). Use this book to obtain reference information about the DirX Identity agent programs, scripts, and files.
- [DirX Identity Troubleshooting Guide](#). Use this book to track down and solve problems in your DirX Identity installation.
- [DirX Identity Installation Guide](#). Use this book to install DirX Identity.
- [DirX Identity Migration Guide](#). Use this book to migrate from previous versions.

Notation Conventions

Boldface type

In command syntax, bold words and characters represent commands or keywords that must be entered exactly as shown.

In examples, bold words and characters represent user input.

Italic type

In command syntax, italic words and characters represent placeholders for information that you must supply.

[]

In command syntax, square braces enclose optional items.

{ }

In command syntax, braces enclose a list from which you must choose one item.

In Tcl syntax, you must actually type in the braces, which will appear in boldface type.

|

In command syntax, the vertical bar separates items in a list of choices.

...

In command syntax, ellipses indicate that the previous item can be repeated.

userID_home_directory

The exact name of the home directory. The default home directory is the home directory of the specified UNIX user, who is logged in on UNIX systems. In this manual, the home pathname is represented by the notation *userID_home_directory*.

install_path

The exact name of the root of the directory where DirX Identity programs and files are installed. The default installation directory is *userID_home_directory*/**DirX Identity** on UNIX systems and **C:\Program Files\DirX\Identity** on Windows systems. During installation the installation directory can be specified. In this manual, the installation-specific portion of pathnames is represented by the notation *install_path*.

dirx_install_path

The exact name of the root of the directory where DirX programs and files are installed. The default installation directory is *userID_home_directory*/**DirX** on UNIX systems and **C:\Program Files\DirX** on Windows systems. During installation the installation directory can be specified. In this manual, the installation-specific portion of pathname is represented by the notation *dirx_install_path*.

dxi_java_home

The exact name of the root directory of the Java environment for DirX Identity. This location is specified while installing the product. For details see the sections "Installation" and "The Java for DirX Identity".

tmp_path

The exact name of the tmp directory. The default tmp directory is /tmp on UNIX systems. In this manual, the tmp pathname is represented by the notation *tmp_path*.

tomcat_install_path

The exact name of the root of the directory where Apache Tomcat programs and files are installed. This location is defined during product installation.

mount_point

The mount point for DVD device (for example, **/cdrom/cdrom0**).

1. Overview

The usual method for defining proposal lists for role parameters of type String is to define the proposal list and the attribute that holds the proposal so that the proposal values are fixed.

Sometimes, however, it makes sense to have proposal lists for role parameters that are user specific. For example, every user has a special set of computers which should act as role parameters. In the solution described in this use case, these values can be provided in a special multi-value user attribute or in a business object referenced by the user. With this method, each user has its own proposals.

For detailed information on users, business objects, role parameters and proposal lists and object descriptions, see the *DirX Identity Customization Guide*, the *DirX Identity Provisioning Administration Guide* and the DirX Identity Manager context-sensitive help.

2. Use Case

This chapter explains how to set up and run the use case. There are three sample configuration objects that you need to create in order to run this use case:

- **MyRPfromUser** – this object is a role parameter with a user-specific proposal list. The section "Configure the Role Parameter" describes how to configure it for this use case.
- **User with Proposals** – this object is a user that is configured to hold a user-specific proposal list in the user attribute "Middle Name". The sections "Define the Object Description" and "Define the Proposed Values" describe how to configure it for this use case.
- **RoleParamFromUser** – this object is a role that uses the **MyRPfromUser** role parameter. You need to create this role (or modify an existing one) and configure it to use the **MyRPfromUser** role parameter. For more information about this task, see the DirX Identity Manager context-sensitive help and the *DirX Identity Provisioning Administration Guide* → "Managing the Privilege Structure" → "Managing Roles" → "Assigning Role Parameters".

2.1. Configure the Attribute

To configure a user-specific attribute for the proposal list:

- In the role parameter, configure the attribute that holds the proposal list.
- In the object description, define the attribute referenced in the role parameter.

2.1.1. Configure the Role Parameter

In this step, you use DirX Identity Manager to create the role parameter **MyRPfromUser**, which must be of type String, at the Domain Configuration level. See the DirX Identity Manager context-sensitive help and the *DirX Identity Provisioning Administration Guide* → "Managing Domains" → "Configuring a Domain" → "Setting up Role Parameters" for details.

In the role parameter's General tab, you'll see the section **Proposal from Subject/Resource** with the property **Reference expression**. Use this section to specify the user attribute or the role attribute that is to hold the proposal list. Here are two examples of a reference expression:

\${user.initials} takes the proposed values from the initials attribute of the user. The source for this assignment is provided in a user attribute instead of in a proposal list object in the Domain Configuration view or in a "tagprovider" element of a property description.

\${user.dxrcontextlink.dxrproposedvalues} follows the user's **dxrcontextlink** attribute and takes the proposed values from the **dxrProposedValues** attribute. The **dxrProposedValues** attribute must be added to the business object schema provided by a business object of the user. This reference expression shows how you can use a user's link attribute to point to a proposal list; here, it's the **dxrcontextlink** attribute.

For this use case, we'll use the **\${user.initials}** as the reference expression.

2.1.2. Define the Object Description

The attributes used in role parameter reference expressions need to be defined in the corresponding object descriptions. For this use case, we'll modify the user object description in the Customer Extensions folder of the Domain Configuration (Domain Configuration view → My-Company → Customer Extensions → Object Descriptions → UserCommon.xml) to make the "initials" attribute multivalued.

Here is the updated definition:

```
<property name="initials"
  label="Middle Name"
  multivalue="true"
  type="java.lang.String"
  incremental="false"/>
```



The usual method for customizing object descriptions is to create a new customer-defined attribute and a new LDAP attribute in the schema. See the *DirX Identity Customization Guide* → "Customizing Objects" → "Customizing Provisioning Objects" → "Adding a New User Attribute" for details.

2.2. Define the Proposed Values

To define the proposed values for the role parameter **MyRPfromUser**, you can use the same mechanism as you would use to define proposal lists. See the DirX Identity Manager context-sensitive help for proposal lists, proposal list items and the Multi-Value Editor for details.

For this use case, you define the proposed values directly at the user object in the **Middle Name** attribute (because you have set up this attribute to be multivalued in the user object description, as described in the section "Define the Object Description"):

The screenshot shows the DirX Identity Manager user configuration interface. The left pane displays a tree view of the domain structure, with 'User with Proposals' selected under the 'Users' folder. The right pane shows the 'General' tab for this user. The 'Name' field is 'User with Proposals'. The 'First Name' field is empty. The 'Middle Name' field is a multi-valued list containing 'first', 'second', and 'third;3rd Computer;si=0'. The 'Salutation' field is a dropdown menu. The 'Title' field is empty. The 'Last Name' field is 'User with Propo...'. The 'Gender' field is a dropdown menu. The 'Day of Birth' field is empty.

In **Middle Name**, the line **third;3rd computer;si=0** indicates the following:

- Use **3rd computer** for display.
- Display **3rd computer** as the first element in the list (**si=0**).

For details on this syntax, see the *DirX Identity Customization Guide* > "Customizing Parameters" > "Creating a New Proposal List".

2.3. Assign the Sample Role

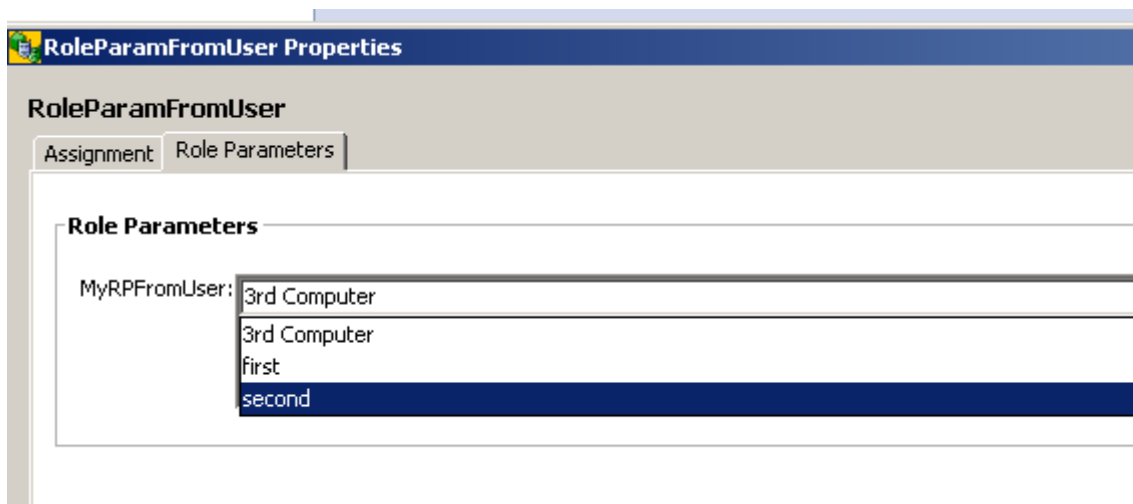
Now you can make the sample role assignment with the defined role parameter:

- Use DirX Identity Manager at the **User with Proposals** object in the Users view to assign the role **RoleParamFromUser** with the role parameter **MyRPfromUser**. The dialog to define the role parameter appears.
- In the Role Parameters tab, you see the following display:



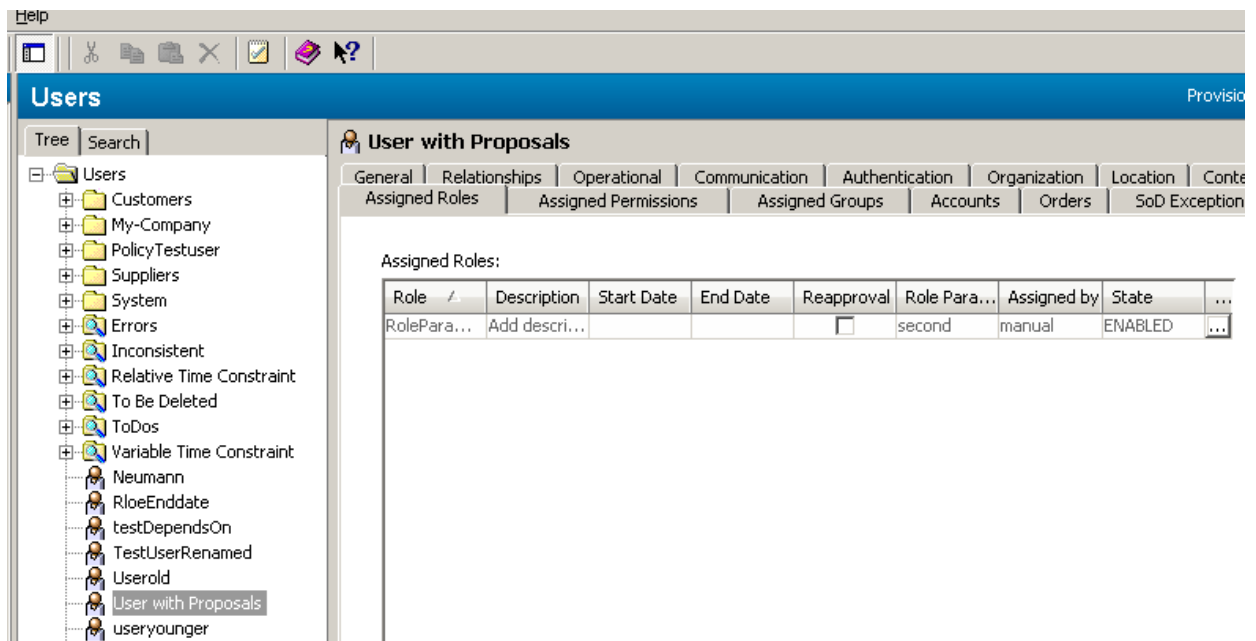
The screenshot shows a dialog box titled "RoleParamFromUser" with two tabs: "Assignment" and "Role Parameters". The "Role Parameters" tab is active. Under the heading "Role Parameters", there is a label "MyRPFromUser:" followed by a dropdown menu. The dropdown menu is currently displaying "3rd Computer". To the right of the dropdown are two icons: a document icon and a red 'X' icon.

- From the drop-down list, select **second**:



The screenshot shows the same "RoleParamFromUser" dialog box, but the "MyRPFromUser:" dropdown menu is open, displaying a list of options. The options are "3rd Computer", "3rd Computer", "first", and "second". The "second" option is highlighted in blue.

- Save the assignment. In Assigned Roles, you'll see the selection you made:



The dxrRoleParamValue in the LDAP assignment is:

```
<roleparamvalues name="MyRPFfromUser" uid="uid-c0a8be81--3bb79da4-149c89e603a--7ffe" type="String">
  <value key="second">second</value>
</roleparamvalues>
```

DirX Product Suite

The DirX product suite provides the basis for fully integrated identity and access management; it includes the following products, which can be ordered separately.



DirX Identity

DirX Identity provides a comprehensive, process-driven, customizable, cloud-enabled, scalable, and highly available identity management solution for businesses and organizations. It provides overarching, risk-based identity and access governance functionality seamlessly integrated with automated provisioning. Functionality includes lifecycle management for users and roles, cross-platform and rule-based real-time provisioning, web-based self-service functions for users, delegated administration, request workflows, access certification, password management, metadirectory as well as auditing and reporting functionality.



DirX Directory

DirX Directory provides a standards-compliant, high-performance, highly available, highly reliable, highly scalable, and secure LDAP and X.500 Directory Server and LDAP Proxy with very high linear scalability. DirX Directory can serve as an identity store for employees, customers, partners, subscribers, and other IoT entities. It can also serve as a provisioning, access management and metadirectory repository, to provide a single point of access to the information within disparate and heterogeneous directories available in an enterprise network or cloud environment for user management and provisioning.



DirX Access

DirX Access is a comprehensive, cloud-ready, scalable, and highly available access management solution providing policy- and risk-based authentication, authorization based on XACML and federation for Web applications and services. DirX Access delivers single sign-on, versatile authentication including FIDO, identity federation based on SAML, OAuth and OpenID Connect, just-in-time provisioning, entitlement management and policy enforcement for applications and services in the cloud or on-premises.



DirX Audit

DirX Audit provides auditors, security compliance officers and audit administrators with analytical insight and transparency for identity and access. Based on historical identity data and recorded events from the identity and access management processes, DirX Audit allows answering the “what, when, where, who and why” questions of user access and entitlements. DirX Audit features historical views and reports on identity data, a graphical dashboard with drill-down into individual events, an analysis view for filtering, evaluating, correlating, and reviewing of identity-related events and job management for report generation.

For more information: support.dirx.solutions/about



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