

Da Vinci Smart Manufacturing

BRD S03.02 User Access Control_Users

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1. Introduction

This document outlines the business requirements for the User Access Control (Users) module within the Da Vinci Smart Manufacturing. The module provides user management functionality that allows administrators to create, edit, deactivate/activate, and manage users, including assigning roles and resetting passwords. This document captures the functional and non-functional requirements to ensure proper implementation and smooth operation.

2. Objectives

The primary objective is to develop a user-friendly module that offers the following functionalities:

- User Creation: Adding new users with specific roles and permissions.
- User Management: Editing, deactivating, and activating users.
- Role Assignment: Assigning one or more roles to each user.
- Password Management: Resetting passwords for non-SSO users.
- Search and Filter: Searching and filtering users by username, status, and role.

3. User Management Interface

The User Management interface within the Da Vinci Smart Manufacturing platform provides administrators with a centralized view and control panel to manage all system users. It supports operations such as user search, role visibility, SSO status monitoring, and user activation/deactivation, all within a clean, paginated UI.

Interface Layout & Navigation

- Located under the User Access Control section in the side navigation menu.
- Provides seamless navigation between the Users and Roles tabs.
- Designed with a structured, paginated table view to efficiently handle large user datasets.

Key Interface Elements

3.1. Header Section

The header must always be visible and contains the following

- **Title:** "Users"
- **Action Buttons in Header:**
 - Add User: Button to create a new User

- User Summary Counters
 - Active Users– Total users currently active.
 - Inactive Users– Users marked inactive or deactivated.
 - SSO Enabled– Users with Single Sign-On (SSO) integration enabled.
- A Search bar enables keyword-based lookups using User ID or Name. Tooltip text: Search by Name / User ID.
- Filters (dropdown) provide options to refine the table by
 - Status
 - Multi-select Dropdown
 - Values: Active | Inactive
 - Role
 - Multiselect Dropdown:
 - All Roles corresponding to Users
 - SSO Login
 - Multiselect Dropdown:
 - Values: Enabled | Disabled
 - Clear Filter - This will clear all the applied filters
 - All Filter drop downs should be sorted alphabetically / numerically
 - Filter options will not reset unless the user navigates to a different menu or module. This means any filters applied will persist as long as the user remains within the same menu option, ensuring continuity until a module change occurs.

3.2. User Table Structure

Each user is represented as a row in the table with the following columns: [CR-VD-5338](#)

Table Default Sorting : Latest Modified first

- User ID
 - Displayed as a hyperlink; clicking navigates to the detailed user profile in view mode.
 - Sorting: Yes
 - Frozen - Yes
- Name
 - First Name and Last Name together
 - Sorting: Yes
 - Frozen – No
- SSO Login
 - Shows Enabled or Disabled based on the user's authentication configuration.
 - Sorting: Yes
 - Frozen - No
- Roles

- Lists all roles assigned to the user, separated by commas.
- Sorting: No
- Frozen - No
- Status –
 - Displays Active (green) or Inactive (red) badges based on account state.
 - Sorting: Yes
 - Frozen – No
- Created At
 - Date and time of record creation
 - Sorting: Yes
 - Frozen – No
- Created By
 - User ID | First Name Last Name of user who created the record
 - Sorting: Yes
 - Frozen – No
- Modified At
 - Last record modified Date and time
 - Sorting: Yes
 - Frozen – No
- Modified By
 - User ID | First Name Last Name of user who last modified the record
 - Sorting: Yes
 - Frozen – No
- **Action Buttons:** Depending on the status, users can perform the following actions
 - Active:
 - View – View details of user in read only mode
 - Edit – Allows to edit user details
 - Deactivate – User can be deactivated after confirming the prompt that reads
“Do you want to deactivate this user: “User ID”?

User	Active 5	Inactive 35	SSO Enabled 5	
<input type="text" value="Search"/> Filters Export				
User Id.	Name	SSO Login	Roles	Status
JSmithOperator	John Smith	Disabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Active
EDavisMaintenance	Emily Davis	Enabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Inactive
MJohnsonSupervisor	Michael Johnson	Disabled	Furnace Operator, Shift Supervisor, Equipment Specialist	Active
SBrownSafety	Sarah Brown	Disabled	Furnace Operator	Active
DWilsonEngineer	David Wilson	Disabled	Furnace Operator, Shift Supervisor	Active
JTaylorQuality	Jessica Taylor	Enabled	Quality Supervisor	Inactive
RWhiteManager	Robert White	Enabled	Plant Manager	Inactive
OHarrisMetallurgist	Olivia Harris	Enabled	Metallurgist	Inactive
WClark.Specialist	William Clark	Enabled	Equipment Specialist	Inactive
ELewisController	Emma Lewis	Enabled	Control Room Operator	Inactive

Showing 10 of 80 1 2 3 ... 8 > Rows Per Page : 10

User	Active 5	Inactive 35	SSO Enabled 5	
<input type="text" value="Search"/> Filters Export				
User Id.	Name	SSO Login	Roles	Status
JSmithOperator	John Smith	Disabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Active
EDavisMaintenance	Emily Davis	Enabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Inactive
MJohnsonSupervisor	Michael Johnson	Disabled	Furnace Operator, Shift Supervisor,	Active
SBrownSafety	Sarah Brown			Active
DWilsonEngineer	David Wilson			Active
JTaylorQuality	Jessica Taylor			Inactive
RWhiteManager	Robert White	Enabled	Plant Manager	Inactive
OHarrisMetallurgist	Olivia Harris	Enabled	Metallurgist	Inactive
WClark.Specialist	William Clark	Enabled	Equipment Specialist	Inactive
ELewisController	Emma Lewis	Enabled	Control Room Operator	Inactive

Showing 10 of 80 1 2 3 ... 8 > Rows Per Page : 10

- **Reset Password –** User can reset password after confirming the prompt that reads
 - Are you sure you want to reset password for : “User ID”
 - User is then prompted to copy the reset password for future use

User Active 5 Inactive 35 SSO Enabled 5 Add User

User Id.	Name	SSO Login	Roles	Status	
JSmithOperator	John Smith	Disabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Active	
EDavisMaintenance	Emily Davis	Enabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Inactive	
MJohnsonSupervisor	Michael Johnson	Disabled	Furnace Operator, Shift Supervisor,	Active	
SBrownSafety	Sarah Brown			Active	
DWilsonEngineer	David Wilson			Active	
JTaylorQuality	Jessica Taylor			Inactive	
RWhiteManager	Robert White	Enabled	Plant Manager	Inactive	
OHarrisMetallurgist	Olivia Harris	Enabled	Metallurgist	Inactive	
WClark.Specialist	William Clark	Enabled	Equipment Specialist	Inactive	
ELewisController	Emma Lewis	Enabled	Control Room Operator	Inactive	

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User Active 5 Inactive 35 SSO Enabled 5 Add User

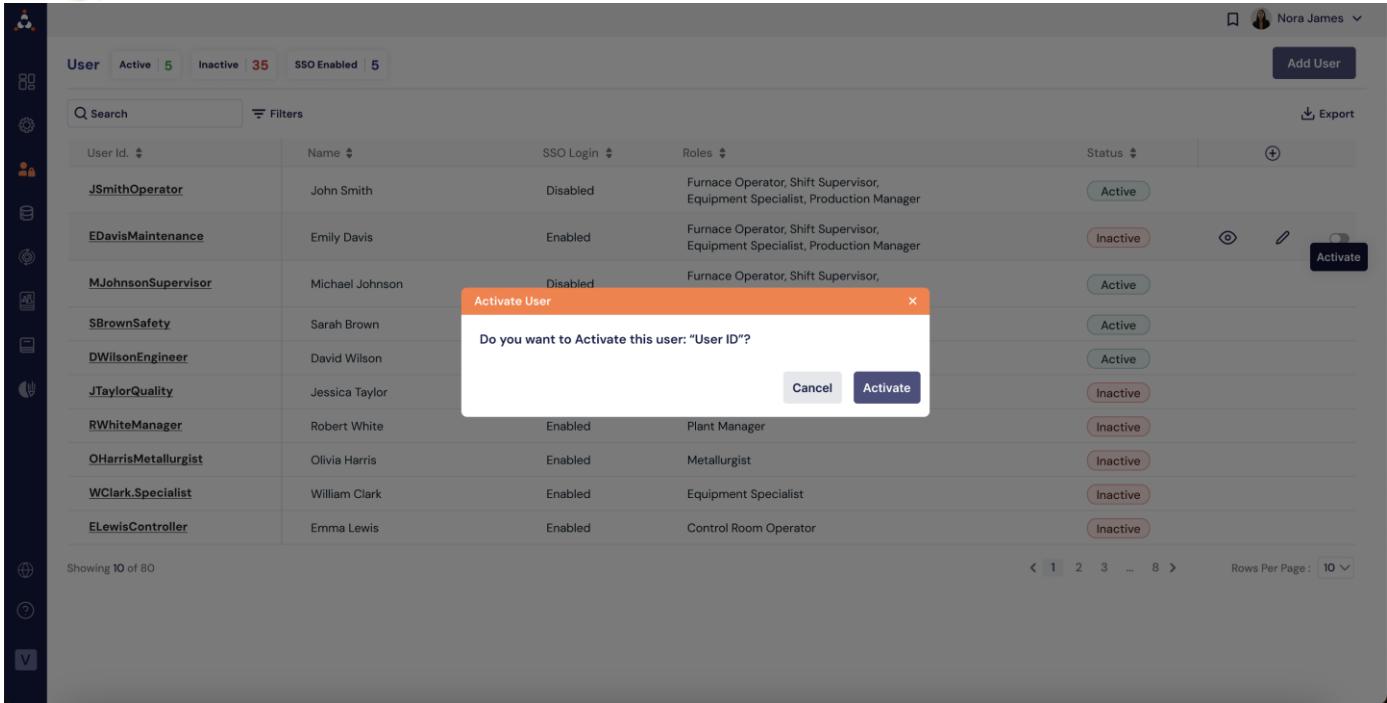
User Id.	Name	SSO Login	Roles	Status	
JSmithOperator	John Smith	Disabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Active	
EDavisMaintenance	Emily Davis	Enabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Inactive	
MJohnsonSupervisor	Michael Johnson	Disabled	Furnace Operator, Shift Supervisor,	Active	
SBrownSafety	Sarah Brown			Active	
DWilsonEngineer	David Wilson			Active	
JTaylorQuality	Jessica Taylor			Inactive	
RWhiteManager	Robert White	Enabled	Plant Manager	Inactive	
OHarrisMetallurgist	Olivia Harris	Enabled	Metallurgist	Inactive	
WClark.Specialist	William Clark	Enabled	Equipment Specialist	Inactive	
ELewisController	Emma Lewis	Enabled	Control Room Operator	Inactive	

Showing 10 of 80 Rows Per Page: 10

- Inactive:

- View – View details of user in read only mode
- Edit – Allows to edit user details
- Activate– User can be activated after confirming the prompt that reads

“Do you want to activate this user: “User ID”?



The screenshot shows a user management interface with a modal dialog. The main table lists users with columns for User ID, Name, SSO Login, Roles, Status, and various action buttons like Add User, Export, and Activate. One row for 'JSmithOperator' has its status set to 'Disabled'. A modal dialog titled 'Activate User' is open over this row, asking 'Do you want to Activate this user: "User ID"?'. It contains 'Cancel' and 'Activate' buttons.

- Pagination Controls:**

- Navigation buttons to browse through multiple pages of records, if applicable (for more than 10 records).
- Rows Per page : Default 10, Dropdown values: 10, 20, 30, 40, 50

- Export:** The export function must extract ALL the information of the list of records shown based on the combined results of filter selection, sort and search criteria. Tooltip to Export button will read “Download CSV”

- Exported File Name:** Users_DD-MM-YYYY

User ID	Name	SSO Login	Role	Created At	Created By	Modified At	Modified By	Status
madhavi	krishna Adimulam	Enabled	super	27/03/2025 12:00 AM	Sahana Sahana Badal		Sahana Sahana Badal	Active
tester01	tester	Disabled	super, Testing	27/03/2025 12:00 AM	Sahana Sahana Badal	27/03/2025 12:00 AM	Sahana Sahana Badal	Active
devara	Devara	Enabled	super	27/03/2025 12:00 AM	Sahana Sahana Badal	27/03/2025 12:00 AM	Sahana Sahana Badal	Active
aksh	tester name	Disabled		27/03/2025 12:00 AM	Sahana Sahana Badal		Sahana Sahana Badal	Active

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- **Customize Columns:** Users can enable or disable all columns based on their preference. Only the enabled columns will be visible in the list. Columns marked as ‘frozen’ will be enabled by default and cannot be modified.

This screenshot shows the DaVinci user management interface. At the top, there are navigation icons on the left and a user profile with a dropdown menu on the right. Below the header, a search bar and filter options are available. The main area displays a table of users with the following columns: User Id, Name, SSO Login, Roles, and Status. Each row contains a user's name, their role, and their status (Active or Inactive). The interface includes standard pagination and row selection controls at the bottom.

User Id.	Name	SSO Login	Roles	Status
JSmithOperator	John Smith	Disabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Active
EDavisMaintenance	Emily Davis	Enabled	Furnace Operator, Shift Supervisor, Equipment Specialist, Production Manager	Inactive
MJohnsonSupervisor	Michael Johnson	Disabled	Furnace Operator, Shift Supervisor, Equipment Specialist	Active
SBrownSafety	Sarah Brown	Disabled	Furnace Operator	Active
DWilsonEngineer	David Wilson	Disabled	Furnace Operator, Shift Supervisor	Active
JTaylorQuality	Jessica Taylor	Enabled	Quality Supervisor	Inactive
RWhiteManager	Robert White	Enabled	Plant Manager	Inactive
OHarrisMetallurgist	Olivia Harris	Enabled	Metallurgist	Inactive
WClark.Specialist	William Clark	Enabled	Equipment Specialist	Inactive
ELewisController	Emma Lewis	Enabled	Control Room Operator	Inactive

This screenshot shows the same user management interface as above, but with a 'Customize Columns' overlay. A modal window titled 'Customize Columns' is open on the right side of the screen. It contains a search bar and a list of columns with toggle switches. The columns listed are User Id, Name, SSO Login, Roles, and Status. All five columns have their toggle switches turned on, indicating they are currently visible in the list.

4.1. User Creation

Allows administrators to create new users.

4.1.1. Basic Details:

- User ID
 - User enter User ID
 - Mandatory - Yes
 - Default value - No
 - Field Type – User Input
 - Validation – **Unique input validation**, alphanumeric - no space - no special chars, Min – 4, Max – 30, no space allowed
- First Name
 - User enters First Name
 - Mandatory - Yes
 - Default value - No
 - Field Type – User Input
 - Validation - alphanumeric - no space - no special chars, Min – 4, Max – 30, no space allowed
- Last Name
 - User enters Last Name
 - Mandatory - Yes
 - Default value - No
 - Field Type – User Input
 - Validation - alphanumeric - no space - no special chars, Min – 4, Max – 30, no space allowed
- Phone Number
 - User input
 - Mandatory - No
 - Field Type - User input
 - Validation - Numeric, Min Limit 10, Max Limit 10, no space allowed
 - Default value - No
- Email
 - User input
 - Mandatory - No
 - Field Type - User input
 - Validation - alphanumeric, @, _ and . allowed to enter =>
 - Basic email format validation - "<text_text>@domain.com" or "<text.text>@domain.com", no space allowed
 - Conditional validation – Mandatory if SSO enabled, authenticate with respective domain name
 - Default value - No
- Department
 - User input
 - Mandatory - No
 - Field Type - User input
 - Validation - alphanumeric with space, Min Limit 4, Max Limit 30
 - Default value - No
- SSO Login
 - Toggle
 - Mandatory - No

- Field Type - Toggle
- Validation -None
- Default value - Disabled
- Roles
 - Multi-select Dropdown
 - Mandatory - No
 - Field Type - Multi-select Dropdown
 - Values - All active roles **CR-VD-3015**
 - Default value – No

4.1.2. Password:

- Generate Password*: This button creates a strong, random system-generated password. Use the **copy icon** to quickly copy it to your clipboard.
- This is a mandatory field

Note:

- Role selection with multi-role assignment functionality. When roles overlap (e.g., viewing and editing permissions), the user receives the highest level of permission from all assigned roles.
- Every user will have a **User ID** and **password** for system login by default.
- In addition, **SSO (Single Sign-On)** login can be **enabled** for users.
- In such cases, the user must provide a **valid domain email address** to use SSO.
- It is at the **user's discretion** to choose between:
- **Password-based authentication**, or **SSO login**, if it has been enabled for their account.
- If both methods are enabled, the system should support either mode of authentication seamlessly.

4.1.3. Action Buttons:

- **Save:** Saves the record into database
- **Cancel:** Cancels the current operation and returns to the list screen

The screenshot shows the 'Add User' form in the DaVinci application. The form is titled 'Add User' and includes the following fields:

- Basic Details:** Fields for User ID*, First Name*, and Last Name*.
- Phone Number:** Enter Phone Number
- Email:** Enter Email ID
- Department:** Enter Department
- SSO Login:** A toggle switch.
- Roles:** A dropdown menu labeled 'Select Role'.
- Password***: A field with a 'Generate Password' button.

At the bottom right of the form are 'Cancel' and 'Save' buttons. The top right corner of the screen shows the user profile 'Nora James'.

4.2 Edit User

Allows administrators to edit users.

Header: Back Icon | Edit “User ID”

4.2.1. Basic Details:

- User ID:
 - Non Editable and pre-populated with existing value.
 - Default value – No
- First Name
 - Editable and pre-populated with existing value.
 - Mandatory - Yes
 - Field Type – User Input
 - Validation- alphanumeric - no space - no special chars, Min – 4, Max – 30, no space allowed
 - Default value – No
- Last Name
 - Editable and pre-populated with existing value.
 - Mandatory - Yes
 - Field Type – User Input
 - Validation- alphanumeric - no space - no special chars, Min – 4, Max – 30, no space allowed
 - Default value - No
- Phone Number
 - Editable and pre-populated with existing value.
 - Mandatory - No
 - Field Type – User Input
 - Validation- alphanumeric - no space - no special chars, Min – 4, Max – 30, no space allowed
 - Default value - No
- Email
 - Editable and pre-populated with existing value.
 - Mandatory - No
 - Field Type - User input
 - Validation - alphanumeric, @, _ and . allowed to enter =>
 - Basic email format validation - "<text_text>@domain.com" or "<text.text>@domain.com", no space allowed
 - Conditional Validation – Mandatory if SSO enabled, authenticate with respective domain name
 - Default value - No
- Department
 - Editable and pre-populated with existing value.
 - Mandatory - No

- o Field Type - User input
- o Validation - alphanumeric with space, Min Limit 4, Max Limit 30
- o Default value - No
- SSO Login
 - o Editable and pre-populated with existing value.
 - o Mandatory - No
 - o Field Type - Toggle
 - o Validation -None
 - o Default value - Disabled
- Roles
 - o Editable and pre-populated with existing values.
 - Each role will be displayed as a pill in the format: Role Name | <Status> (e.g., Manager | Active).
 - Pills will visually differentiate **active** and **inactive** roles:
 - **Active roles:** Use a **darker background** shade. **CR-VD-4483**
 - **Inactive roles:** Use a **lighter background** shade. **CR-VD-4483**
 - o Pills differentiation for differentiating active/inactive roles. role name | <status> with Pill background shade differentiated darker/lighter for active/inactive role respectively
 - o Mandatory - No
 - o Field Type - Multi-select Dropdown
 - o Values - All active roles
 - o Default value – No

4.2.2. Password:

Reset Password - User can reset password after confirming the prompt that reads

“Are you sure you want to reset password for : “User ID””. A new password will be generated and can be copied using the **copy icon** next to it.

Edit JSmithOperator

Basic Details

User ID*	First Name*	Last Name*
JSmithOperator	John	Smith

Email	Phone Number	Department	SSO Login
john.smith@gmail.com	+12 123456789	Operations	<input checked="" type="checkbox"/>

Roles

- Select Role
 - Furnace Operator X
 - Shift Supervisor X

>Password

Reset Password

Cancel **Proceed**

Cancel **Save**

Edit JSmithOperator

Basic Details

User ID*	First Name*	Last Name*
JSmithOperator	John	Smith

Email	Phone Number	Department	SSO Login
john.smith@gmail.com	+12 123456789	Operations	<input checked="" type="checkbox"/>

Roles

- Select Role
 - Furnace Operator X
 - Shift Supervisor X
 - Equipment Specialist X
 - Production Manager X

Password

***** □

Cancel **Save**

4.2.3. Action Buttons:

- **Save:** Saves the record into database
- **Cancel:** Cancels the current operation and returns to the list screen

Edit JSmithOperator

Basic Details

User ID*	First Name*	Last Name*
JSmithOperator	John	Smith

Email	Phone Number	Department	SSO Login
john.smith@gmail.com	+12 123456789	Operations	Enabled

Roles

- Select Role
- Furnace Operator
- Shift Supervisor
- Equipment Specialist
- Production Manager

>Password

Reset Password

Cancel **Save**

4.3. View User

The **View User** screen provides a read-only summary of all user-related details including profile information, assigned roles, and access configurations.

An **Edit icon** will be displayed if the logged-in user has permission to modify user details.

Header: Back Icon | User ID | Edit Icon

JSmithOperator

Basic Details

User ID	First Name	Last Name
JSmithOperator	John	Smith

Phone Number	Email	Department	SSO Login
+12 123456789	john.smith@gmail.com	Operations	Enabled

Roles

- Furnace Operator
- Shift Supervisor
- Equipment Specialist
- Production Manager

