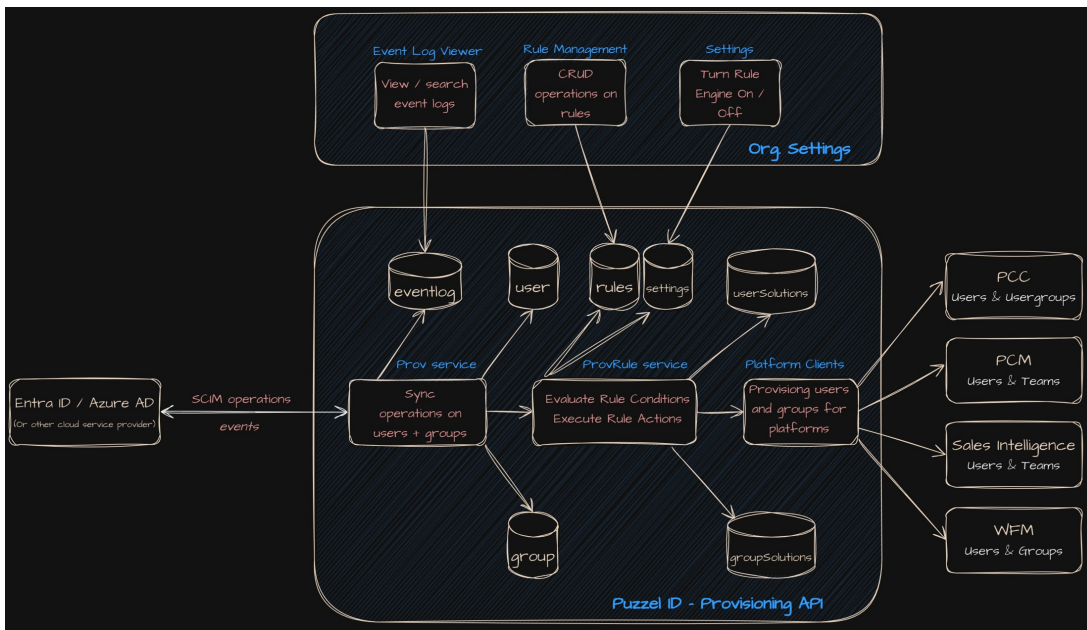


## Configuring product access with Puzzel ID Rule Engine

The Puzzel ID rule engine is an add-on to the Entra ID synchronization for controlling user access to Puzzel products. It lets customer administrators configure additional events based on SCIM events. SCIM events can be e.g., “create user”, “update user”, “update group” etc. Based on conditional logic defined by the customer administrator, one or more actions can be performed on the back of such events such as giving access to Puzzel products (PCC, PCM etc.) or assigning a specific role to a Puzzel ID user.

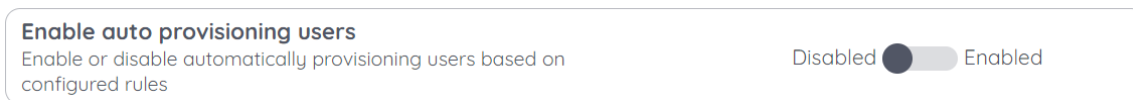
A visual interface for managing the rules is provided as through the [Organisation Settings portal](#), a Puzzel ID user with “Admin”, “Partner” or CustomerGroupAdministrator” role is needed to access this portal.

The following illustration shows the high-level architecture for the provisioning features as a whole:

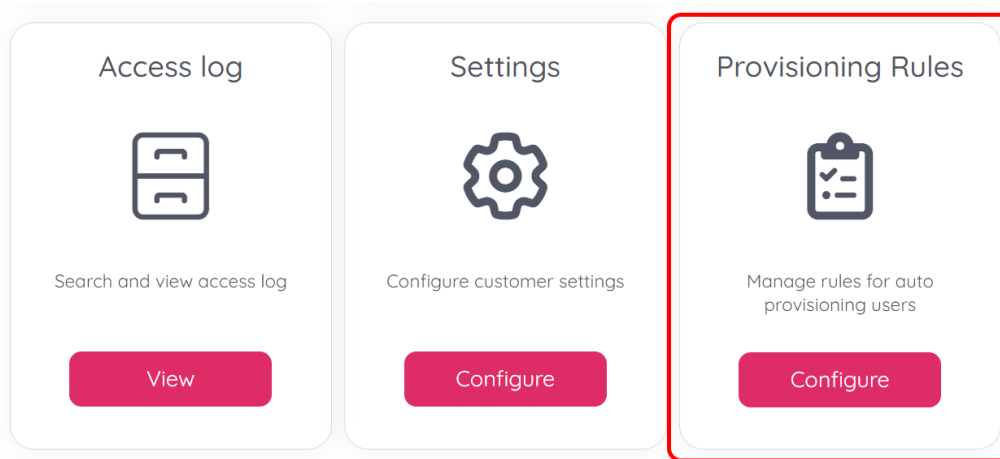


## Activating the Puzzel ID Rule Engine

By default, the Puzzel ID rule engine is deactivated. To activate it you need to go to the “Settings” sections in the Organisation Settings portal and find the setting named “**Enable auto provisioning users**”:

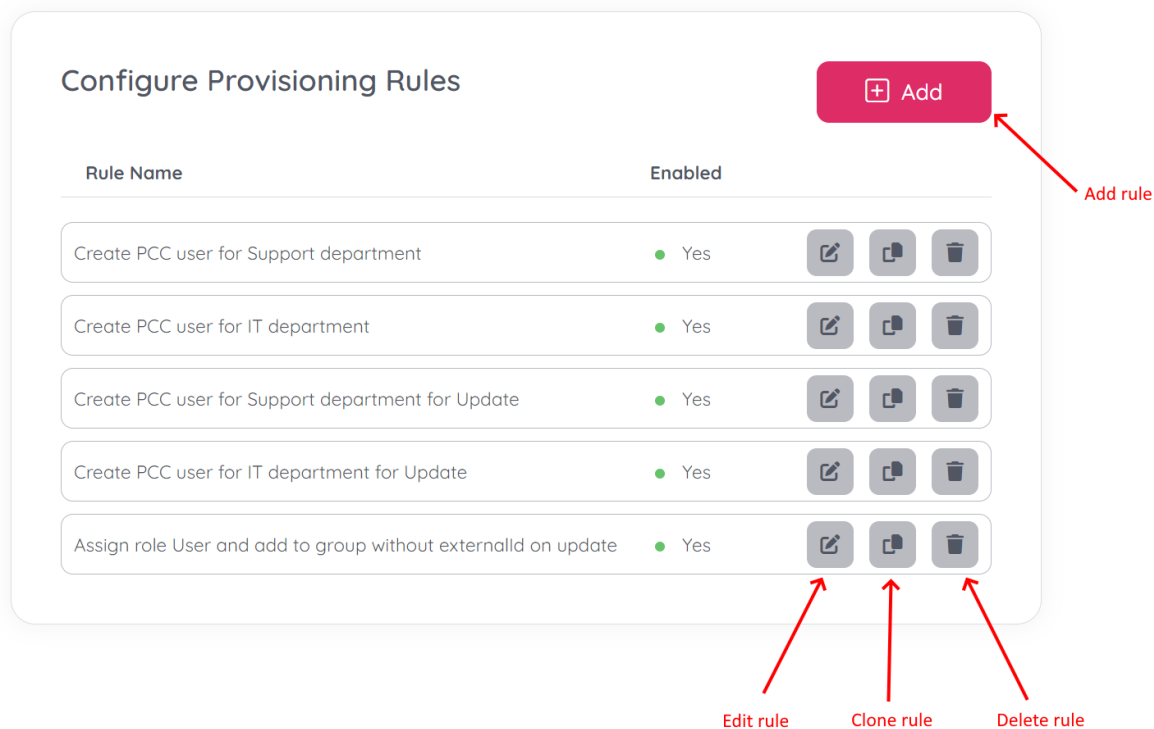


Set this to “Enabled” and return to the Organisation Settings home page, you should now see a new icon named “Provisioning Rules”:



## Managing Provisioning Rules

From the landing page of the “Provisioning Rules” section you can add, edit, clone and delete rules. You will also get an overview of the existing rules including their state (enabled / disabled). If you hover over a rule name you will get a popup showing the rule description.



## Adding a rule

To add a new provisioning click the “Add” button on the top of the “Configure Provisioning Rules” page. You will be taken to a new screen with four main sections:

- “Create rule” -> General information (rule name and description)
- “When” -> information about what SCIM event this rule should be triggered on
- “If” -> Conditions that needs to evaluate to true if the rule action(s) are to execute
- “Then” → Actions to execute if conditions evaluate to true

## Triggers

Triggers are the “When” section of creating a provisioning rule. This is where you define which trigger your rule should apply for.

There are two parts of the trigger section, represented as two dropdown boxes:

The screenshot shows a configuration interface for a provisioning rule trigger. The title is "When (Trigger)". Below it, there are two dropdown menus. The first dropdown is labeled "Operation (Verb)" and has "Create" selected. A dropdown menu is open below it, showing "Create" and "Update". The second dropdown is labeled "Object (Noun)" and has "User" selected. Red arrows point from the labels "Operation (Verb)" and "Object (Noun)" to the respective dropdowns.

First you select the type of operation the rule should trigger on. Currently “Create” and “Update” is supported. “Delete” is also an operation that is supported by the system, but for security reasons it has been decided to leave it out as an operation to trigger rules with as of now. “Create” is similar to the HTTP verb / method “POST” and “Update” is similar to HTTP PUT or PATCH.

Next, you choose the object for the trigger, there are two options available, “User” (Entra ID user) and “Group” (Entra ID group). So, as an example, if you want a rule to execute when a new user is created you would chose “Create” + ”User” as trigger.

### Note

One very common rule trigger for rules is when users are added to AD groups, or new users are added belonging to AD different groups. Due to the way Entra ID provisioning works, users are first created then updated with their group relationship. So if you are creating a rule that depends on Entra ID (AD) group membership, you have to use “Update User” as the trigger.

## Conditions

Conditions represent the “If” section of creating a provisioning rule. Here you can create conditional expressions joined by operators.

**If (Conditions)**

Condition 1

Attribute	Operator	Value
groups:display	EQUALS	agents

groups:display  
groups:type  
groups:value  
roles:display  
roles:value  
costCenter

In the “Attribute” dropdown, all SCIM attributes are shown, including the attributes from the enterprise extension. Choose the attribute that your conditional expression should evaluate, if you need more information on the SCIM attributes, please refer to [RFC7643 Section 4](#).

#### Note

If you want to make rule that depends on a users group membership in a specific AD group name then use the “groups:display” attribute. This attribute will contain the groups name as defined in Entra ID.

Next chose the operator for the conditional logic, the following operators are supported:

- Equals (exact string match)
- Not Equals (exact string match)
- Contains (at least a substring of the value must match)
- Not Contains (at least a substring of the value must match)
- Starts With (*attribute* string begins with the value)
- Ends With (*attribute* string ends with the value)

Next, type the value to evaluate the condition towards in the “Value” field.

If you want to add another condition, press the “Add” button below the attributes field:

displayName

CONTAINS

agents

+ Add

Add another condition

CONTAINS

EQUALS

NOT EQUALS

NOT CONTAINS

Starts with

Ends with

You can choose between the “And” and “Or” operators when adding / chaining multiple conditional expressions. If you want to remove an existing condition, use the small “minus” icon.

Condition 1

Attribute Operator Value

displayName CONTAINS agents

Condition 2

And

Operator Value

And

Or

EQUALS

+ Add

Operator for expression chaining

Remove condition

## Actions

Actions represent the “Then” part of a rule, they define what action(s) to take if a rule triggers and the condition defined evaluates to true.

The Puzzel ID provisioning rule engine defines multiple types of actions that can be executed, and a rule can also execute multiple actions.

Currently the following actions are supported:

Action Name	Description
Add Solution User	<p>A “solution user” is a user in one of the Puzzel products:</p> <ul style="list-style-type: none"> <li>• PCC (Contact Centre)</li> <li>• PCM (Case Management)</li> <li>• WFM (Workforce Management)</li> <li>• SI (Sales Intelligence)</li> </ul> <p>In short, adding a solution user grants product access for a Puzzel ID user.</p>
Remove Solution User	Similar to above, but this action is to remove access.
Assign Role	Assigns a specific role to the Puzzel ID user this event triggered for. See below for an explanation of the roles available.
Remove Role	Similar to above, this action is to remove a role
Add to Group	Adds the Puzzel ID user this event triggered for to a specific Puzzel ID group.
Remove from Group	Similar to above, this action is to remove group access.
Add PCC User	This action is similar to “Add Solution User” → PCC and will at some stage be deprecated. Kept for compatibility reasons, use “Add Solution User” instead.

#### Action - Add Solution User

As mentioned above, “Add Solution User” grants a Puzzel ID user product access to Puzzel products.

Then (Action) ^

Action 1

Add Solution User v

Platform / Solution: PCC : Innovation Internal (19000) v      PCC Usergroup: Agent v

Type: Main v      Primary: Yes v      Username: userName ^

Prefix: AGT      Suffix: \_NO

The fields involved in adding a solution user is as follows:

Field	Description
Platform / Solution	<p>The solutions available for your customer account will be displayed here. The values in this dropdown consists of three sections.</p> <p>The first section is separated by a colon ":" and indicates the name of the platform the solution belongs to in abbreviated form as follows:</p> <ul style="list-style-type: none"> <li>• PCC - Puzzel Contact Centre</li> <li>• PT - Puzzel Case Management (this uses the old form Puzzel Ticketing)</li> <li>• SI - Puzzel Sales Intelligence</li> <li>• WFM - Puzzel Workforce Management</li> </ul> <p>The second part of the values in this dropdown is the actual name of the solution and the last part in parentheses shows the identifier of the solution in the Puzzel platform.</p> <div style="text-align: center;"> <p>Platform / Solution</p> <p>Platform / Product      Solution name      Solution id</p> </div>
PCC Usergroup	<p>This field is only displayed if a PCC solution is selected. A PCC user needs to be created within a usergroup. This field will be populated with the</p>

	to be created within a usergroup. This field will be populated with the existing user groups for the PCC solution selected. PCC user groups needs to be managed through PCC adminweb.
Type	A label indicating the solution's purpose or usage.  Canonical values: 'main', 'admin', 'demo', 'test'. This field is more for general classifications, what you choose here will not have any functional effects as of now.
Primary	Indicating if this user should be the primary user for the given platform / product or not. This only has effect if there is more than one solution user linked to a Puzzel ID for a given platform. Then primary is the default solution user you will be logged in as when logging in with Puzzel ID.
Username	This field instructs the rule engine how to create the username for the new solution user. The following options exist: <ul style="list-style-type: none"> <li>• Generate from email: Will use the username section of the email for the Puzzel ID user. E.g., <a href="mailto:john.doe@test.com">john.doe@test.com</a> will result in a username of "john.doe".</li> <li>• Displayname: The name of the Puzzel ID user, suitable for display to end-users. The name SHOULD be the full name of the user being described, if known</li> <li>• Employee number This requires the SCIM enterprise data extension to be in use and synchronized with Azure ID. Will use the employee number as username.</li> <li>• Name.formatted The full name, including all middle names, titles, and suffixes as appropriate, formatted for display.</li> <li>• Name.familyname The family name of the user, or last name in most Western languages.</li> <li>• Name.givenname The given name of the user, or first name in most Western languages.</li> <li>• Username The username of the user, this will in effect use the email address registered as Puzzel ID for the user.</li> </ul>
Prefix	Adds a prefix to the solution username, so if AGENT_ is added here, usernames for solution users will be created with this as a prefix. E.g., AGENT_john.doe.
Suffix	Adds a suffix to the solution username, so if _NO is added here, usernames



Suffix	Adds a suffix to the solution username, so if _NO is added here, usernames for solution users will be created with this as a suffix. E.g., john.doe_NO.
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**Action - Remove Solution User**

When triggered, this action removes a solution user by matching the solution users username.

**Then (Action)**

**Action 1**

Remove Solution User

Platform / Solution: PCC : Innovation Internal (19000)

External id: **userName**

- Generate from email
- displayName
- employeeNumber
- name.formatted
- name.familyName
- name.givenName
- userName**

The fields involved in remove a solution user is as follows:

Field	Description
Platform / Solution	<p>The solutions available for your customer account will be displayed here. The values in this dropdown consists of three sections.</p> <p>The first section is separated by a colon ":" and indicates the name of the platform the solution belongs to in abbreviated form as follows:</p> <ul style="list-style-type: none"> <li>• PCC - Puzzel Contact Centre</li> <li>• PT - Puzzel Case Management (this uses the old form Puzzel Ticketing)</li> <li>• SI - Puzzel Sales Intelligence</li> <li>• WFM - Puzzel Workforce Management</li> </ul> <p>The second part of the values in this dropdown is the actual name of the</p>

	solution and the last part in parentheses shows the identifier of the solution in the Puzzel platform
Externalid	<p>This field is the username of the solution user. What is chosen here will need to match the username of the solution user you want to delete.</p> <ul style="list-style-type: none"> <li>• Generate from email: Will use the username section of the email for the Puzzel ID user. E.g., <a href="mailto:john.doe@test.com">john.doe@test.com</a> will result in a username of "john.doe".</li> <li>• Displayname: The name of the Puzzel ID user, suitable for display to end-users. The name SHOULD be the full name of the user being described, if known</li> <li>• Employee number This requires the SCIM enterprise data extension to be in use and synchronized with Azure AD. Will use the employee number as username.</li> <li>• Name.formatted The full name, including all middle names, titles, and suffixes as appropriate, formatted for display.</li> <li>• Name.familyname The family name of the user, or last name in most Western languages.</li> <li>• Name.givenname The given name of the user, or first name in most Western languages.</li> <li>• Username The username of the user, this will in effect use the email address registered as Puzzel ID for the user.</li> </ul>

**Action: Assign role** 

This action adds a role to a Puzzel ID user. The following roles are available:

Role	Description
User	A normal user in the Puzzel ecosystem, typically an agent
Admin	A customer administrator with access to administer own solutions (under the customerid the Puzzel ID user belongs to). This will grant access to the Organisation Settings portal.
Visitor	A visitor to the Puzzel ecosystem. Currently not in use.
Partner	A partner user with access to the customers managed by the partner agreement.
KnowledgebaseAdmin	Grants access to the Knowledgebase system as an administrator.

#### Note

Note that a normal user like a PCC agent or admin does not have to have the role "User" set on their Puzzel ID to be able to use the system. Roles are expected to play a larger role in the Puzzel ecosystem in the future.

#### Action: Remove role assignment

This action removes a role from a Puzzel ID user. The following roles are available:

Role	Description
User	A normal user in the Puzzel ecosystem, typically an agent
Admin	A customer administrator with access to administer own solutions (under the customerid the Puzzel ID user belongs to). This will grant access to the Organisation Settings portal.
Visitor	A visitor to the Puzzel ecosystem. Currently not in use.
Partner	A partner user with access to the customers managed by the partner agreement.
KnowledgebaseAdmin	Grants access to the Knowledgebase system as an administrator.

#### Action: Add to Group

This action can add a Puzzel ID user to a specified Puzzel ID group.

**Action 1**

Add to Group ^

Add to Group

Admin v

**Action: Remove from Group**

This action is similar to the above action only that it removes a Puzzel ID user from a specified group instead.

**Executing multiple actions for a rule**

It is possible to execute multiple actions for a rule. To do so use the “Add action” button. Existing actions can also be deleted using the “minus” icon as illustrated below:

The screenshot shows a configuration panel titled "Then (Action)". It contains two actions:

- Action 1:** "Assign Role" with a dropdown menu set to "Admin". A minus icon is visible to its right.
- Action 2:** "Remove From Group" with a dropdown menu set to "Test group". A minus icon is visible to its right.

At the bottom of the panel is a red button labeled "+ Add Action". A red arrow points from the text "Add another action to execute for this rule" to this button. Another red arrow points from the text "Remove existing action" to the minus icon next to Action 2.

**Enabling / disabling a rule**

A rule can be enabled / disabled through a toggle switch at the bottom of page:

The screenshot shows a control bar with a toggle switch labeled "Disabled" on the left and "Enabled" on the right. The switch is currently in the "Disabled" position. To the right of the toggle are two buttons: a grey "Cancel" button and a red "Save" button.

From here you can also save any changes you made to the rule or cancel to exit without saving.
















**Editing a rule**

From the “Provisioning rules” main page you can also edit existing rules. This will give the exact same options as when

creating a rule documented above.

**Configure Provisioning Rules**

**+ Add**

Rule Name	Enabled	
Create PCC user for Support department	● Yes	  
Create PCC user for IT department	● Yes	  
Create PCC user for Support department for Update	● Yes	  
Create PCC user for IT department for Update	● Yes	  
Assign role User and add to group without externalId on update	● Yes	  

**Add rule**

**Edit rule** **Clone rule** **Delete rule**

### Cloning a rule

It is possible to create a new rule based off an existing rule. This is typically useful when you have several rules that do almost the same thing. Say as an example that you have a rule that adds a new PCC solution user to the “Supervisor” PCC user group based on certain AD groups. You can then create a rule that does this for the first AD group, then clone this rule and just change the AD group value in the conditions for the subsequent AD groups.

### Deleting a rule

A rule can be deleted using the trashcan icon from the list of provisioning rules. The deletion needs to be confirmed by an additional click in a modal window.

Are you sure you want to delete this rule?

**Cancel** **Delete**