

What's new in MidPoint 4.6 "Baumgarten"

Agenda





- What's new in 4.5 "Nightingale"
- What's new in 4.6 "Baumgarten"
- Supported platforms

MidPoint 4.5 "Nightingale"

Evolveum

- Released on 11 April 2022
 - Feature release, 1 year support
- Main features
 - Identity matching support for InCommon ID Match integration
 - Notification improvements and localizable Message templates
 - OpenID Connect support (oidc module for Flexible authentication)

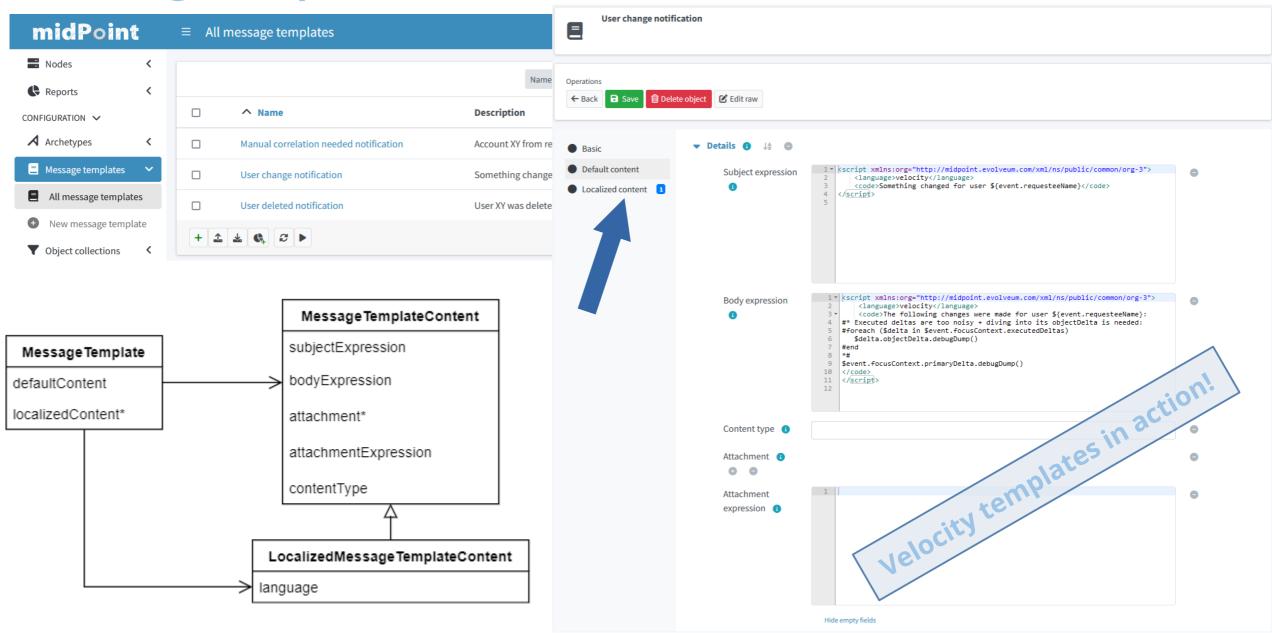
Selection of other improvements

- Many GUI improvements, System configuration pages improvements
- Added expression support for Axiom query language, supported and recommended option
- Native fail-over support in LDAP connector



Message templates (for notifications)





Notifications with message template



```
<notificationConfiguration>
 <handler>
   <description>Sends notification for filtered event</description>
   <generalNotifier>
     <expressionFilter>
        <script><code>return event?.something?.possibly?.returningTrue // not a real code!</code></script>
     </expressionFilter>
     <recipientExpression><script> <!-- recipientExpression can now return string OR focus object -->
        <code>actor</code> <!-- focus object, this will enter the expression lower as recipient -->
     </script></recipientExpression>
     <!-- message template ref as alternative to {subject,body,contentType,attachment}Expression-s -->
     <messageTemplateRef oid="989a480f-4781-4e43-b31d-4b2e2af6d814"/>
      <transport>mymail</transport>
   </generalNotifier>
 </handler>
</notificationConfiguration>
<messageTransportConfiguration>
  <mail>
   <name>mymail</name>
   <le><logToFile>mail-notifications.txt</le>
   <recipientAddressExpression><script>
        <code>recipient.emailAddress ?: 'missing-email@example.com'</code> <!-- fallback email if user has none -->
   </script></recipientAddressExpression>
   <!-- the rest of email server config -->
 </mail>
</messageTransportConfiguration>
```

Axiom expressions



```
Example 1:
                                                           Example 1:
<q:equal>
                                                           name = $c:account/c:attributes/ri:uid
   <q:path>name</q:path>
   <c:expression>
                                                           Example 2 – implicit Groovy script/code:
      <c:path>$c:account/c:attributes/ri:uid</c:path>
   </c:expression>
                                                           metadata/createTimestamp > ```
</q:equal>
                                                             now = basic.currentDateTime();
                                                             ret = basic.addDuration(now, "-P30D");
Example 2:
                                                             return ret
<gt>
                                                             . . .
 <path>metadata/createTimestamp</path>
 <expression>
                                                           Example 2 – universal expression:
   <script>
     <language>groovy</language>
                                                           metadata/createTimestamp > yaml```
     <code>
                                                             script:
       ret = basic.addDuration(now, "-P30D");
                                                               language: groovy
       now = basic.currentDateTime();
                                                               code:
       return ret
                                                                 now = basic.currentDateTime();
     </code>
   </script>
                                                                 ret = basic.addDuration(now, "-P30D");
 </expression>
                                                                 return ret
</gt>
```

Docs: https://docs.evolveum.com/midpoint/reference/concepts/query/axiom-query-language/expressions/

MidPoint 4.6 "Baumgarten"

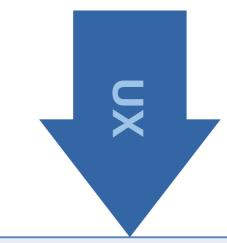
Evolveum

- Released on 21 October 2022
 - Feature release, 1 year support
- Main features
 - Main UX improvements: Resource wizard, Self-service
 - Smart correlation
 - Resource templates, Resource discovery
 - Many other UI/UX improvements
 - Assignment panel search can use Repository
 - Most GUI configuration changes are applied without logout now
 - Saved searches



Resource Wizard overhaul





Resource Wizard

Resource



Resource Wizard

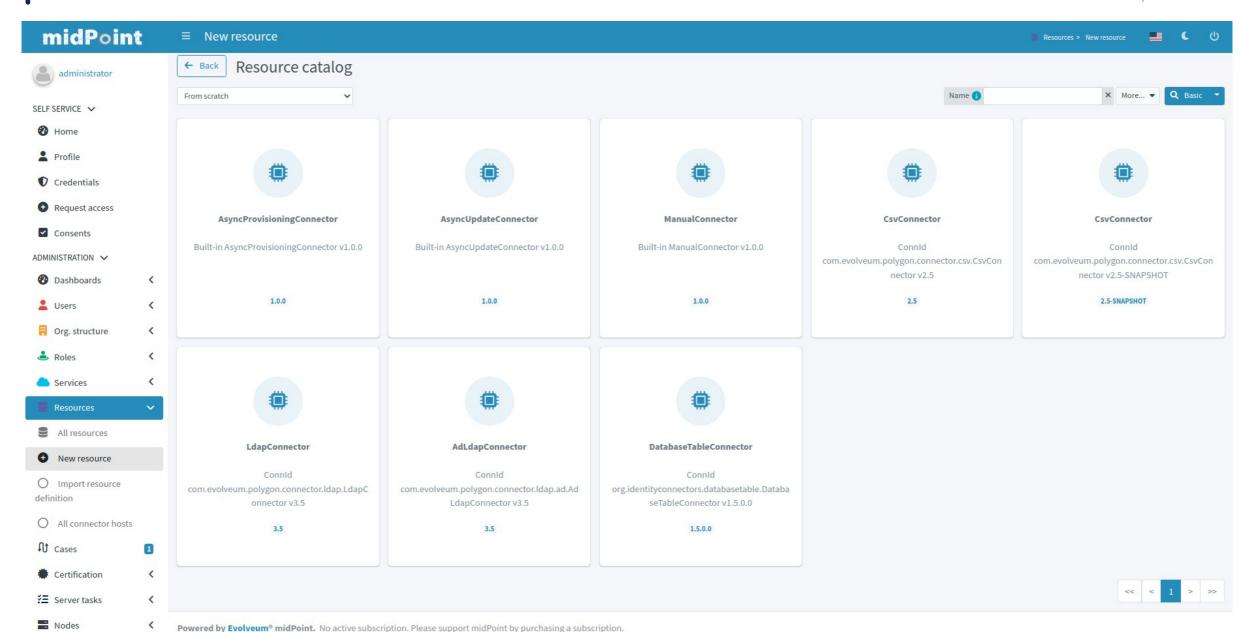


- Basic configuration creating new Resource
 - From scratch, selecting a Connector
 - From Resource template ("abstract" resource)
 - Resource template is a "super-resource" and changes there affect the derived resource
- Object type configuration
 - Available as a continuation of the wizard for a new resource
 - Available from edit page via Accounts, Entitlement... and Schema handling

Docs: https://docs.evolveum.com/midpoint/reference/admin-gui/resource-wizard/

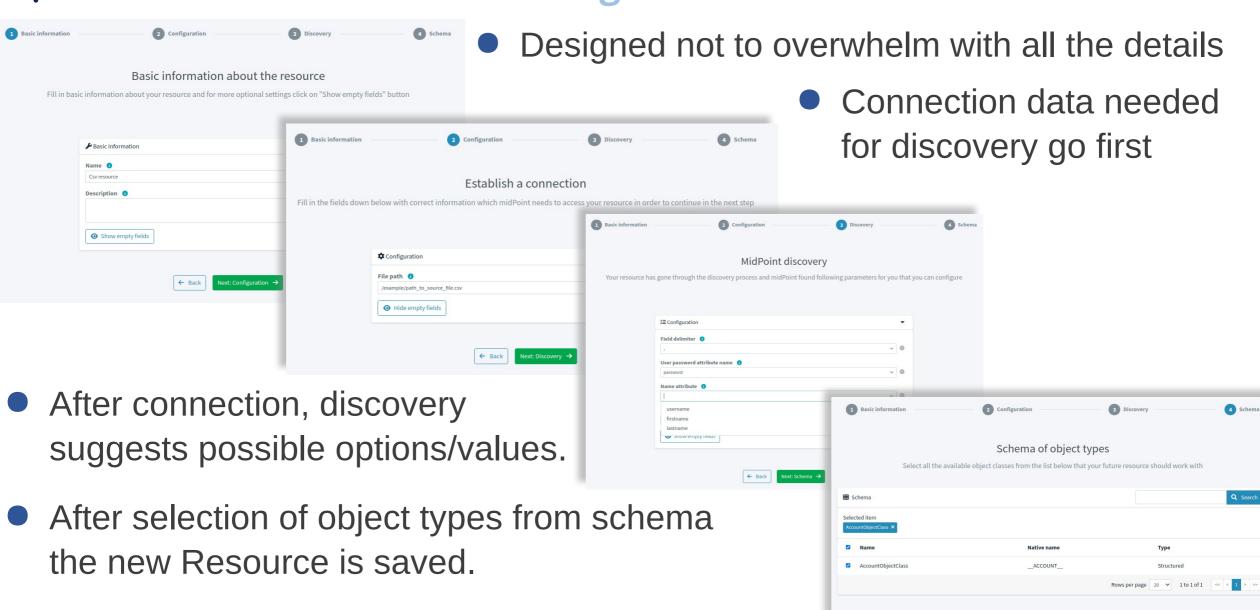
Resource Wizard - New resource





Resource Wizard - Basic configuration

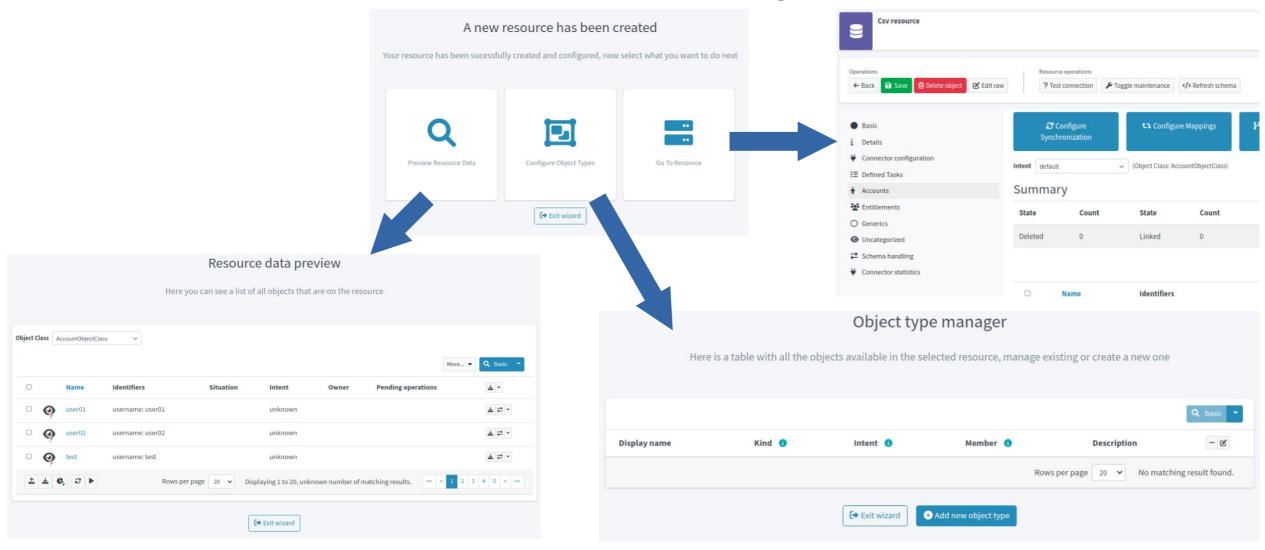




Resource Wizard - after basic configuration



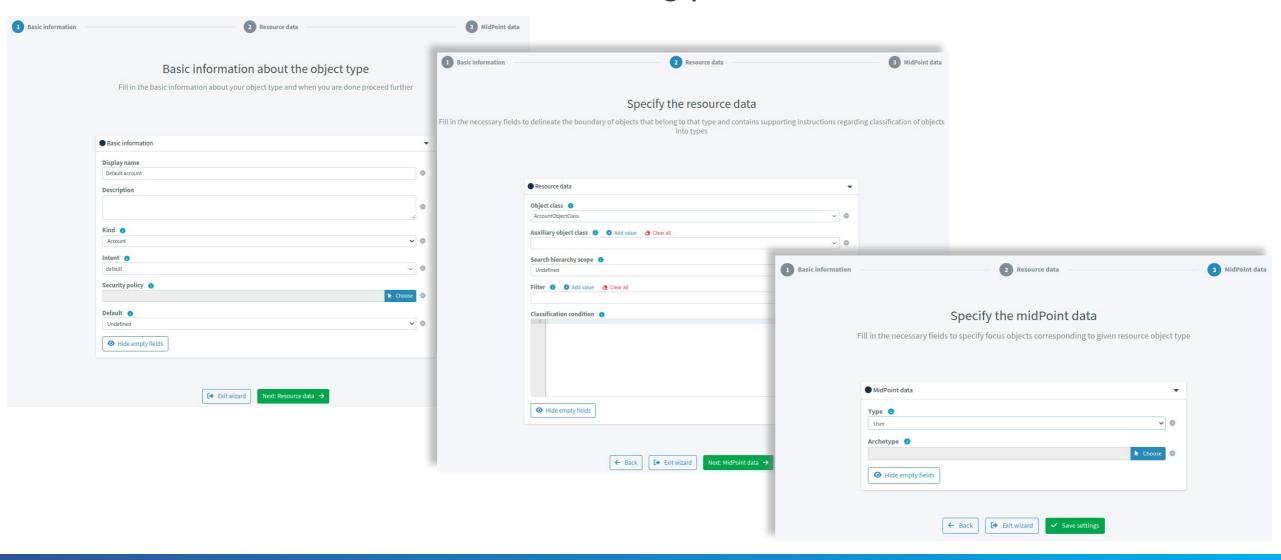
You can continue with other sub-wizards or go to Resource edit



Resource Wizard – new Object Type

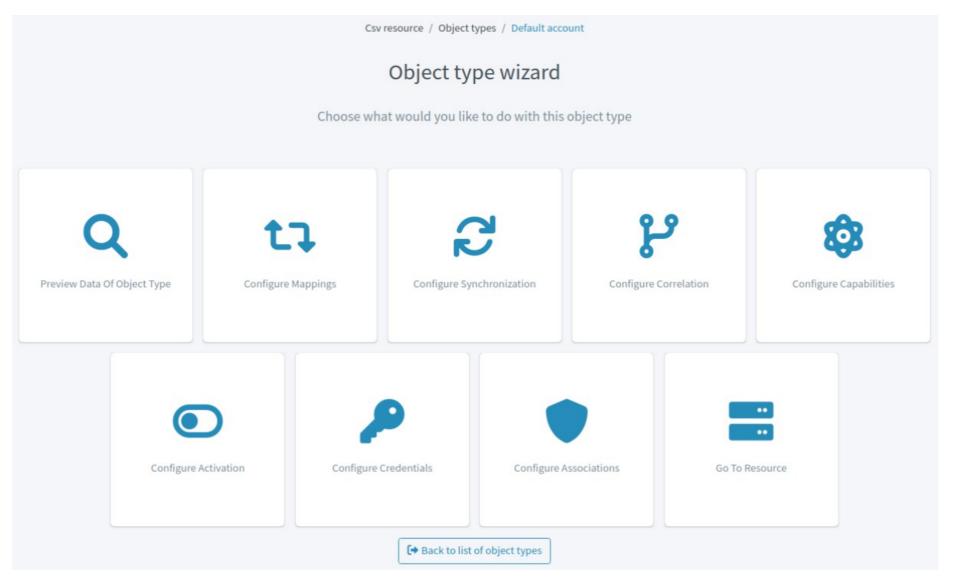


Also available from Schema handling panel

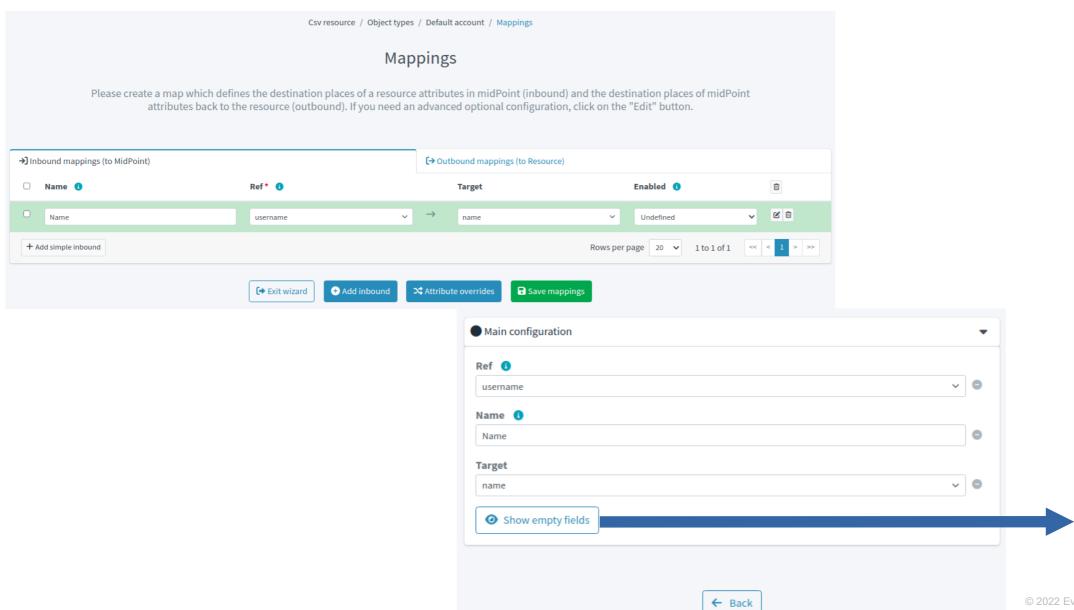


Resource Wizard – Object Type wizards

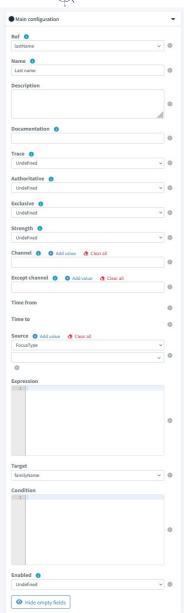




Resource Wizard - Configure Mappings



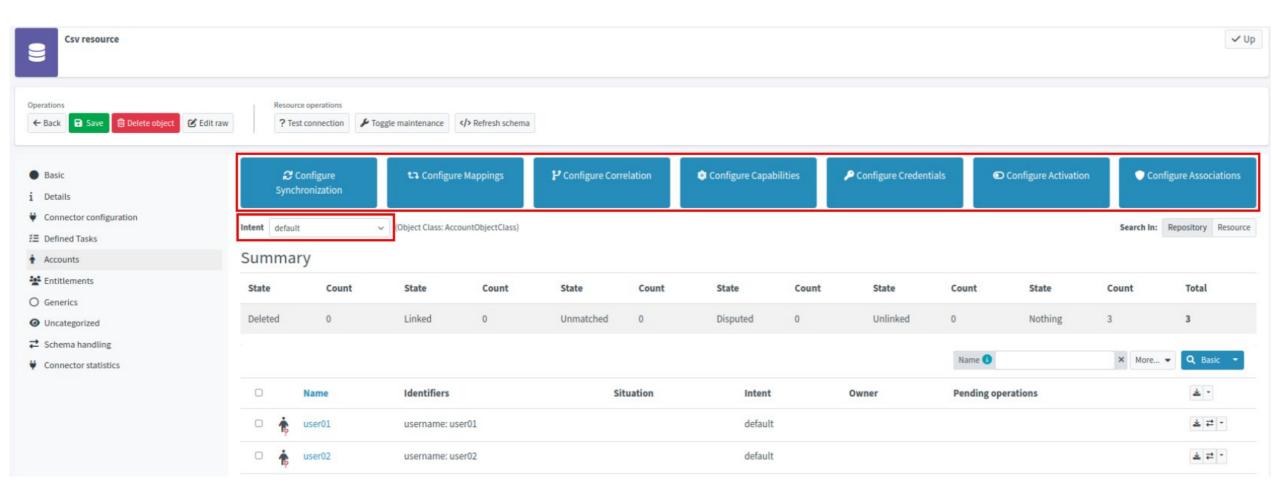
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Resource Wizard – available from edit page



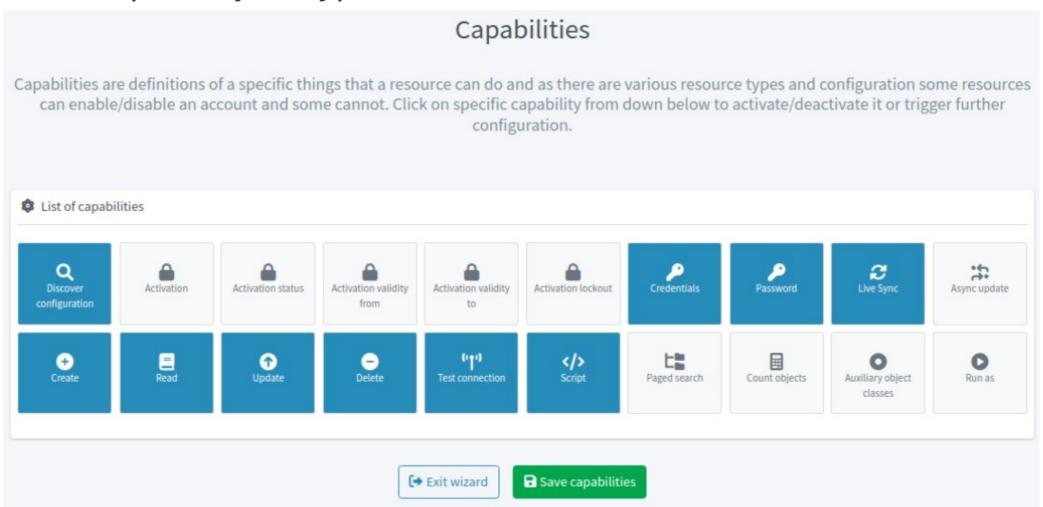
• In Accounts, Entitlements... after choosing Intent



Resource Wizard – capabilities

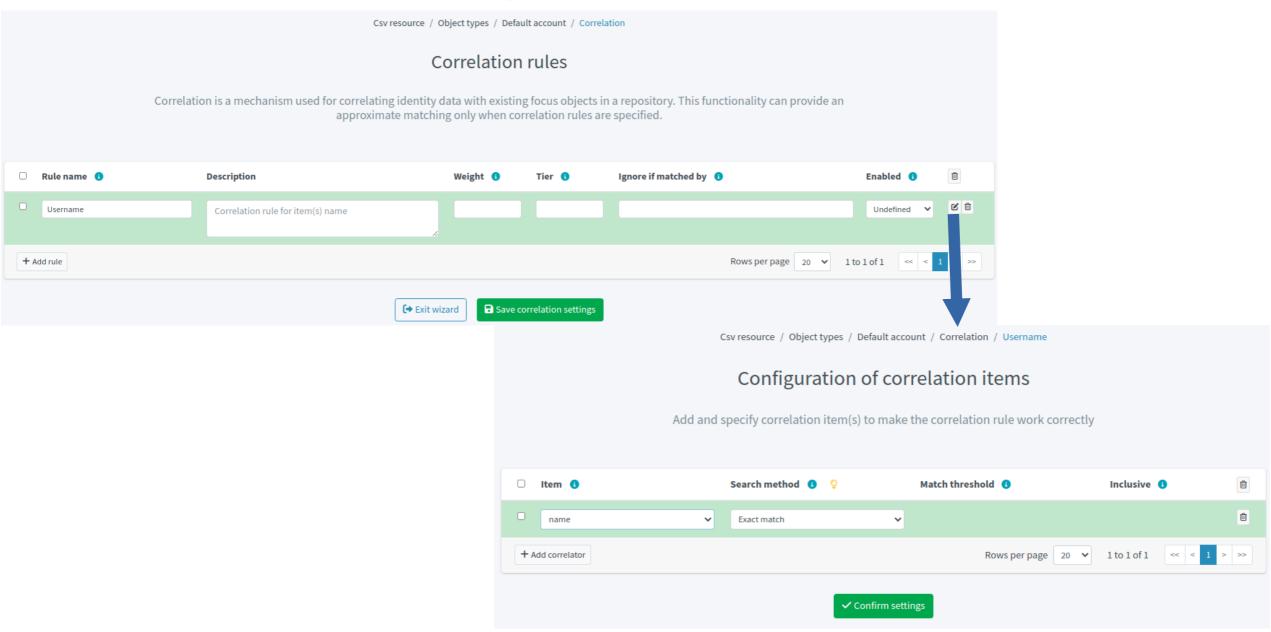


Available per Object Type and also in Resource/Details



Resource Wizard - Configure Correlation





Smart Correlation



- In 4.6, the correlation mechanism is based on correlation rules.
- Correlation rule types:
 - **filter** legacy filter-based correlation rule (since midPoint 1.7)
 - expression custom expression, experimental (since 4.5)
 - idmatch rule using external ID Match service (since 4.5)
 - <u>items smart item-based correlation, the suggested option now (since 4.6)</u>
- Rule composition, Fuzzy searching (next slides)
- Experimental: Custom indexing (e.g. just prefix of the name), Multiple identity sources

Docs: https://docs.evolveum.com/midpoint/reference/correlation/

Item-based correlation



- Previously, correlation filter searched focus by resource object attributes.
- Item-based correlation compares focus-like object after the mapping.
- Element correlation can appear in the Resource configuration under schemaHandling /objectType or inside an Object template:

Item-based correlation shortcut



Item correlation can be defined directly inside attribute definition:

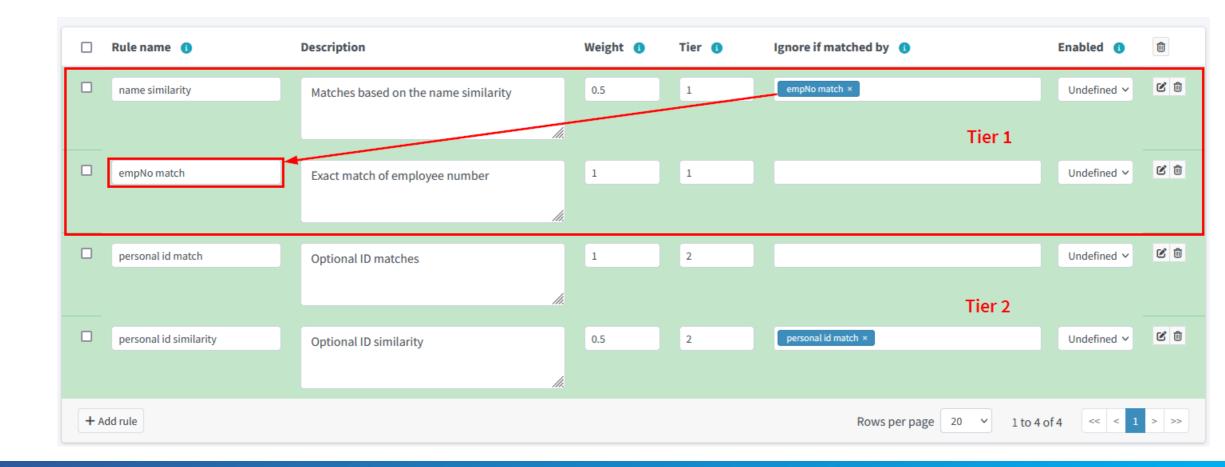
```
<schemaHandling>
    <objectType>
        <attribute>
            <ref>icfs:name</ref>
            <correlator/> <!-- enables correlation-time mapping evaluation -->
            <inbound>
                <target>
                    <path>name</path> <!-- focus property is correlated -->
                </target>
            </inbound>
        </attribute>
        . . .
    </objectType>
</schemaHandling>
```

Rule composition

$$total \, confidence_{cand} = min(\sum_{cor} \frac{confidence_{cand, cor} \cdot weight_{cor}}{scale}, 1)$$



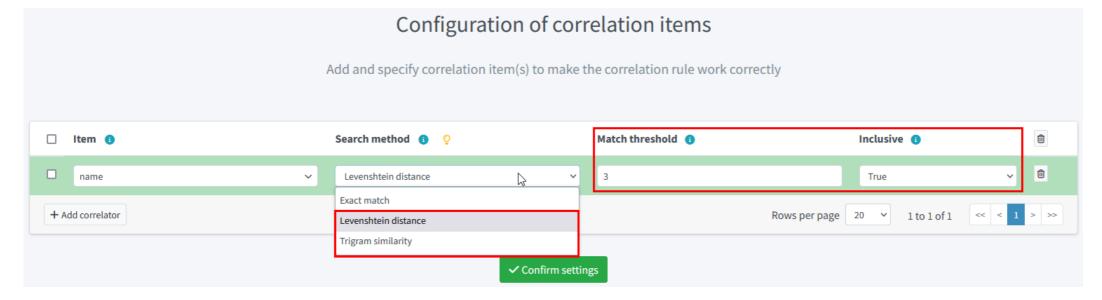
- Rules can be grouped to tiers, next tier is used only when needed.
- "Ignore if matched by" implies order of processing within the tier.



Fuzzy match/search



- Available functions: Levenshtein distance and Trigram similarity
- Supported in-memory and with the Native repository
- Usable in correlation rules:



Can be used in other queries, example of Axiom filter:

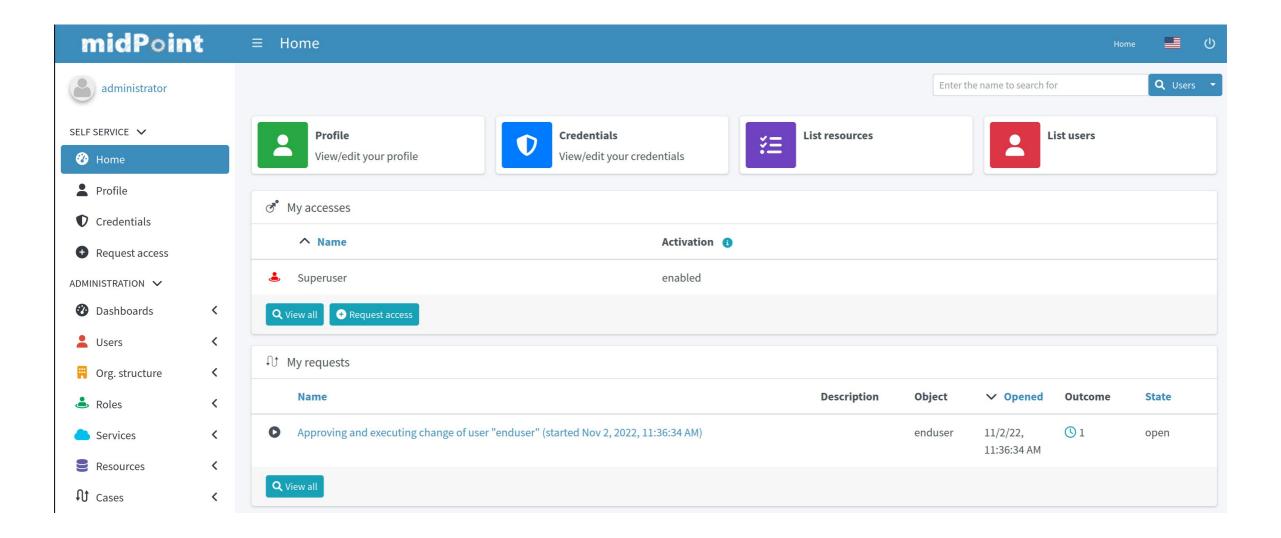
Changes on the Self Service Home page



- All widgets shown on Home dashboard are configurable
- homePage element is added to adminGuiConfiguration for Home dashboard page configuration
- It's possible to configure the number of the widgets on the Home page, their visibility for different roles, their look, actions etc.
 - See https://docs.evolveum.com/midpoint/reference/admin-gui/self-service/#home-page
- Both standard (implemented in midPoint) and custom panels can be configured to be shown on the Home dashboard page
 - For more info see https://docs.evolveum.com/midpoint/reference/admin-gui/admin-gui-config/,
 Panel configuration section
- userDashboardLink is deprecated

New look of the Home dashboard page





Changes on the Self Service Profile page

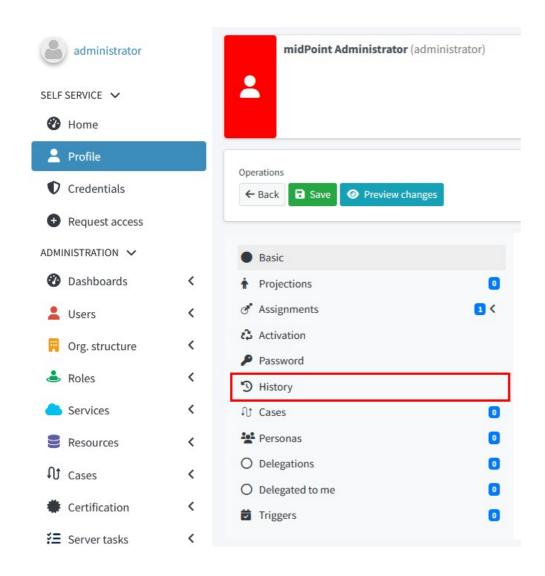


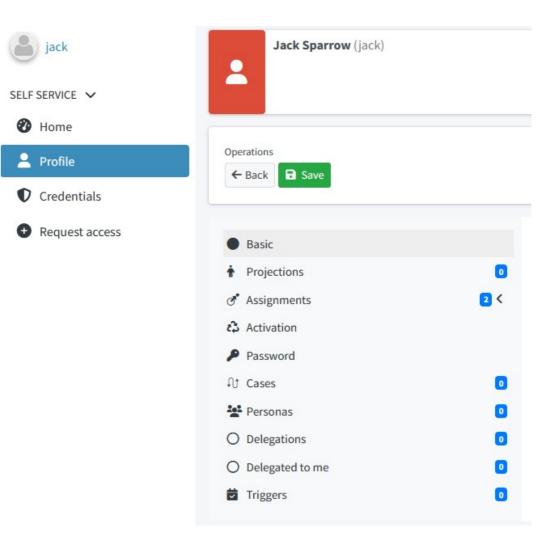
- Self Service Profile page configuration was separated from the object details page configuration.
- selfProfilePage element is added to adminGuiConfiguration for Profile page configuration
- Documentation for Profile page configuration:
 https://docs.evolveum.com/midpoint/reference/admin-gui/self-service/#profile-page
- Example default midPoint End user role was updated with Profile page configuration:

Changes on the Self Service Profile page



Administrator without End user role versus user with End user role:

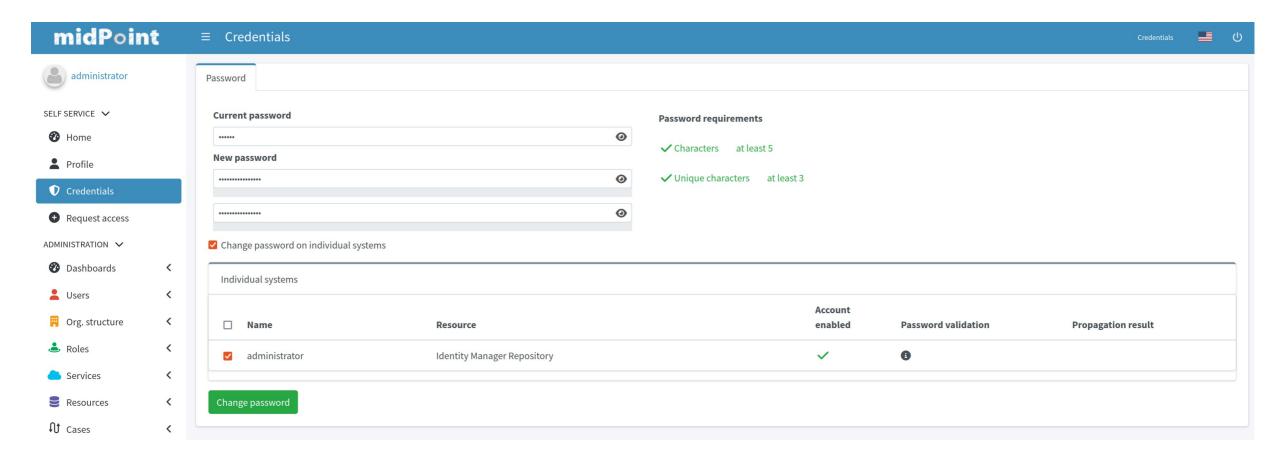




Changes on the Self Service Credentials page



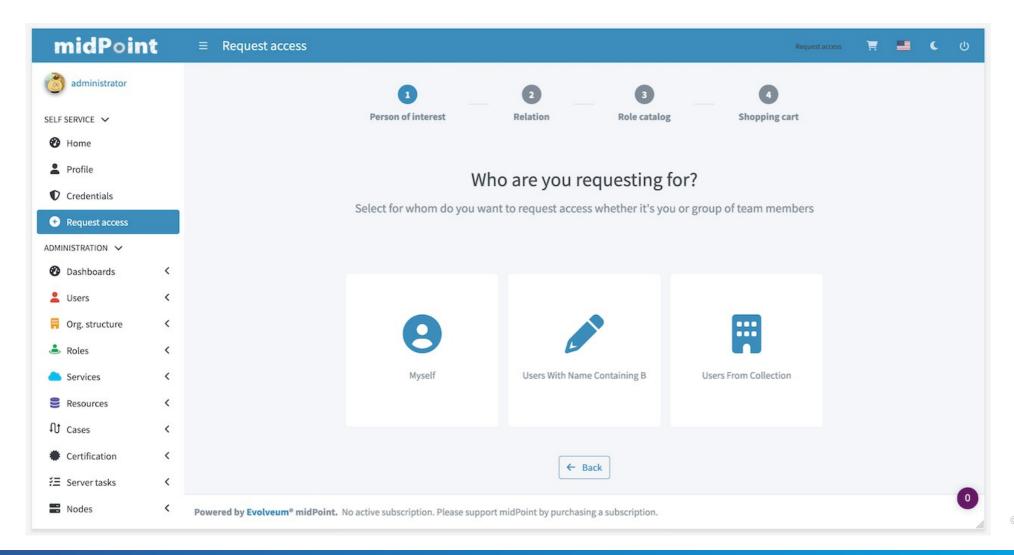
Self Service Credentials page was reworked to comply with the latest UX designs. The functionality remains the same.



Request Access

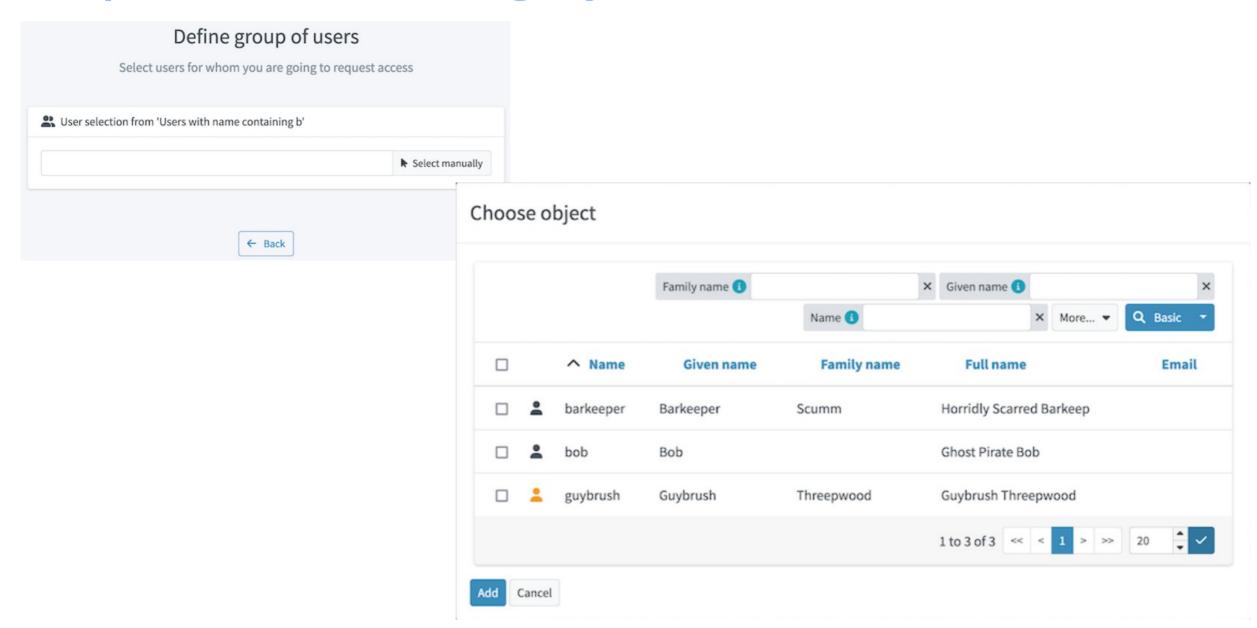


Completely rewritten, with first two steps optional (configuration/authz)



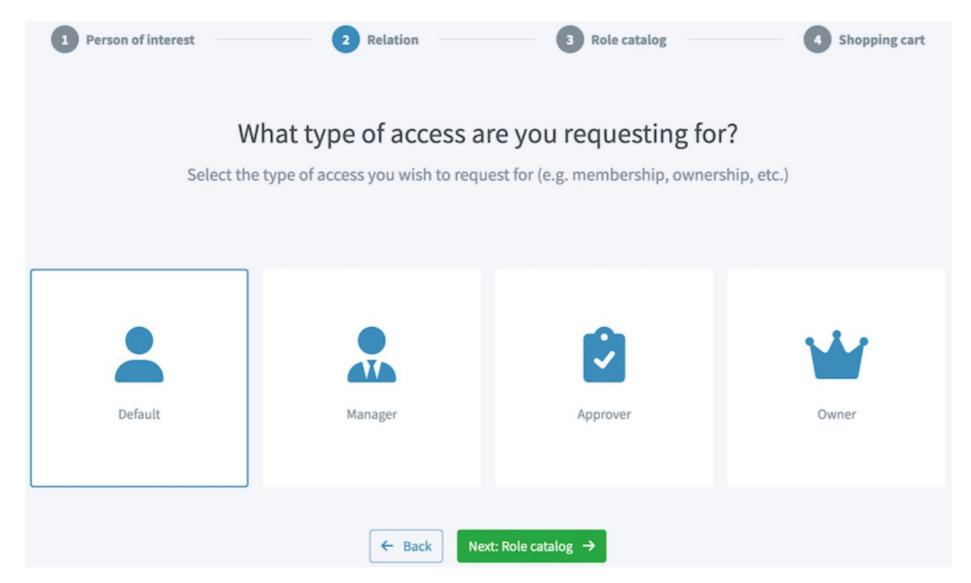
Request Access – choosing objects





Request Access – relation

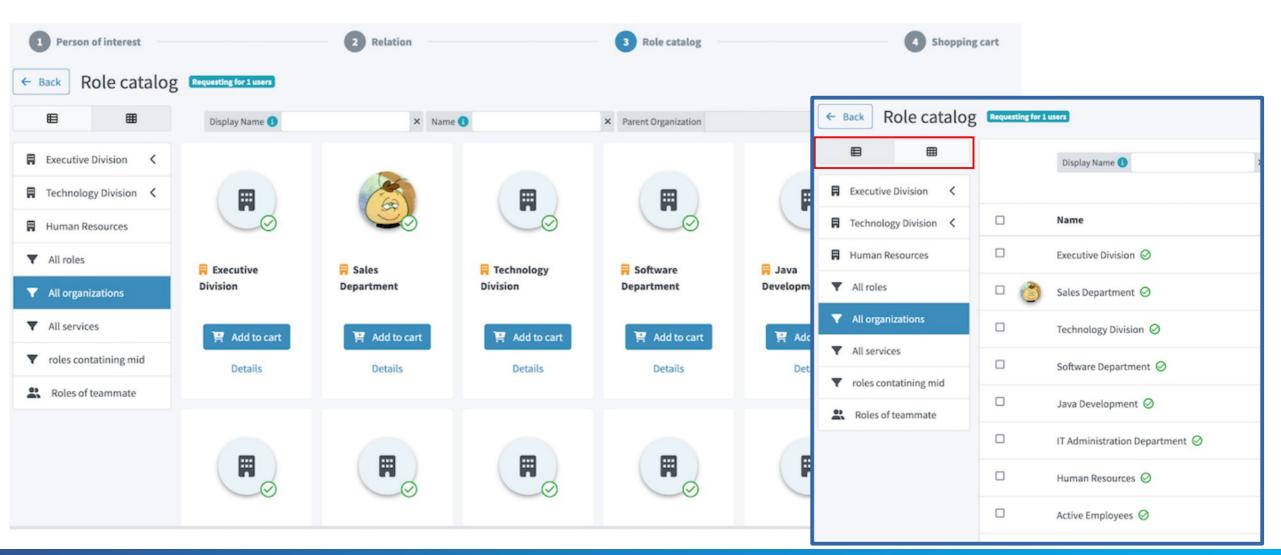




Request Access - role catalog

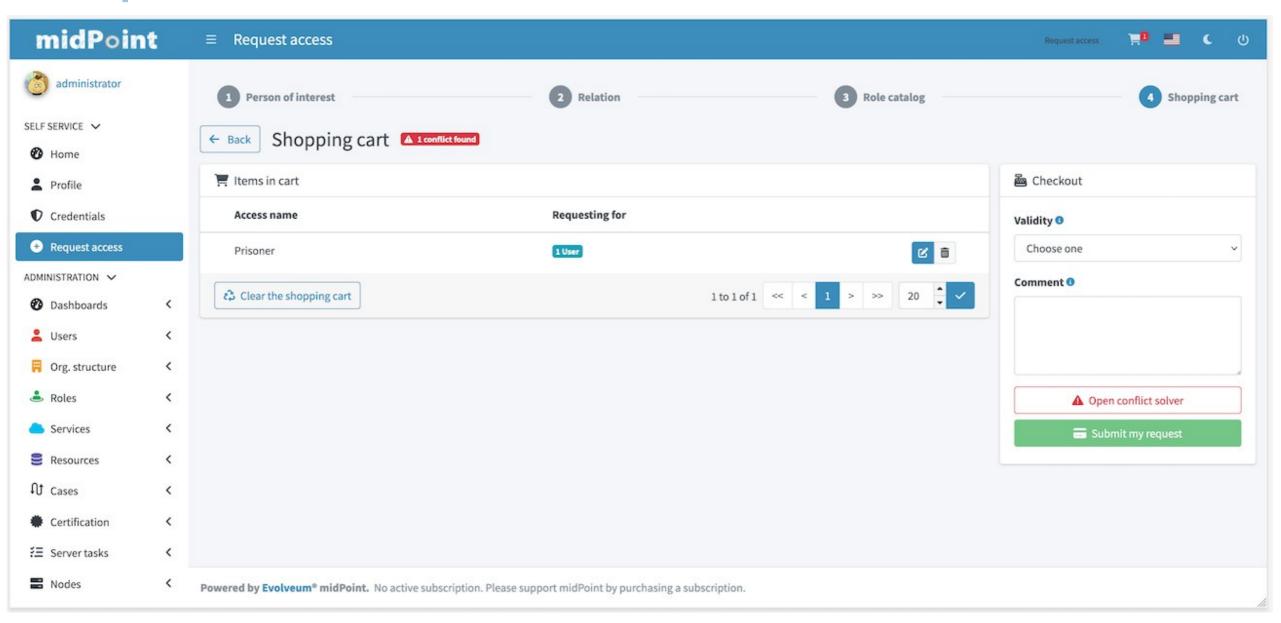


Menu sections: a) org structure, b) collections, c) roles of teammates



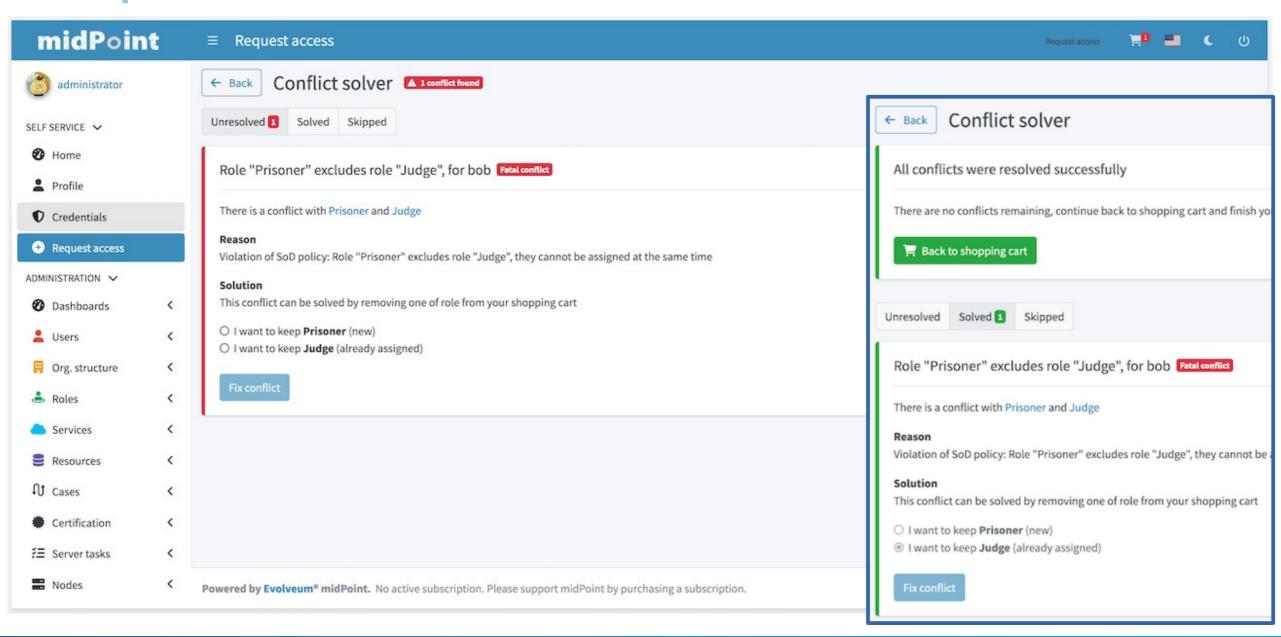
Request Access – checkout





Request Access – conflict solver





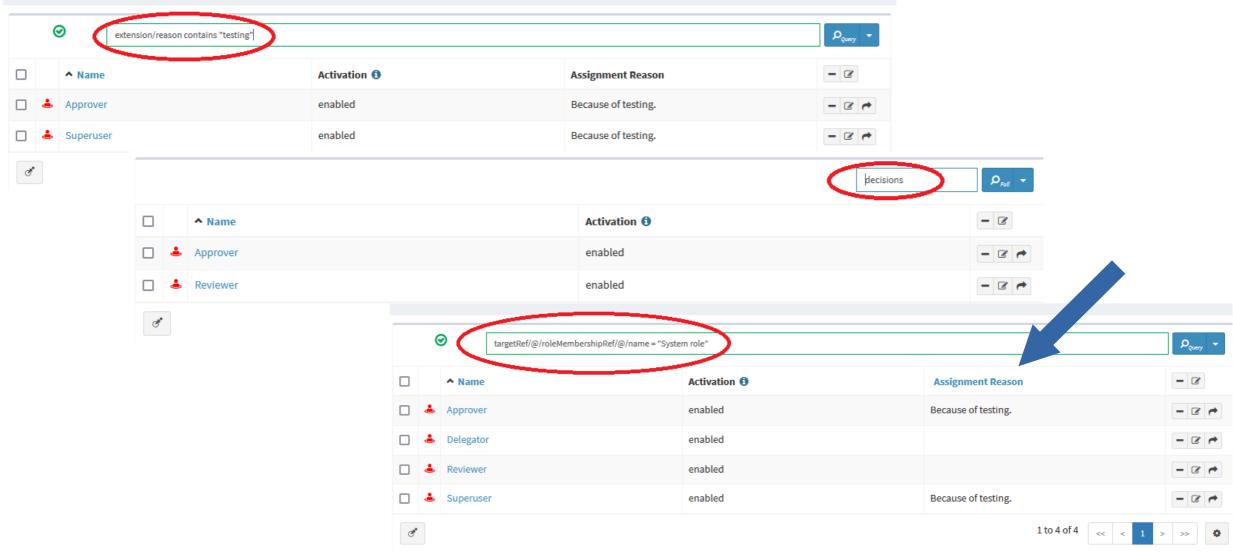
Assignment panel with repository search



- Assignment panel in object detail uses in-memory search by default.
- Since 4.6 you can switch it to repository search. (Native repository only!)
 - Search by assignment's **targetRef** target conditions, e.g. target object name.
 - Search by target object full-text index. (Not assignment's! No full-text index on them.)
 - Search by combination of target reference criteria and target object criteria.
 - Search by assignment extensions.
- Object with assignments has to be saved for consistent results.
- Order by assignment extensions possible (must be single-value).
- Enabled by dataProvider element in adminGuiConfiguration.

Assignment panel with repository search examples





Docs: https://docs.evolveum.com/midpoint/guides/assignment-repository-search/

New query filters – ref filter with target filter

- Extended ref filter allows combining criteria for the reference itself (type, relation) with the criteria for the target object.
- Useful for multi-value references, allowing things not possible before.
- Example: users that are members of roles with names starting with the specified string:

```
roleMembershipRef matches (
    targetType = RoleType
    and
    // @ represents ref target, target filter is inside (...)
    @ matches (
        name startsWith[origIgnoreCase] "super" ) )
```

Evolveum

New query filters – referencedBy

- referencedBy allows to filter objects by conditions on another object/container that is referencing the queried object.
- No relation specified means "any".
- oid1 targetOid = oid2 targetType = ... relation = ...
- Example:
 Search for organizations assigned to a particular user, whatever the relation.

```
. referencedBy (
    @type = UserType
    and @path = parentOrgRef
    and . inOid '2b1fd02e-db31-4896-95e9-82192df00c42'
)
```

New query filters – ownedBy

- ownedBy allows to filter containers by conditions on another object/container that is a parent object/container of the filtered one.
- Example: Filtering assignments for a user with specified name

```
. ownedBy (
    @type = UserType
    and @path = assignment
    and name = "user-3"
)
```

New query filters – ownedBy



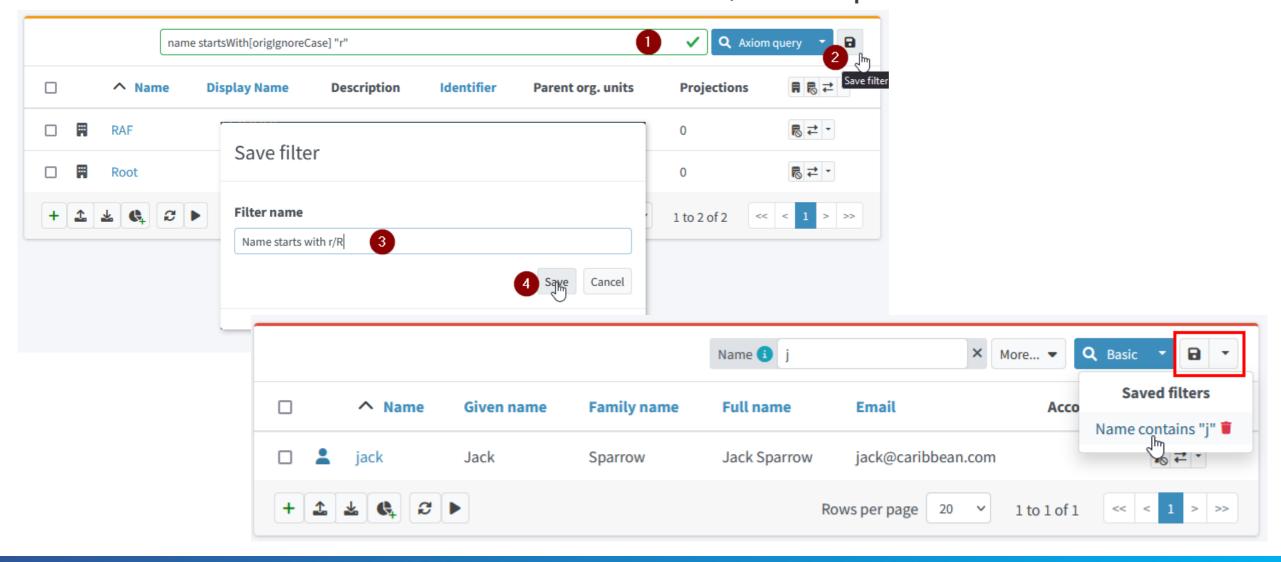
- ownedBy can be nested or combined with referencedBy
- Example: Search for AccessCertificationWorkItemType containers that are part of an object with specified OID:

```
<filter>
    <ownedBy>
        <type>AccessCertificationCaseType</type> <!-- parent container -->
        <filter>
            <ownedBy>
                <type>AccessCertificationCampaignType</type> <!-- owning object -->
                <filter>
                    <inOid>
                        <value>a4397437-db99-413d-ae60-a437624dc8c8</value>
                    </in0id>
                </filter>
            </ownedBy>
        </filter>
    </ownedBy>
</filter>
```

Saved filters



User can now save often used searches, stored per user



Immediate GUI config and auth changes



- Most GUI configuration and authorization changes do not require logout
 - Changes in assignments, activation and GUI configuration for user...
 - ...or for roles, orgs, archetypes... directly or indirectly assigned to the user
- Changes in admin GUI configuration are applied without logout
- User deactivation results in logout/403 of the other session
 - validFrom/validTo applied via Validity Scanner every 15 minutes by default

Docs: https://docs.evolveum.com/midpoint/reference/admin-gui/change-application/

MidPoint 4.6 "Baumgarten"

Evolveum

- New Resource Wizard
- New Self-service pages, including Request Access
- Smart correlation item-based correlation, fuzzy-match
- Saved searches
- Assignment panel repository search
- New query filters (referencedBy, ownedBy)
- GUI and assignments changes applied without logout



Supported platforms



- Production deployment: Linux (x86_64)
- Java 11, recommended Java 17 (both are LTS versions)
- Stand-alone deployment
 - JAR packaging only, WAR deployment is not possible anymore
- Native repository with PostgreSQL (v13, 14, 15)
 - The old Generic repository is deprecated (PG, Oracle, SQL Server)
 - Many new features are **not** supported with the old repository!
- Any recent version of Chrome, Firefox, Safari, Edge or Opera

WAR to JAR change



- Distribution package now contains lib/midoint.jar (not *.war)
 - WAR deployment on Tomcat is not supported since midPoint 4.5 and not possible with midPoint 4.6 (and has been deprecated since midPoint 4.1)
- No change needed if bin/*.sh scripts are used
- If custom java ... -jar /.../midpoint.war is used, including OS service definitions, the name must be fixed to *.jar
- MidPoint Overlay is not WAR overlay anymore, but simple Spring Boot repackage.
 - See the example project: https://github.com/Evolveum/midpoint-overlay-example

Resources



- Smart correlation: https://docs.evolveum.com/midpoint/reference/correlation/
- Resource wizard: https://docs.evolveum.com/midpoint/reference/admin-gui/resource-wizard/
- Self-service: https://docs.evolveum.com/midpoint/reference/admin-gui/self-service/
- Request access: https://docs.evolveum.com/midpoint/reference/admin-gui/request-access/
- GUI Assignment Repository search:
 https://docs.evolveum.com/midpoint/guides/assignment-repository-search/
- Saved filters (GUI User Profile): https://docs.evolveum.com/midpoint/guides/gui-user-profile/
- Notifications: https://docs.evolveum.com/midpoint/reference/misc/notifications/
- Axiom query language: https://docs.evolveum.com/midpoint/reference/concepts/query/axiom-query-language/
- Query API: https://docs.evolveum.com/midpoint/reference/concepts/query/query-api/
- Release notes:
 https://docs.evolveum.com/midpoint/release/4.6/
 https://docs.evolveum.com/midpoint/release/4.5/

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