

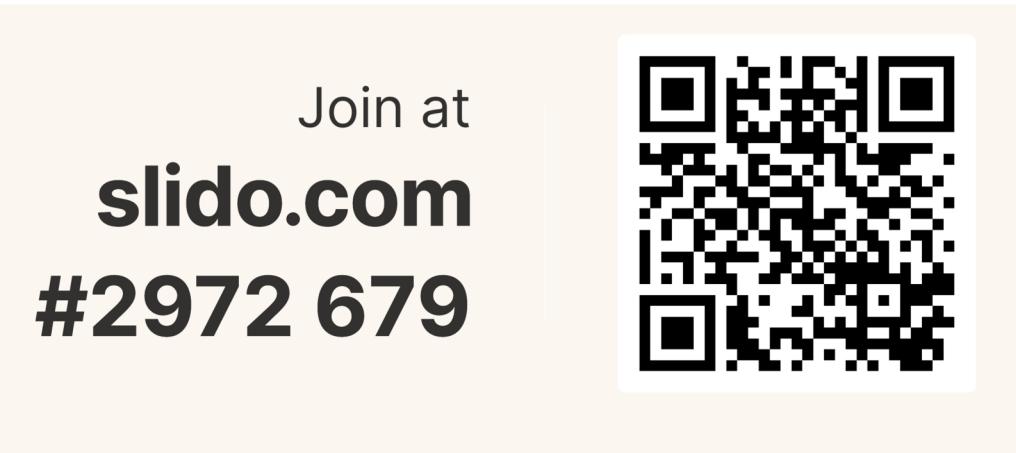


MidPoint Community Meetup 2025

Use the Studio Luke

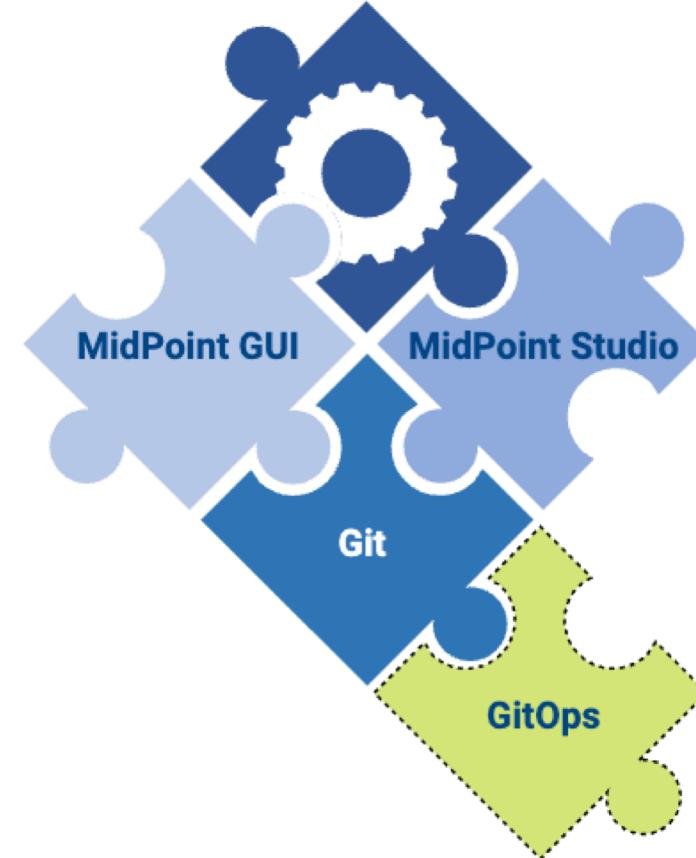
Agenda

- Streamlined support for midPoint deployment using GitOps
- Configuration cleanup
- Handling secrets
- Object synchronization
- Live demo
- Discussion



Streamlined support for midPoint deployment using GitOps

- MidPoint objects configured
 - XML files in Studio
 - Via midPoint GUI
- Configuration versioned in git
- Versioned configuration can be used in multiple environments using GitOps



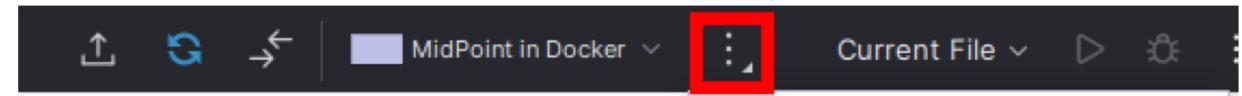
Configuration cleanup: Why?

- Remove unnecessary data from XML
 - All kinds of operational data
 - Optional items like resource schema
- Encrypted passwords
- Update connector references
- Associations based on Shadow oid
- Warn about missing referenced objects in project

```
1 <resource xmlns="http://midpoint.evolveum.com/xml/ns/public/common/common-3" xmlns:c="http://midpoint.evolveum.co
2   <name>AD</name>
3   <description>ExAmPLE, Inc. AD resource</description>
4   <metadata...>
5   <lifecycleState>active</lifecycleState>
6   <operationExecution id="74"...>
7   <iteration>0</iteration>
8   <iterationToken/>
9   <operationalState...>
10  <operationalStateHistory id="78"...>
11  <connectorRef oid="69c8dff3-72c3-4e08-a115-f9ce51c203f3" relation="org:default" type="c:ConnectorType">
12    <description>Reference to the ConnId LDAP connector. This is dynamic reference, it will be translated to
13      OID during import.
14      Only connector which is available is used (connector objects without existing JAR are ignored).
15    </description>
16    <filter>
17      <q:text>connectorType = "com.evolveum.polygon.connector.ldap.LdapConnector" and available = "true"</q:text>
18    </filter>
19  </connectorRef>
20  <connectorConfiguration xmlns:icfc="http://midpoint.evolveum.com/xml/ns/public/connector/icf-1/connector-sche
21  <schema>
22    <cachingMetadata>
23      <retrievalTimestamp>2024-05-28T12:33:32.622Z</retrievalTimestamp>
24      <serialNumber>1ce3f4d7406f3d34-bcbfd02f7ad2076d</serialNumber>
25    </cachingMetadata>
26    <generationConstraints>
27      <generateObjectClass>ri:inetOrgPerson</generateObjectClass>
28      <generateObjectClass>ri:groupOfUniqueNames</generateObjectClass>
29      <generateObjectClass>ri:groupOfNames</generateObjectClass>
30      <generateObjectClass>ri:organizationalUnit</generateObjectClass>
31    </generationConstraints>
32    <definition>
33      <xsd:schema xmlns:a="http://prism.evolveum.com/xml/ns/public/annotation-3" xmlns:ra="http://midpoint.e
34        <xsd:import namespace="http://prism.evolveum.com/xml/ns/public/annotation-3"/>
35        <xsd:import namespace="http://midpoint.evolveum.com/xml/ns/public/resource/annotation-3"/>
36        <xsd:complexType name="groupOfNames">
37          <xsd:annotation>
38            <xsd:appinfo>
39              <a:container>true</a:container>
40              <ra:resourceObject>true</ra:resourceObject>
41              <ra:nativeObjectClass>groupOfNames</ra:nativeObjectClass>
42              <ra:default>false</ra:default>
43              <ra:auxiliary>false</ra:auxiliary>
44              <ra:namingAttribute>ri:dn</ra:namingAttribute>
45              <ra:disallowNameAttribute>ri:dn</ra:disallowNameAttribute>
46            </xsd:appinfo>
47          </xsd:annotation>
48        </xsd:complexType>
49      </xsd:schema>
50    </definition>
51  </schema>
52 </connectorConfiguration>
53 </resource>
```

Configuration cleanup: How?

- Cleanup actions are configurable per item
- One or multiple files/folders at once
- Warn about missing references
- Optionally remove metadata



References

Cleanup connector references
Cleanup will remove oid/relation/type from connector reference.

Replace connector oid references
Cleanup will try to replace connector reference oid with search type/version in selected environment.

Warn about missing referenced objects
Cleanup will warn about references that points to objects not available.

Other

Warn about missing natural keys
Cleanup will check if containers have natural key defined.

Remove metadata
Cleanup will remove metadata from objects.

- Upload/execute
- Upload/execute (stop on error)
- Upload/recompute
- Upload/Test Resource
- Upload/Test/Validate Resource
- Recompute
- Download selected types
- Test Resource
- Delete from Server
- Delete from Server (raw)
- Diff local
- Cleanup File**
- Verify
- Upgrade task to activity (4.4)
- Server Log
- Generate Random OID
- Test Connection
- Generate Documentation

Handling secrets

- Encrypted data are bound to specific environment
- Studio magic - project properties
- Secret providers
 - Since 4.9
 - Docker, File, Environment variables, Properties
- Cleanup warns about encrypted values in midPoint objects

```
<cfg:bindPassword>
  <t:encryptedData>
    <t:encryptionMethod>
      <t:algorithm xmlns="http://prism.evolveum.com/xml/ns/public/types-3">http://
    </t:encryptionMethod>
    <t:keyInfo>
      <t:keyName>aY7PzKsf66rq10PMYA20p7bVebg=</t:keyName>
    </t:keyInfo>
    <t:cipherData>
      <t:cipherValue>6RmRqz7/fCtzqfEhHn8NyQNVGiSLccPFthMl1h9jT2w=</t:cipherValue>
    </t:cipherData>
  </t:encryptedData>
</cfg:bindPassword>
<secretsProviders>
  <docker>
    <identifier>my-docker-secrets</identifier>
    <description>Allow accessing docker secrets. D
      com.evolveum.midpoint.common.secrets TRACE,
    <cache>PT30M</cache>
    <display>
      <label>Docker secrets</label>
      <icon>
        <cssClass>fa fa-play</cssClass>
      </icon>
    </display>
  </docker>
</secretsProviders>
<cfg:bindPassword>
  <t:externalData>
    <t:provider>my-docker-secrets</t:provider>
    <t:key>ad_password</t:key>
  </t:externalData>
</cfg:bindPassword>
```

Object synchronization

- Compare local and remote objects
 - Update local/remote object
- Preview partial changes (deltas)

The screenshot shows the MidPoint interface for object synchronization. At the top, a header bar includes buttons for 'Natural Keys' and navigation symbols. A red box highlights the status 'HR.xml (HR) (Pending: remote)'.

The main area displays a tree view of changes to the 'HR.xml (LOCAL)' object. A red box highlights the 'All' node under 'schemaHandling/objectType/5 (HR Person)'. Below it, several changes are listed:

- Replace existing with: This object type describes HR employees minus the non-IT employees which are excluded from midPoint pro.
- Remove: The delineation filter implements the company directive *IT/2022-119*.
- Remove: <inbound xmlns="http://midpoint.evolveum.com/xml/ns/public/common-common-3" xmlns:c="http://midpoint.evolveum.com/xml/ns/public/common-common-3" c:filter="not(contains(localName, 'IT'))"/>
- Add: First name
- Expression: ScriptExpressionEvaluatorType
- Remove: <attribute name="status" type="string" value="status-to-lifecycle-state" inbound="true" expression="ScriptExpressionEvaluatorType" c:script="switch (input) { case 'In': 'active' break case 'Long-term leave': 'suspended' break case 'Former employee': 'archived' break //default: //'suspended' //break }"/>
- Remove: <attribute name="job" type="string" value="job-to-title-nice" inbound="true" expression="ScriptExpressionEvaluatorType" c:script="switch (input) { case 'In': 'active' break case 'Long-term leave': 'suspended' break case 'Former employee': 'archived' break //default: //'suspended' //break }"/>

Below the tree view is a side-by-side code editor. The left pane shows the 'Before' state of the XML code, and the right pane shows the 'After' state. A red box highlights the code difference, specifically the removal of the 'status' attribute's expression and its corresponding 'c:script' block.

```
Before: "HR"; HR.xml (LOCAL) ()  
<expression xmlns="http://midpoint.evolveum.com/xml/ns/public/common-common-3" xmlns:c="http://midpoint.evolveum.com/xml/ns/public/common-common-3" c:filter="not(contains(localName, 'IT'))">  
After: "HR"; HR.xml (LOCAL) ()  
<expression xmlns="http://midpoint.evolveum.com/xml/ns/public/common-common-3" xmlns:c="http://midpoint.evolveum.com/xml/ns/public/common-common-3">
```

At the bottom of the code editor, there are tabs for 'Object Delta' and 'Text', and buttons for 'Save local' and 'Update remote'.

Demo

Join at

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Questions

- What features do you miss in midPoint Studio?
- What features are hard to use?
 - What are the use cases?



Thank you for your attention

Feel free to ask your questions now!



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