

Release 2.1

Coeus

Release 2.1 is a sixth midPoint release code-named *Coeus*. This release brings new features, better stability and robustness. It is introducing new way of attribute mapping, password policies, provisioning dependencies and robustness features, organizational structure support and a lot of other features.

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Features

midPoint 2.1 provides following features:

- Account provisioning (create, read, update, delete accounts)
 - [Enabling and disabling accounts](#)
 - Support for [mapping and expressions](#) to determine account attributes
 - Support of multi-value attributes
 - Processing and computation fully based on [relative changes](#)
 - [Provisioning dependencies](#)
 - [Provisioning robustness](#) - ability to provision to non-accessible (offline) resources
 - [Provisioning consistency](#) - ability to handle provisioning errors and compensate for inconsistencies
 - Support for tolerant attributes
- Integration of [Identity Connector Framework \(OpenICF\)](#)
 - [Unified Connector Framework \(UCF\) layer to allow more provisioning frameworks in the future](#)
 - Automatic generation and caching of [resource schema](#) from the connector
 - [Local connector discovery](#)
 - Support for connector hosts and remote [connectors](#), [identity connector](#) and [connectors host type](#)
 - [Remote connector discovery](#)
- Improved administration GUI
 - Preview changes page
 - Basic account-centered views (browse and search accounts directly)
- [Flexible identity repository implementations](#) and [SQL repository implementation](#)
 - [Identity repository based on relational databases](#)
- [Live synchronization](#)
- [Reconciliation](#)
- Advanced RBAC support and flexible account assignments
 - [Expressions in the roles](#)
 - Hierarchical roles
 - Parametric roles (including ability to assign the same role several times with different parameters)
- Several [assignment enforcement modes](#)
- [Customization expressions](#)
 - [Groovy](#)
 - [JavaScript \(ECMAScript\)](#)
 - [XPath version 2 and XPath Tutorial](#)
- [PolyString](#) support allows automatic conversion of strings in national alphabets
- [Custom schema extensibility](#)
- [Enhanced logging and error reporting](#)
- [Multi-node task manager component with HA support](#)
- Rule-based RBAC (RB-RBAC) ability by using conditional mappings in [user template](#)
- Basic [auditing](#)
 - Auditing to [file \(logging\)](#)
 - Auditing to [SQL table](#)
- [Password policies](#)
- Lightweight deployment structure
- Support for Apache Tomcat web container
- [Import from file and resource](#)
 - [Object schema validation during import](#) (can be switched off)
 - [Smart references between objects based on search filters](#)
- Simple [handling of provisioning errors](#)

- [Protected accounts](#) (accounts that will not be affected by midPoint)
- [Segregation of Duties \(SoD\)](#)
 - [Role exclusions](#)
- Export objects to XML
- Enterprise class scalability (hundreds of thousands of users)

Changes

When compared to the previous version, Coeus is introducing following changes:

- [Password policies](#)
- [Auditing to SQL tables](#) (see also [basic information about auditing](#))
- Recording [synchronization](#) situations in the shadows
- [Provisioning dependencies](#)
- [Provisioning consistency](#)
- [Remote connector discovery](#)
- Improved attribute [mappings and expressions](#)
- [Support for conditions in attribute mappings](#) (roles, outbound/inbound mapping)
- Experimental [workflow integration](#)
- Organizational structure
- GUI improvements
 - Preview changes page
 - Basic account-centered views (browse and search accounts directly)
- Rule-based RBAC (RB-RBAC) ability by using conditional mappings in [user template](#)
- Export objects to XML
- Several [assignment enforcement modes](#)
- Support for tolerant attributes
- Experimental JasperReports integration

Changes in the internals, minor improvements and quality assurance:

- Significantly increased number of integration tests
- Improved overall quality, usability, stability and performance during testing phase that focused on requirements from customers
- Internal search query representation was re-engineered
- ValueConstruction changed completely to Mapping (non-compatible schema change)
- Switching object name to PolyString for better national environment support
- Improved internal support for asynchronous processes (still experimental)
- Improved logging and presentation of operation results
- Better GUI resilience in case of resource failures
- Recording value origin (inbound, outbound, etc.) and displaying that in GUI
- Ability to limit mapping to a specific channel
- XML editor encrypts sensitive values
- Support maven3 in the build process

Quality

Release 2.1 (Coeus) is intended for full production use in enterprise environments. All features are stable and well tested.

Platforms

MidPoint is known to work well in the following deployment environment. The following list is list of **tested** platforms, i.e. platforms that midPoint team or reliable partners personally tested this release. The version numbers in parentheses are the actual version numbers used for the tests. However it is very likely that midPoint will also work in similar environments. Also note that this list is not closed. MidPoint can be supported in almost any reasonably recent platform (please contact Evolveum for more details).

Java

- Sun/Oracle Java SE Runtime Environment 6 update 26 or above (1.6.0_26, 1.6.0_35 64bit, 1.6.0_37)
- Sun/Oracle Java SE Runtime Environment 7 (1.7.0_09)

Web Containers

- Apache Tomcat 6 (6.0.32, 6.0.33)
- Apache Tomcat 7 (7.0.30, 7.0.32)
- Sun/Oracle Glassfish 3 (3.1.2.2)

Databases

- H2 (embedded, only recommended for demo deployments)
- PostgreSQL (8.4.14, 9.1, 9.2)

- MySQL (5.5)
- Oracle 11g (11.2.0.2.0)

Unsupported Platforms

Following list contains platforms that midPoint is known **not** to work due to various issues. As these platforms are obsolete and/or marginal we have no plans to support midPoint for these platforms.

- Sun/Oracle Java SE Runtime Environment 6 update 25 or older
- Sun/Oracle GlassFish 2

Download and Install

Release Form	Download	Install Instructions
Binary	http://evolveum.com/downloads/midpoint/2.1/midpoint.war	Installing midPoint from Binary Release - 2.1
Source	Subversion: https://svn.evolveum.com/midpoint/tags/midpoint-2.1/	Installing midPoint from Source Code Release - 2.1
Java API	http://evolveum.com/downloads/midpoint/2.1/midpoint-javadocs-2.1/ [ZIP]	
XSD Docs	http://evolveum.com/downloads/midpoint/2.1/midpoint-xsddocs-2.1/ [ZIP]	

Background and History

midPoint is roughly based on OpenIDM version 1. When compared to OpenIDM v1, midPoint code was made significantly "lighter" and provides much more sophisticated features. Although the architectural outline of OpenIDM v1 is still guiding the development of midPoint almost all the OpenIDM v1 code was rewritten. MidPoint is now based on relative changes and contains advanced identity management mechanisms such as advanced RBAC, provisioning consistency, etc.

For the full project background see the [midPoint History](#) page.

Known Issues

1. Consistency mechanism fails to operate correctly in case new user is added (under some circumstances) (<https://jira.evolveum.com/browse/MID-1056>)
2. Strong mappings fail in presence of replace deltas for mapping targets (<https://jira.evolveum.com/browse/MID-1067>)
3. Weak mappings are not processes correctly in modify situations (<https://jira.evolveum.com/browse/MID-1068>)
4. Two consecutive modifications may produce strange results when resource is down (<https://jira.evolveum.com/browse/MID-1054>)

Change secret key in keystore

To generate new secret key (with different key size), you have to proceed through this steps:

1. shutdown midpoint
2. find JCEKS keystore in midpoint.home (by default it's keystore.jceks, but file name can be different)
3. generate new key


```
keytool -genseckey -alias <SOME_ALIAS> -keystore <KEYSTORE_FILENAME> -storetype jceks -keyalg AES -keysize <KEY_SIZE>
```

 Supported key sizes are: 128 (doesn't require JCE), 192 and 256 (JCE required)
4. change configuration in config.xml in midpoint.home


```
<encryptionKeyAlias>default</encryptionKeyAlias>
```

 change 'default' to <SOME_ALIAS>
5. add/edit <xmlCipher></xmlCipher> in <keystore> element. You can use smaller cipher key size for encryption. For:


```
AES_128 use "http://www.w3.org/2001/04/xmlenc#aes128-cbc"
AES_256 use "http://www.w3.org/2001/04/xmlenc#aes256-cbc"
AES_192 use "http://www.w3.org/2001/04/xmlenc#aes192-cbc"
```

 without quotation. This element is optional, if it doesn't exist AES_128 is used.
6. From now every encryption operation uses new key, for decryption old key is used.

See Also

- [midPoint History](#)
- [Installing midPoint from Binary Release - 2.1](#)
- [Installing midPoint from Source Code Release - 2.1](#)