







Release notes

ForgeRock® Autonomous Identity is an entitlements analytics system that lets you fully manage your company's access to your data.

These release notes are written for anyone using the Autonomous Identity 2021.3.5 release. Read these notes before you install Autonomous Identity software, especially for production deployments.

Quick Start

| | | |
|---|---|--|
|  <u>What's New</u> Learn about what's new in this version. |  <u>Before You Start</u> Learn about the requirements for running Autonomous Identity software in production. |  <u>Known Issues</u> Learn about the known issues in this release. |
|  <u>Check Doc Updates</u> Track important changes to the documentation. |  <u>Release Levels</u> Learn about the Release Levels, upgrades, and stability levels. |  <u>Get Support</u> Find out where to get professional support and training. |

What's New in 2021.3.5

Autonomous Identity 2021.3.5 is the latest patch bundle release that contains a collection of fixes for 2021.3.x deployments. These fixes have been grouped together and released as part of our commitment to support our customers.

IMPORTANT

If you are currently on versions 2021.3.0, 2021.3.1, 2021.3.2, 2021.3.3, or 2021.3.4, we strongly recommend that you upgrade to version 2021.3.5. The release contains important security and bug fixes. For more information, see [Upgrading Autonomous Identity](#).

For general information on ForgeRock's maintenance and patch releases, see [Maintenance and Patch availability_policy](#).

You can deploy Autonomous Identity 2021.3.5 as an initial deployment, or update from an existing 2021.3.0, 2021.3.1, 2021.3.2, 2021.3.3, or 2021.3.4 deployment.

Security Advisories

ForgeRock issues security advisories in collaboration with our customers and the open source community to address any security vulnerabilities transparently and rapidly. ForgeRock's security advisory policy governs the process on how security issues are submitted, received, and evaluated as well as the timeline for the issuance of security advisories and patches.

A note about log4j version 1

IMPORTANT

ForgeRock has released a security advisory on Log4j. Refer to: [Log4j Security Advisory #202111](#) for details.

Before you start

Autonomous Identity server software requires the following hardware, storage, and operating system requirements to run in your production environment. Autonomous Identity's flexible architecture runs in a variety of network environments: on-prem, cloud, multi-cloud, and hybrid.

IMPORTANT

All production systems differ in many ways. Please discuss with your ForgeRock Professional Services, installers, or partner representatives about your environment specifics.

ForgeRock Google Cloud registry key

You deploy Autonomous Identity using a Docker image that pulls other dependent images from the ForgeRock Google Cloud Registry (gcr.io) repository and installs the components on a target node.

For specific instructions on obtaining the registry key, see [How To Configure Service Credentials \(Push Auth, Docker\) in Backstage](#).

Hardware and memory requirements

Autonomous Identity has a number of components that include application, data, and analytics servers, which are all included in the Docker images. The minimum hardware and memory requirements for a single-node target and a separate deployer machine are as follows:

Table 2: Hardware and memory requirements

| Vendor | Versions |
|-------------------------|-------------------|
| Deployer Node | 32 GB RAM, 8 CPU |
| Analytics (Target) Node | 64 GB RAM, 16 CPU |

Storage requirements

Autonomous Identity has a number of components that include application, data, and analytics servers, which are all included in the Docker images. The minimum storage requirements for a single-node deployment are as follows:

Autonomous Identity requires the following minimum storage requirements:

Table 3: Storage requirements

| Type | Size |
|--------------|-------------------------------------|
| Data Storage | 500 GB (minimum), 1 TB (production) |

Operating systems requirements

Autonomous Identity is supported on the following operating system:

Table 4: Operating System Requirements

| Vendor | Versions |
|-------------------------|----------|
| CentOS | 7.0 |
| Redhat Enterprise Linux | 7.0 |

Cloud services requirements

Autonomous Identity has been successfully deployed on the following cloud services:

Table 5: Cloud services requirements

| Vendor | Versions |
|---|----------|
| Google Cloud Platform (GCP) | Latest |
| Amazon Web Services (AWS) standard Elastic File System (EFS) shared drive | Latest |

Java requirements

Autonomous Identity software supports the following Java version:

Table 6: Java requirements

| Vendor | Versions |
|---------|----------|
| OpenJDK | 8u262 |

Third-party software

Autonomous Identity uses the following third-party software in the deployment.

You do not need to pre-install these components in your environment. The Autonomous Identity deployer installs these components.

Table 7: Third-party software

| Component | Version | Usage |
|------------------|------------------|---|
| Python | 3.6 | Scripts |
| Docker CE | 18.09.1 | Container cluster management |
| Apache Cassandra | 3.11.2 | Database for all Autonomous Identity services |
| Apache Spark | 3.1 | Cluster to run Autonomous Identity analytics |
| Apache Livy | 0.8.0-incubating | REST interface to Spark master to run Autonomous Identity analytics |
| Mongo DB | 4.2 | Database for all Autonomous Identity services |

| Component | Version | Usage |
|-------------------------------|-------------------|--|
| HashiCorp Consul | 1.7 | Service discovery and configuration server |
| nginx | 1.18 | Reverse proxy for routing HTTPS traffic |
| Open Distro for Elasticsearch | 1.9 | Distributed, open source search engine for all data types. |
| OpenLDAP | 2.4.50 and higher | An LDAP server backend. |

Supported browsers

Autonomous Identity supports the following browsers:

Table 8: Supported browsers

| Vendor | Versions |
|-----------------|----------------------------------|
| Google Chrome | version 85.0.4183.121 and higher |
| Mozilla Firefox | version 86.0.1 and higher |

Autonomous Identity ports

Autonomous Identity uses the following ports:

Table 9: Autonomous Identity ports

| Port | Protocol | Machine | Source | Description |
|------|----------|-----------------------------|-----------------------------|---|
| 2377 | TCP | Docker managers | Docker managers and nodes | Communication between the nodes of a Docker swarm cluster |
| 7946 | TCP/UDP | Docker managers and workers | Docker managers and workers | Communication among nodes for container network discovery |
| 4789 | UDP | Docker managers and workers | Docker managers and workers | Overlay network traffic |

| Port | Protocol | Machine | Source | Description |
|-------------|----------|-------------------------------|--|--|
| 7001 | TCP | Cassandra | Cassandra nodes | Internode communication |
| 9042 | TCP | Cassandra | Cassandra nodes, Docker managers and nodes | CQL native transport |
| 27017 | TCP | MongoDB | MongoDB nodes, Docker managers and nodes | Default ports for mongod and mongos instances |
| 9200 | TCP | Open Distro for Elasticsearch | Docker managers and nodes | Elasticsearch REST API endpoint |
| 7077 | TCP | Spark master | Spark workers | Spark master internode communication port |
| 40040-40045 | TCP | Spark Master | Spark Workers | Spark driver ports for Spark workers to callback |
| 443 | TCP | Docker managers | User's browsers/API clients | Port to access the dashboard and API |

Key Fixes

Key Fixes in 2021.3.5

- An important security upgrade was made to fix a vulnerability found in a third-party component.

Key Fixes in 2021.3.4

- An important security upgrade was made to fix a vulnerability found in a third-party component.

Key Fixes in 2021.3.3

Autonomous Identity 2021.3.3 introduces new security fixes in this release. ForgeRock does not publish its fixed security issues.

The following issue was fixed in Autonomous Identity 2021.3.5:

- [AUTOID-2550](#): Remove Cadence libthrift Library

Key Fixes in 2021.3.2

The following issues were fixed in Autonomous Identity 2021.3.2:

- [AUTOID-1999](#): JAS Issue: after machine restarts, all UIHRData is not coming up
- [AUTOID-2217](#): Special password char handling for service accounts
- [AUTOID-2258](#): Delete datasource confirmation pop up is not getting refreshed
- [AUTOID-2274](#): Datasource with mappings defined: cannot be deleted
- [AUTOID-2304](#): Rule_decision_history is not getting updated in autoid after Upgrade
- [AUTOID-2399](#): Scalability issue in batched write to Elastic

Key Fixes in 2021.3.1

The following issues were fixed in Autonomous Identity 2021.3.1:

- [AUTOID-1975](#): Fix recommend runtime
- [AUTOID-1976](#): Re-work session management
- [AUTOID-1977](#): Add user permissions to other groups
- [AUTOID-1979](#): Application filters not working on Identities, Entitlements pages
- [AUTOID-1981](#): AutoID installation is trying to pull Access Notebook image
- [AUTOID-1993](#): Delete datasource not working for SSO
- [AUTOID-1994](#): Combo roles rails when approving entitlement (supervisor/entitlement owner)
- [AUTOID-1997](#): Api-configuration step in Deployer fails when public IP is used for target VMs
- [AUTOID-1999](#): JAS issue: after machine restarts, all UIHRData is not coming up
- [AUTOID-2004](#): Entitlements/unscored endpoint not working due to collision with entitlements/:id endpoint
- [AUTOID-2010](#): Bulk approval not working for entitlements - Application view
- [AUTOID-2011](#): Elastic search and filters not showing complete data (supervisor/entitlement owner)
- [AUTOID-2014](#): Bulk approval not working for entitlements - Employee details page

- [AUTOID-2015](#): Anomaly report is failing
- [AUTOID-2021](#): Dashboard - User type bug
- [AUTOID-2023](#): In Entity Definitions UI add Assignments section
- [AUTOID-2027](#): Enable additional attributes in assignments
- [AUTOID-2028](#): Assignments attributes marked as searchable should be saved to API config
- [AUTOID-2029](#): Change isinternal flag for usr_manager_id
- [AUTOID-2030](#): Modify UI behavior so that usr_manager_id can be changed
- [AUTOID-2032](#): Old colors user in dashboard → Most Critical Entitlements
- [AUTOID-2040](#): Remove reference to last_usage and is_assigned in autoid_es.json file
- [AUTOID-2046](#): Modify API to send assignment attributes with userDetails endpoint
- [AUTOID-2047](#): Modify employeeDetails page to enable optional attributes on assignment table
- [AUTOID-2064](#): Cassandra schema seeding fails if admin and user passwords are different
- [AUTOID-2065](#): Remove 'become:yes' from image-import.yml playbook
- [AUTOID-2068](#): Make firewall configuration in deployer optional
- [AUTOID-2077](#): Modify employeeDetails 'Not Scored' table to enable optional attributes
- [AUTOID-2094](#): API: Re-add singleViewWithApp/employees endpoint
- [AUTOID-2187](#): Overlapping text on user detail page

Key Fixes in 2021.3.0

The following issues were fixed in Autonomous Identity 2021.3.0:

- [AUTOID-1975](#): Fix recommend runtime
- [AUTOID-1976](#): Re-work session management
- [AUTOID-1977](#): Add user permissions to other groups
- [AUTOID-1979](#): Application filters not working on Identities, Entitlements pages
- [AUTOID-1981](#): AutoID installation is trying to pull Access Notebook image
- [AUTOID-1993](#): Delete datasource not working for SSO
- [AUTOID-1994](#): Combo roles rails when approving entitlement (supervisor/entitlement owner)
- [AUTOID-1997](#): Api-configuration step in Deployer fails when public IP is used for target VMs
- [AUTOID-1999](#): JAS issue: after machine restarts, all UIHRData is not coming up

- [AUTOID-2004](#): Entitlements/unscored endpoint not working due to collision with entitlements/:id endpoint
- [AUTOID-2010](#): Bulk approval not working for entitlements - Application view
- [AUTOID-2011](#): Elastic search and filters not showing complete data (supervisor/entitlement owner)
- [AUTOID-2014](#): Bulk approval not working for entitlements - Employee details page
- [AUTOID-2015](#): Anomaly report is failing
- [AUTOID-2021](#): Dashboard - User type bug
- [AUTOID-2023](#): In Entity Definitions UI add Assignments section
- [AUTOID-2027](#): Enable additional attributes in assignments
- [AUTOID-2028](#): Assignments attributes marked as searchable should be saved to API config
- [AUTOID-2029](#): Change isinternal flag for usr_manager_id
- [AUTOID-2030](#): Modify UI behavior so that usr_manager_id can be changed
- [AUTOID-2032](#): Old colors user in dashboard → Most Critical Entitlements
- [AUTOID-2040](#): Remove reference to last_usage and is_assigned in autoid_es.json file
- [AUTOID-2046](#): Modify API to send assignment attributes with userDetails endpoint
- [AUTOID-2047](#): Modify employeeDetails page to enable optional attributes on assignment table
- [AUTOID-2064](#): Cassandra schema seeding fails if admin and user passwords are different
- [AUTOID-2065](#): Remove 'become:yes' from image-import.yml playbook
- [AUTOID-2068](#): Make firewall configuration in deployer optional
- [AUTOID-2077](#): Modify employeeDetails 'Not Scored' table to enable optional attributes
- [AUTOID-2094](#): API: Re-add singleViewWithApp/employees endpoint
- [AUTOID-2187](#): Overlapping text on user detail page

Known Issues

Known Issues in 2021.3.5

- There are no known issues in this release.

Known Issues in 2021.3.4

- There are no known issues in this release.

Known Issues in 2021.3.3

- There are no known issues in this release.

Known Issues in 2021.3.2

- There are no known issues in this release.

Known Issues in 2021.3.1

- There are no known issues in this release.

Known Issues in 2021.3.0

- There are no known issues in this release.

Deprecated

Deprecated in 2021.3.5

- No new functions were deprecated in this release, other than those in previous releases.

Deprecated in 2021.3.4

- No new functions were deprecated in this release, other than those in previous releases.

Deprecated in 2021.3.3

- No new functions were deprecated in this release, other than those in previous releases.

Deprecated in 2021.3.2

- No new functions were deprecated in this release, other than those in previous releases.

Deprecated in 2021.3.1

- POST employees (/api/singleViewWithApp/employees)

NOTE

This endpoint was originally removed in 2021.3.0, but was re-added in 2021.3.1. The endpoint is still deprecated and will be removed in a future release.

For more information, see [Autonomous Identity API Guide](#).

Deprecated in 2021.3.0

The following API endpoints have been deprecated in this release:

- /api/report. The Spark jobs now generates the Anomaly and Master Feed reports.

The following CompanyView endpoints have been deprecated as the data is included in the response from the /companyOverview endpoint:

- GET Entitlements Without Owner: /api/companyview/entitlementsWithoutOwner
- GET Users without manager: /api/companyview/usersWithoutManager
- GET coverage: /api/companyview/coverage
- GET companyViewEntitlements: /api/companyview/companyViewEntitlements
- GET companyViewEmployeeTypes: /api/companyview/companyViewEmployeeTypes
- GET Assignments High Threshold: /api/companyview/assignments

The following Single View with Application endpoints have been deprecated:

- POST employees: /api/singleViewWithApp/employees. This endpoint is replaced by the /userDetails endpoint.
- GET entitlements/entitlementId: /api/singleViewWithApp/entitlements/{entitlementID}. This endpoint is replaced by the /entitlements/entitlementId endpoint.

The following Role Owner with Application Oriented endpoints have been deprecated:

- POST unscoredEntitlements: /api/roleOwnerWithAppOriented/unscoredEntitlements. This endpoint is replaced by the /entitlements/unscored endpoint.
- POST entownuserdata: /api/roleOwnerWithAppOriented/entownuserdata. This endpoint is replaced by the /entitlements/stats endpoint.
- POST entownentdata: /api/roleOwnerWithAppOriented/entownentdata. This endpoint is replaced by the /entitlements/stats endpoint.

The following Manager with Application Oriented endpoints have been deprecated:

- POST `unscoredEntitlements`:
- POST `supervisor: /api/managersWithAppOriented/supervisor`. This endpoint is replaced by the `/entitlement/stats` endpoint.
- POST `supervisorEntitlements: /api/managersWithAppOriented/supervisorEntitlements`. This endpoint is replaced by the `/entitlement/stats` endpoint.
- POST `supervisorUser: /api/managersWithAppOriented/supervisorUser`. This endpoint is replaced by the `/entitlement/stats` endpoint.

The following Entitlements endpoints have been deprecated:

- GET `Filters by Entt Owners: /api/entitlements/filters?by=entitlementOwner&ownerId=timothy.slack`. The endpoint has been moved to the Filters API.
- GET `Filters by Supervisor: /api/entitlements/filters?by=supervisor&ownerId=albert.pardini`. The endpoint has been moved to the Filters API.

The following Applications (formerly `Appcentric View`) endpoints have been deprecated:

- GET `filters: /api/applications/<appId>/filters`. This endpoint has been moved to the Filters API.

For more information, see [Autonomous Identity API Guide](#).

Removed Functionality

Removed in 2021.3.5

- No functionality were removed in this release.

Removed in 2021.3.4

- No functionality were removed in this release.

Removed in 2021.3.3

- No functionality were removed in this release.

Removed in 2021.3.2

- No functionality were removed in this release.

Removed in 2021.3.1

- No functionality were removed in this release.

Removed in 2021.3.0

The following endpoints were removed in release 2021.3.0:

Companyview (/api/companyview)

- GET entitlementAvgGroupDetails Start End
- GET Assignments High Threshold
- GET Entitlements Without Owner
- GET Users without manager
- GET coverage
- GET companyViewEntitlements
- GET companyViewEmployeeTypes

Singleview with App (/api/singleViewWithApp)

- GET entitlements/:entitlementId

Roleowner with App (/api/roleOwnerWithAppOriented)

- All endpoints

Manager with App (/api/managers/WithAppOriented)

- All endpoints

Entitlements (/api/entitlements)

- GET Filters by Supervisor
- GET Filters by Entt Owners

Applications (/api/applications)

- GET filters

For more information, see [Autonomous Identity API Guide](#).

Documentation Updates

The following table tracks changes to the documentation set following the release of Autonomous Identity 2021.3.5:

Documentation Change Log

| Date | Description |
|------------|---|
| 2022-08-22 | Added a note about the latest security on log4j. Refer to Security Advisories . |
| 2022-07-18 | Added a note about log4j version 1. See Security Advisories . |
| 2022-06-14 | Corrected the minimum storage requirements in the release notes: see Storage requirements . |
| 2022-05-12 | Made small changes to the Before you start section. |
| 2022-02-09 | Added a step to rename two files prior to upgrade, which will be overwritten in a later process. See Upgrade Autonomous Identity . |
| 2022-01-13 | Updated the upgrade section to streamline processes. See Upgrade Autonomous Identity . |
| 2021-12-21 | Initial release of Autonomous Identity 2021.3.5. The following documentation updates were made: * Updated the upgrade section to include air-gapped instructions and upgrade instruction to version 2021.3.5. |
| 2021-12-16 | Initial release of Autonomous Identity 2021.3.4. The following documentation updates were made: <ul style="list-style-type: none">• Updated the upgrade section to include an important patch step. See Upgrading Autonomous Identity. |
| 2021-10-12 | Initial release of Autonomous Identity 2021.3.3. |
| 2021-08-09 | Initial release of Autonomous Identity 2021.3.2. |
| 2021-07-15 | Updated the install instructions to indicate that the default shell for the autoid user is bash. See Install a Single Node Deployment . |

| Date | Description |
|------------|--|
| 2021-07-13 | <p>The following doc changes were made:</p> <ul style="list-style-type: none">• Changed a line in the air-gap setup instructions to set the <code>offline_mode</code> property in the <code>vars.yml</code> when setting up the tar file. See Install a Single Node Air-Gapped Deployment or Install a Multi-Node Air-Gapped Deployment.• Updated the API guide with fixes to the Single View with Application, User Detail Decisions, and Entitlement Details. |

| Date | Description |
|------------|---|
| 2021-06-28 | <p data-bbox="379 197 1043 232">Initial release of Autonomous Identity 2021.3.1.</p> <p data-bbox="379 353 1078 389">The following documentation updates were made:</p> <ul data-bbox="408 434 1401 1733" style="list-style-type: none"> <li data-bbox="408 434 1305 510">• Updated the Admin Guide with updated instructions for Entity Definitions, Set Data Sources, and Set Attribute Mappings. <li data-bbox="408 539 1350 616">• Added a section on the default user permissions for Autonomous Identity. See Appendix A: Default User Permissions. <li data-bbox="408 645 1295 680">• Fixed an air-gapped installation step. See Prepare the Tar File. <li data-bbox="408 710 1378 786">• Added a prerequisite about Docker cluster IP addresses ranges. See Install a Multi-Node Deployment. <li data-bbox="408 815 1359 891">• Removed the Lightweight deployment steps in the Getting Started Guide. <li data-bbox="408 920 1401 1041">• Removed Python 3.6 as an installation prerequisite. The Autonomous Identity deployer.sh uses Python 3.6 during installation and does not require that it exists on the target machine. <li data-bbox="408 1070 963 1106">• Made small changes to the API Guide. <li data-bbox="408 1135 1401 1211">• Added a prerequisite about enabling IPv4 forwarding in high-security environments. See Install a Single Node Target. <li data-bbox="408 1240 1382 1317">• Added a new overview section on the Autonomous Identity security controls in the Deployment Planning Guide. <li data-bbox="408 1346 1225 1422">• Updated the Autonomous Identity port descriptions. See Autonomous Identity Ports. <li data-bbox="408 1451 1356 1527">• Added sections on checking Cassandra, MongoDB and Spark after install. See Install a Single Node Target. <li data-bbox="408 1556 1372 1632">• Added a known issue about vault passwords not containing special characters, & and \$. See Known Issues. <li data-bbox="408 1662 1398 1738">• Added upgrade procedures to update Autonomous Identity 2021.3.0 to 2021.3.1. |
| 2021-03-30 | <p data-bbox="379 1794 1337 1870">Re-added the Data Preparation chapter to the Admin Guide. See Data Preparation.</p> |

| Date | Description |
|------------|---|
| 2021-03-25 | <p>Initial release of Autonomous Identity 2021.3.0.</p> <p>The following documentation updates were made:</p> <ul style="list-style-type: none"> • Updated the installation instructions for Autonomous Identity. For example, see Install a Single Node Deployment. • Updated the analytics procedures for Autonomous Identity. For more information, see Run Analytics. • Updated the upgrade procedure for Autonomous Identity. For more information, see Upgrade Autonomous Identity. • All guides have been updated to reflect the changes made in Autonomous Identity 2021.3.0. |

Appendix A: Release Levels and Interface Stability

ForgeRock defines Major, Minor, and Patch product release levels. The release level is reflected in the version number. The release level tells you what sort of compatibility changes to expect.

IMPORTANT

Autonomous Identity uses a different version numbering system from other ForgeRock products. The version number use the following format:
Major . *Minor* . *Patch* , where *Major* is the year of the release, *Minor* is the month of the release, *Patch* is the number beginning with 0, and increases for each patch release.

Thus, for this release of Autonomous Identity, the version number is **2021.3.5**.

Release Level Definitions

| Release Label | Version Numbers | Characteristics |
|---------------|------------------|--|
| Major | Version: x[.0.0] | <ul style="list-style-type: none"> • Bring major new features, minor features, and bug fixes • Can include changes even to Stable interfaces • Major indicates the year of the release, for example, 2021 |

| Release Label | Version Numbers | Characteristics |
|---------------|------------------|---|
| Minor | Version: x.y[.0] | <ul style="list-style-type: none"> • Bring minor features, and bug fixes • Can include backwards-compatible changes to Stable interfaces in the same Major release, and incompatible changes to Evolving interfaces • Minor indicates the month of the release, for example, 3 for March |
| Patch | Version: x.y.z | <ul style="list-style-type: none"> • Bring bug fixes • Are intended to be fully compatible with previous versions from the same Minor release • Patch starts with 0 and increases for each bug fix release |

Upgrade and Patching

ForgeRock plans to introduce quarterly upgrades and patches for Autonomous Identity as a service to our customers. Autonomous Identity's architecture supports seamless rolling upgrades to simplify the process.

The following are some general points about upgrades and patches:

- Upgrades and patches are implemented using a simple swap of the underlying container. The operation is zero down-time as long as the cluster has a redundant instance of the microservice.
- Patching does not require schema changes.

Autonomous Identity schema changes are additive and backward-compatible. This means that during a zero-downtime upgrade, older versions of the container can still write to the new version of the schema. Also, newer versions of the container may alter the tables in a way that preserves the semantics of the previous columns.

- If an upgrade requires a downgrade due to some issue, the downgrade will not restore the previous schema.

More information about upgrading, see [Upgrading Autonomous Identity](#).

ForgeRock Product Stability Labels

ForgeRock products support many features, protocols, APIs, GUIs, and command-line interfaces. Some of these are standard and very stable. Others offer new functionality that is continuing to evolve.

ForgeRock acknowledges that you invest in these features and interfaces, and therefore must know when and how ForgeRock expects them to change. For that reason, ForgeRock defines stability labels and uses these definitions in ForgeRock products.

ForgeRock Stability Label Definitions

| Stability Label | Definition |
|------------------------|---|
| Stable | This documented feature or interface is expected to undergo backwards-compatible changes only for major releases. Changes may be announced at least one minor release before they take effect. |
| Evolving | This documented feature or interface is continuing to evolve and so is expected to change, potentially in backwards-incompatible ways even in a minor release. Changes are documented at the time of product release. While new protocols and APIs are still in the process of standardization, they are Evolving. This applies for example to recent Internet-Draft implementations, and also to newly developed functionality. |
| Legacy | This feature or interface has been replaced with an improved version, and is no longer receiving development effort from ForgeRock. You should migrate to the newer version, however the existing functionality will remain. Legacy features or interfaces will be marked as <i>Deprecated</i> if they are scheduled to be removed from the product. |
| Deprecated | This feature or interface is deprecated and likely to be removed in a future release. For previously stable features or interfaces, the change was likely announced in a previous release. Deprecated features or interfaces will be removed from ForgeRock products. |
| Removed | This feature or interface was deprecated in a previous release and has now been removed from the product. |

| Stability Label | Definition |
|-----------------------|---|
| Technology Preview | <p>Technology previews provide access to new features that are considered as new technology that is not yet supported. Technology preview features may be functionally incomplete and the function as implemented is subject to change without notice. DO NOT DEPLOY A TECHNOLOGY PREVIEW INTO A PRODUCTION ENVIRONMENT.</p> <p>Customers are encouraged to test drive the technology preview features in a non-production environment and are welcome to make comments and suggestions about the features in the associated forums.</p> <p>ForgeRock does not guarantee that a technology preview feature will be present in future releases, the final complete version of the feature is liable to change between preview and the final version. Once a technology preview moves into the completed version, said feature will become part of the ForgeRock platform. Technology previews are provided on an “AS-IS” basis for evaluation purposes only and ForgeRock accepts no liability or obligations for the use thereof.</p> |
| Internal/Undocumented | <p>Internal and undocumented features or interfaces can change without notice. If you depend on one of these features or interfaces, contact ForgeRock support or email info@forgerock.com to discuss your needs.</p> |

Appendix B: Getting Support

ForgeRock provides support services, professional services, training through ForgeRock University, and partner services to assist you in setting up and maintaining your deployments. For a general overview of these services, see <https://www.forgerock.com>.

ForgeRock has staff members around the globe who support our international customers and partners. For details on ForgeRock’s support offering, including support plans and service level agreements (SLAs), visit <https://www.forgerock.com/support>.

ForgeRock publishes comprehensive documentation online:

- The ForgeRock [Knowledge Base](#) offers a large and increasing number of up-to-date, practical articles that help you deploy and manage ForgeRock software.

While many articles are visible to community members, ForgeRock customers have access to much more, including advanced information for customers using

ForgeRock software in a mission-critical capacity.

- ForgeRock product documentation, such as this document, aims to be technically accurate and complete with respect to the software documented. It is visible to everyone and covers all product features and examples of how to use them.

Was this helpful?  

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