Migration Toolkit for Applications 6.0

User Interface Guide

Use the Migration Toolkit for Applications user interface to group your applications into projects for analysis.

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Legal Notice

Abstract

This guide describes how to use the Migration Toolkit for Applications user interface to accelerate large-scale application modernization efforts across hybrid cloud environments on Red Hat OpenShift.

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MAKING OPEN SOURCE MORE INCLUSIVE

Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see our CTO Chris Wright's message .

CHAPTER 1. INTRODUCTION

1.1. ABOUT THE USER INTERFACE GUIDE

This guide is for architects, engineers, consultants, and others who want to use the Migration Toolkit for Applications (MTA) user interface to accelerate large-scale application modernization efforts across hybrid cloud environments on Red Hat OpenShift. This solution provides insight throughout the adoption process, at both the portfolio and application levels: inventory, assess, analyze, and manage applications for faster migration to OpenShift via the user interface.

> **NOTE**
>
> The migration solution that was provided in the Migration Toolkit for Applications 5.*x* releases (migration and modernization of Java applications) is now available with Migration Toolkit for Runtimes 1.0.

1.2. ABOUT THE MIGRATION TOOLKIT FOR APPLICATIONS

What is the Migration Toolkit for Applications?
Migration Toolkit for Applications (MTA) accelerates large-scale application modernization efforts across hybrid cloud environments on Red Hat OpenShift. This solution provides insight throughout the adoption process, at both the portfolio and application levels: inventory, assess, analyze, and manage applications for faster migration to OpenShift via the user interface.

MTA uses an extensive questionaire as the the basis for assessing your applications, enabling you to estimate the difficulty, time, and other resources needed to prepare an application for containerization. You can use the results of an assessment as the basis for discussions between stakeholders to determine which applications are good candidates for containerization, which require significant work first, and which are not suitable for containerization.

MTA analyzes applications by applying one or more rulesets to each application considered to determine which specific lines of that application must be modified before it can be modernized.

MTA examines application artifacts, including project source directories and application archives, and then produces an HTML report highlighting areas needing changes. MTA supports many migration paths including the following:

- Upgrading to the latest release of Red Hat JBoss Enterprise Application Platform

- Migrating from Oracle WebLogic or IBM WebSphere Application Server to Red Hat JBoss Enterprise Application Platform

- Containerizing applications and making them cloud-ready

- Migrating from Java Spring Boot to Quarkus

- Upgrading from OpenJDK 8 to OpenJDK 11

- Upgrading from OpenJDK 11 to OpenJDK 17

- Migrating EAP Java applicatons to Azure App Service

- Migrating Spring Boot Java applications to Azure App Service

For more information about use cases and migration paths, see the MTA for developers web page.

How does the Migration Toolkit for Applications simplify migration?
The Migration Toolkit for Applications looks for common resources and known trouble spots when migrating applications. It provides a high-level view of the technologies used by the application.

MTA generates a detailed report evaluating a migration or modernization path. This report can help you to estimate the effort required for large-scale projects and to reduce the work involved.

1.3. ABOUT THE USER INTERFACE

The user interface for the Migration Toolkit for Applications allows a team of users to assess and analayze applications for risks and suitability for migration to hybrid cloud environments on Red Hat OpenShift.

Use the user interface to assess and analyze your applications to get insights about potential pitfalls in the adoption process, at both the portfolio and application levels as you inventory, assess, analyze, and manage applications for faster migration to OpenShift.

CHAPTER 2. USER INTERFACE VIEWS

The Migration Toolkit for Applications (MTA) user interface has two views:

- Administrator view

- Developer view

In **Administrator** view, you configure the instance environment, working with credentials, repositories, and HTTP and HTTPS proxy definitions.

In **Developer** view, you perform application assessments and analyses, review reports, and add applications for assessment and analysis.

CHAPTER 3. INSTALLING THE MIGRATION TOOLKIT FOR APPLICATIONS USER INTERFACE

You install the Migration Toolkit for Applications (MTA) user interface as part of the process of installing the MTA Operator on the OpenShift Container Platform.

The MTA Operator is a structural layer that manages resources deployed on Kubernetes (database, front end, back end) to automatically create an MTA instance instead of you doing it manually.

3.1. PERSISTENT VOLUME REQUIREMENTS

To successfully deploy, the MTA Operator requires 3 RWO persistent volumes (PVs) used by different components. If the **rwx_supported** configuration option is set to **true**, the MTA Operator requires an additional 2 RWX PVs that are used by Maven and the hub file storage. The PVs are described in the table below:

Table 3.1. Required persistent volumes

Name	Default size	Access mode	Description
hub database	5 GiB	RWO	Hub database
hub bucket	100 GiB	RWX	Hub file storage; required if the **rwx_supported** configuration option is set to **true**
keycloak postgresql	1 GiB	RWO	Keycloak back end database
pathfinder postgresql	1 GiB	RWO	Pathfinder back end database
cache	100 GiB	RWX	Maven m2 cache; required if the **rwx_supported** configuration option is set to **true**

3.2. INSTALLING THE MIGRATION TOOLKIT FOR APPLICATIONS OPERATOR AND THE USER INTERFACE

You can install the Migration Toolkit for Applications (MTA) and the user interface on OpenShift Container Platform versions 4.9-4.11 when you install the Migration Toolkit for Applications Operator.

Prerequisites

- 4 vCPUs, 8 GB RAM, and 40 GB persistent storage.

- OpenShift Container Platform 4.9-4.11 installed.

- You must be logged in as a user with **cluster-admin** permissions.

Procedure

1. In the OpenShift Container Platform web console, click **Operators → OperatorHub**.

2. Use the **Filter by keyword** field to search for **MTA**.

3. Click the **Migration Toolkit for Applications** Operator and then click **Install**.

4. On the **Install Operator** page, click **Install**.

5. Click **Operators → Installed Operators** to verify that the MTA Operator appears in the **openshift-mta** project with the status **Succeeded**.

6. Click the **MTA** Operator.

7. Under **Provided APIs**, locate **Tackle**, and click **Create Instance**.
   The **Create Tackle** window opens in **Form** view.

8. Review the CR settings. The default choices should be acceptable, but make sure to check the system requirements for storage, memory, and cores.

9. If you prefer to work directly with the YAML file, click **YAML** view and review the CR settings that are listed in the **spec** section of the YAML file.
   The most commonly used CR settings are listed in this table:

Table 3.2. Tackle CR settings

Name	Default	Description
cache_data_volume_size	100 GiB	Size requested for the cache volume; ignored when **rwx_supported=false**
cache_storage_class	Default storage class	Storage class used for the cache volume; ignored when **rwx_supported=false**
feature_auth_required	True	Flag to indicate whether keycloak authorization is required (single user/"noauth")
feature_isolate_namespace	True	Flag to indicate whether namespace isolation using network policies is enabled
hub_database_volume_size	5 GiB	Size requested for the Hub database volume
hub_bucket_volume_size	100 GiB	Size requested for the Hub bucket volume
hub_bucket_storage_class	Default storage class	Storage class used for the bucket volume

Name	Default	Description
keycloak_database_data_volume_size	1 GiB	Size requested for the Keycloak database volume
pathfinder_database_data_volume_size	1 GiB	Size requested for the Pathfinder database volume
maven_data_volume_size	100 GiB	Size requested for the Maven m2 cache volume; deprecated in MTA 6.0.1
rwx_storage_class	NA	Storage class requested for the Tackle RWX volumes; deprecated in MTA 6.0.1
rwx_supported	True	Flag to indicate whether the cluster storage supports RWX mode
rwo_storage_class	NA	Storage class requested for the Tackle RW0 volumes
rhsso_external_access	False	Flag to indicate whether a dedicated route is created to access the MTA managed RHSSO instance

Example YAML file

```
kind: Tackle
apiVersion: tackle.konveyor.io/v1alpha1
metadata:
  name: mta
  namespace: openshift-mta
spec:
  hub_bucket_volume_size: "25Gi"
  maven_data_volume_size: "25Gi"
  rwx_supported: "false"
```

10. Edit the CR settings if needed, and then click **Create**.

11. In **Administrator** view, click **Workloads → Pods** to verify that the MTA pods are running.

12. Access the user interface from your browser by using the route exposed by the **mta-ui** application within OpenShift.

13. Use the following credentials to log in:

    - **User name**: admin

    - **Password**: PasswOrd!

14. When prompted, create a new password.

3.3. MEMORY REQUIREMENTS FOR RUNNING MTA ON RED HAT OPENSHIFT LOCAL

When installed on Red Hat OpenShift Local , MTA requires a minimum amount of memory to complete its analysis. Adding memory above the required minimum makes the analysis process run faster. The table below describes the MTA performance with varying amounts of memory.

Table 3.3. OpenShift Local MTA memory requirements

Memory (GB)	Description
10	MTA cannot run the analysis due to insufficient memory
11	MTA cannot run the analysis due to insufficient memory
12	**MTA works and the analysis is completed in approximately 3 minutes**
15	MTA works and the analysis is completed in less than 2 minutes
20	MTA works quickly and the analysis is completed in less than 1 minute

The test results indicate that the minimum amount of memory for running MTA on OpenShift Local is **12 GB**.

> **NOTE**
>
> - The tests were performed by running the MTA binary analysis through the user interface.
>
> - All the analyses used the **tackle-testapp** binary.
>
> - All the tests were conducted on an OpenShift Local cluster without the monitoring tools installed.
>
> - Installing the cluster monitoring tools requires an additional 5 GB of memory.

3.4. RED HAT SINGLE SIGN-ON

MTA delegates authentication and authorization to a Red Hat Single Sign-On (RHSSO) instance managed by the MTA operator. Aside from controlling the full lifecycle of the managed RHSSO instance, the MTA operator also manages the configuration of a dedicated realm that contains all the roles and permissions that MTA requires.

If an advanced configuration is required in the MTA managed RHSSO instance, such as adding a provider for User Federation or integrating identity providers, users can log into the RHSSO Admin Console through the **/auth/admin** subpath in the **mta-ui** route. The admin credentials to access the MTA managed RHSSO instance can be retrieved from the **credential-mta-rhsso** secret available in the namespace in which the user interface was installed.

A dedicated route for the MTA managed RHSSO instance can be created by setting the **rhsso_external_access** parameter to **True** in the **Tackle CR** that manages the MTA instance.

For more information, see Red Hat Single Sign-On features and concepts .

3.4.1. Roles and Permissions

The following table contains the roles and permissions (scopes) that MTA seeds the managed RHSSO instance with:

tackle-admin	Resource Name	Verbs
	addons	delete get post put
	adoptionplans	post
	applications	delete get post put
	applications.facts	delete get post put
	applications.tags	delete get post put
	applications.bucket	delete get post put
	assessments	delete get patch post put
	businessservices	delete get post put
	dependencies	delete get post put

	identities	delete get post put
12	imports	delete get post put
	jobfunctions	delete get post put
	proxies	delete get post put
	reviews	delete get post put
	settings	delete get post put
	stakeholdergroups	delete get post put
	stakeholders	delete get post put
	tags	delete get post put
	tagtypes	delete get post put

	tasks	delete get post put
	tasks.bucket	delete get post put
	tickets	delete get post put
	trackers	delete get post put
	cache	delete get
	files	delete get post put
	rulebundles	delete get post put
tackle-architect	**Resource Name**	**Verbs**
	addons	delete get post put
	applications.bucket	delete get post put
	adoptionplans	post

	applications	delete get post put
	applications.facts	delete get post put
	applications.tags	delete get post put
	assessments	delete get patch post put
	businessservices	delete get post put
	dependencies	delete get post put
	identities	get
	imports	delete get post put
	jobfunctions	delete get post put
	proxies	get
	reviews	delete get post put
	settings	get

	stakeholdergroups	delete get post put
	stakeholders	delete get post put
	tags	delete get post put
	tagtypes	delete get post put
	tasks	delete get post put
	tasks.bucket	delete get post put
	trackers	get
	tickets	delete get post put
	cache	get
	files	delete get post put
	rulebundles	delete get post put
tackle-migrator	**Resource Name**	**Verbs**

	addons	get
	adoptionplans	post
	applications	get
	applications.facts	get
	applications.tags	get
	applications.bucket	get
	assessments	get post
	businessservices	get
	dependencies	delete get post put
	identities	get
	imports	get
	jobfunctions	get
	proxies	get
	reviews	get post put
	settings	get
	stakeholdergroups	get
	stakeholders	get
	tags	get
	tagtypes	get
	tasks	delete get post put

	tasks.bucket	delete get post put
	tackers	get
	tickets	get
	cache	get
	files	get
	rulebundles	get

CHAPTER 4. CONFIGURING THE INSTANCE ENVIRONMENT

You can configure the following in **Administrator** view:

- Credentials

- Repositories

- HTTP and HTTPS proxy settings

4.1. CONFIGURING CREDENTIALS

You can configure the following types of credentials in **Administrator** view:

- Source control

- Maven

- Proxy

4.1.1. Configuring source control credentials

You can configure source control credentials in the **Credentials** view of the Migration Toolkit for Applications (MTA) user interface.

Procedure

1. In **Administrator** view, click **Credentials**.

2. Click **Create new**.

3. Enter the following information:

   - Name

   - Description (Optional)

4. In the **Type** list, select **Source Control**.

5. In the **User credentials** list, select **Credential Type** and enter the requested information:

   - Username/Password

     - Username

     - Password (hidden)

   - SCM Private Key/Passphrase

     - SCM Private Key

     - Private Key Passphrase (hidden)

NOTE

Type-specific credential information such as keys and passphrases is either hidden or shown as [Encrypted].

6. Click **Create**.
MTA validates the input and creates a new credential. SCM keys must be parsed and checked for validity. If the validation fails, the following error message is displayed: **"not a valid key/XML file"**.

4.1.2. Configuring Maven credentials

You can configure new Maven credentials in the **Credentials** view of the Migration Toolkit for Applications (MTA) user interface.

Procedure

1. In **Administrator** view, click **Credentials**.

2. Click **Create new**.

3. Enter the following information:

   - Name

   - Description (Optional)

4. In the **Type** list, select **Maven Settings File.**

5. Upload the settings file or paste its contents.

6. Click **Create**.
MTA validates the input and creates a new credential. The Maven **settings.xml** file must be parsed and checked for validity. If the validation fails, the following error message is displayed: **"not a valid key/XML file"**.

4.1.3. Configuring proxy credentials

You can configure proxy credentials in the **Credentials** view of the Migration Toolkit for Applications (MTA) user interface.

Procedure

1. In **Administrator** view, click **Credentials**.

2. Click **Create new**.

3. Enter the following information:

   - Name

   - Description (Optional)

4. In the **Type** list, select **Proxy**.

5. Enter the following information.

- Username

- Password

NOTE

Type-specific credential information such as keys and passphrases is either hidden or shown as [Encrypted].

6. Click **Create**.
   MTA validates the input and creates a new credential.

4.2. CONFIGURING REPOSITORIES

You can configure the following types of repositories in **Administrator** view:

- Git

- Subversion

- Maven

4.2.1. Configuring Git repositories

You can configure Git respositories in the **Repositories** view of the Migration Toolkit for Applications (MTA) user interface.

Procedure

1. In **Administrator** view, click **Repositories** and then click **Git**.

2. Toggle the **Consume insecure Git repositories**switch to the right.

4.2.2. Configuring subversion repositories

You can configure subversion respositories in the **Repositories** view of the Migration Toolkit for Applications (MTA) user interface.

Procedure

1. In **Administrator** view, click **Repositories** and then click **Subversion**.

2. Toggle the **Consume insecure Subversion repositories**switch to the right.

4.2.3. Configuring a Maven repository and reducing its size

You can use the MTA user interface to both configure a Maven repository and to reduce its size.

4.2.3.1. Configuring a Maven repository

You can configure a Maven repository in the **Repositories** view of the Migration Toolkit for Applications (MTA) user interface.
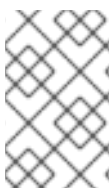
> **NOTE**
>
> If the **rwx_supported** configuration option of the Tackle CR is set to **false**, the **Consume insecure artifact repositories** switch is disabled and this procedure is not possible.

Procedure

1. In **Administrator** view, click **Repositories** and then click **Maven**.

2. Toggle the **Consume insecure artifact repositories** switch to the right.

4.2.3.2. Reducing the size of a Maven repository

You can reduce the size of a Maven repository in the **Repositories** view of the Migration Toolkit for Applications (MTA) user interface.

> **NOTE**
>
> If the **rwx_supported** configuration option of the Tackle CR is set to **false**, both the **Local artifact repository** field and the **Clear repository** button are disabled and this procedure is not possible.

Procedure

1. In **Administrator** view, click **Repositories** and then click **Maven**.

2. Click the **Clear repository** link.

> **NOTE**
>
> Depending on the size of the repository, the size change may not be evident despite the function working properly.

4.3. CONFIGURING HTTP AND HTTPS PROXY SETTINGS

You can configure HTTP and HTTPS proxy settings with this management module.

Procedure

1. In the **Administrator** view, click **Proxy**.

2. Toggle **HTTP proxy** or **HTTPS proxy** to enable the proxy connection.

3. Enter the following information:

   - Proxy host

   - Proxy port

4. Optional: Toggle **HTTP proxy credentials** or **HTTPS proxy credentials** to enable authentication.

5. Click **Insert**.

4.4. SEEDING AN INSTANCE

If you are a project architect, you can configure the instance's key parameters in the Controls window, before migration. The parameters can be added and edited as needed. The following parameters define applications, individuals, teams, verticals or areas within an organization affected or participating in the migration:

- Stakeholders

- Stakeholder groups

- Job functions

- Business services

- Tag types

- Tags

You can create and configure an instance in any order. However, the suggested order below is the most efficient for creating stakeholders and tags.

Stakeholders:

1. Create stakeholder groups

2. Create job functions

3. Create stakeholders

Tags:

1. Create tag types

2. Create tags

Stakeholders and defined by:

- Email

- Name

- Job function

- Stakeholder groups

4.4.1. Creating a new stakeholder group

There are no default stakeholder groups defined. You can create a new stakeholder group by following the procedure below.

Procedure

1. In **Developer** view, click **Controls**.

2. Click **Stakeholder groups**.

3. Click **Create new**.

4. Enter the following information:

   - Name

   - Description

   - Member(s)

5. Click **Create**.

4.4.2. Creating a new job function

Migration Toolkit for Applications (MTA) uses the job function attribute to classify stakeholders and provides a list of default values that can be expanded.

You can create a new job function, which is not in the default list, by following the procedure below.

Procedure

1. In **Developer** view, click **Controls**.

2. Click **Job functions**.

3. Click **Create new**.

4. Enter a job function title in the **Name** text box.

5. Click **Create**.

4.4.3. Creating a new stakeholder

You can create a new migration project stakeholder by following the procedure below.

Procedure

1. In **Developer** view, click **Controls**.

2. Click **Stakeholders**.

3. Click **Create new**.

4. Enter the following information:

   - Email

   - Name

   - Job function – custom functions can be created

   - Stakeholder group

5. Click **Create**.

4.4.4. Creating a new business service

Migration Toolkit for Applications (MTA) uses the business service attribute to specify the departments within the organization that use the application and that are affected by the migration.

You can create a new business service by following the procedure below.

Procedure

1. In **Developer** view, click **Controls**.

2. Click **Business services**.

3. Click **Create new**.

4. Enter the following information:

   - Name

   - Description

   - Owner

5. Click **Create**.

4.4.5. Creating new tag types

Migration Toolkit for Applications (MTA) uses tags in multiple categories and provides a list of default values. You can create a new tag type by following the procedure below.

Procedure

1. In **Developer** view, click **Controls**.

2. Click **Tags**.

3. Click **Create tag type**

4. Enter the following information:

   - Name

   - Rank – the order in which the tags appear on the applications

   - Color

5. Click **Create**.

4.4.5.1. Creating new tags

You can create a new tag, which is not in the default list, by following the procedure below.

Procedure

1. In **Developer** view, click **Controls**.

2. Click **Tags**.

3. Click **Create tag**.

4. Enter the following information:

   - Name

   - Tag type

5. Click **Create**.

CHAPTER 5. ASSESSING AND ANALYZING APPLICATIONS

You can use the Migration Toolkit for Applications (MTA) user interface to both assess and to analyze applications.

Assessing applications refers to estimating the risks and costs involved in preparing applications for containerization, including time, personnel, and other factors. The results of an assessment can be used as the basis for discussions between stakeholders to determine which applications are good candidates for containerization, which require significant work, and which are not suitable for containerization.

Analyzing applications refers to using rules to determine which specific lines in an application must be modified before the application can be migrated or modernized.

5.1. ASSESSING APPLICATIONS

You can use the Migration Toolkit for Applications (MTA) user interface to determine the risks involved in containerizing an application.

Procedure

1. In **Development** view, click **Application inventory**.

2. Select the application you want to assess.

   > **NOTE**
   >
   > Only one application can be assessed at a time.

3. Click **Assess**.

4. Select **Stakeholders** and **Stakeholder groups** from the lists to track who contributed to the assessment for future reference.

   > **NOTE**
   >
   > You can add **Stakeholder Groups** or **Stakeholders** on the **Controls** screen of **Developers** view.

5. Click **Next**.

6. Answer each question and then click **Next**.

7. Click **Save and Review** to view the assessment.

5.2. APPLYING ASSESSMENTS TO OTHER APPLICATIONS

Many applications are similar enough to each other that you might want to apply a completed assessment of one application to another application. This can save time and provide consistent answers to assessment questions for similar applications.

Procedure

1. In **Development** view, click **Application inventory**.

2. Select the application with the completed assessment to copy.

3. Click the Options menu ⋮ at the right of the selected application.

4. Select **Copy assessment** or **Copy assessment and review**.

5. Select the application(s) to which you want to apply the completed assessment.

6. Click **Copy**.

5.3. CONFIGURING AND RUNNING AN APPLICATION ANALYSIS

You can analyze more than one application at a time against more than one transformation target in the same analysis.

Procedure

1. In **Development** view, click **Application inventory**.

2. Click the **Analysis** tab.

3. Select the applications you want to analyze.

4. Review the credentials assigned to the application.

5. Click **Analyze**.

6. Select the **Analysis mode** from the list. Valid options are:

   - Binary.

   - Source code.

   - Source code and dependencies.

   - Upload a local binary. This option only appears if you are analyzing a single application.

7. If you choose **Upload a local binary**, a window opens and you are prompted to **Upload a local binary**. Either drag and drop a file into the area provided or click **Upload** and then select the file to upload.

8. Click **Next**.

9. Select one or more target options for the analysis:

   - Application server migration to:

     ○ JBoss EAP 7

     ○ JBoss EAP 6

   - Containerization

   - Quarkus

   - OracleJDK to OpenJDK

- OpenJDK - upgrades to one of the following JDK versions:

    - OpenJDK 11

    - OpenJDK 17

- Linux - ensures there are no Microsoft Windows paths hard-coded into your applications

- Jakarta EE 9 - for migrating from Java EE 8 to Jakarta EE 9

- Spring Boot on Red Hat Runtimes

- Open Liberty

- Camel - for migrating from Apache Camel 2 to Apache Camel 3

- Azure

    - Azure App Service

10. Click **Next**.

11. Select one of the following **Scope** options to better focus the analysis:

    - Application and internal dependencies only.

    - Application and all dependencies, including known Open Source libraries.

    - Select the list of packages to be analyzed manually. If you choose this option, type the file name and click **Add**.

    - Exclude packages. If you choose this option, type the name of the package name and click **Add**.

12. Click **Next**.

13. In **Advanced**, set **Custom rules** by typing a name or by searching and clicking **Add Rules**.

14. Set any of the following options, if needed:

    - Target

    - Source(s)

    - Excluded rules tags: Rules with these tags are not processed. Add or delete as needed.

    - Enable transaction report: Select the checkbox to generate a DIVA report that displays the call stack, which executes operations on relational database tables.

> **NOTE**
>
> The Transactions report is a Technology Preview feature only. Technology Preview features are not supported with Red Hat production service level agreements (SLAs) and might not be functionally complete. Red Hat does not recommend using them in production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process.

> **NOTE**
>
> Analysis engines use standard rules for a comprehensive set of migration targets, but if the target is not included or is a customized framework, custom rules can be added. Custom rules files are validated.

15. Click **Next**.

16. In **Review**, verify the analysis parameters.

17. Click **Run**.
    Analysis status is **Scheduled** as MTA downloads the image for the container to execute. When the image is downloaded, the status changes to **In-progress.**

> **NOTE**
>
> Analysis takes minutes to hours to run depending on the size of the application and the capacity and resources of the cluster.

TIP

MTA relies on Kubernetes scheduling capabilities to determine how many analyzer instances are created based on cluster capacity. If several applications are selected for analysis, by default, only one analyzer can be provisioned at a time. With more cluster capacity, more analysis processes can be executed in parallel.

18. When analysis is complete, you can click the **Report** link to see the results of the analysis.

5.4. REVIEWING AN ANALYSIS REPORT

An MTA analysis report contains a variety of sections, including a listing of the technologies used by the application, the dependencies of the application, and the lines of code that must be changed to successfully migrate or modernize the application.

For more information on the contents of an MTA analysis report, see the Reviewing the reports

Procedure

1. In **Development** view, click **Application inventory**.

2. Expand the application with a completed analysis.

3. Click **Report**.

4. Click the dependencies or source links.

5. Click the tabs to review the report.

CHAPTER 6. WORKING WITH APPLICATIONS

You can use the Migration Toolkit for Applications (MTA) user interface to do the following:

- Add applications

- Assign application credentials

- Import a list of applications

- Download a CSV template for importing application lists

6.1. APPLICATION ATTRIBUTES

You can add applications to the Migration Toolkit for Applications (MTA) user interface manually or by importing a list of applications.

MTA user interface applications have the following attributes:

- Name (Free text)

- Description (Optional; free text)

- Business service (Optional; chosen from a list)

- Tags (Optional; chosen from a list)

- Source code (Path entered by user)

- Binary (Path entered by user)

6.2. ADDING APPLICATIONS

You can add an application to the **Application Inventory** for assessment and analysis.

TIP

Before creating an application, it is helpful to set up business services, check tags and tag types, and create additions as needed.

Procedure

1. In **Developer** view, click **Application Inventory**.

2. Click **Create new**.

3. Enter the following information or choose from a list:

   - Name

   - Description (optional)

   - Business service (optional)

   - Tags (optional; one or more)

- Comments (optional)

4. Click the arrow to the left of **Source Code**.

5. Enter the following information or choose from a list:

   - Repository type

   - Source repository

   - Branch

   - Root path

6. Click the arrow to the left of **Binary**.

7. Enter the following information:

   - Group

   - Artifact

   - Version

   - Packaging

8. Click **Create**.

6.3. ASSIGNING APPLICATION CREDENTIALS

You can assign credentials to one or more applications.

Procedure

1. In **Developer** view, click **Application inventory**.

2. Click the **Analysis** tab.

3. Click the Options menu ⋮ to the right of **Analyze** and select **Manage credentials**.

4. Select one credential each from the **Source credentials** list and from the **Maven settings** list.

5. Click **Save**.

6.4. IMPORTING A LIST OF APPLICATIONS

You can import a .csv file containing a list of applications and their attributes to the Migration Toolkit for Applications (MTA) user interface.

> **NOTE**
>
> Importing a list of applications only adds applications, it does not overwrite any existing ones.

Procedure

1. Review the import file to ensure it contains all the required information in the required format.

2. In **Developer** view, click **Application Inventory**.

3. Click the Options menu ⋮ to the right of **Review**.

4. Click **Import**.

5. Browse to the desired file and click **Open**.

6. Optional: Select **Enable automatic creation of missing entities** By default, this option is selected.

7. Verify the import has completed and check the number of rows accepted or rejected.

8. Review the imported applications by clicking the arrow to the left of the checkbox.
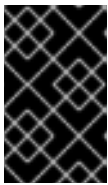
> **IMPORTANT**
>
> Rows accepted may not match the number of applications in the Application inventory list because some rows are dependencies. To verify, check the **Record Type** column of the CSV file for applications defined as **1** and dependencies as **2**.

6.5. DOWNLOADING A CSV TEMPLATE FOR IMPORTING APPLICATION LISTS

You can download a CSV template for importing application lists.

Procedure

1. In **Developer** view, click **Application inventory**.

2. Click the Options menu ⋮ to the right of **Review**.

3. Click **Manage imports** to open the **Application imports** page.

4. Click the Options menu ⋮ to the right of **Import** and then click **Download CSV template**.

Revised on 2023-03-06 11:44:47 UTC