Altair® Monarch Server™ v2023.0
REPORT MINING EDITION —
DEVELOPER GUIDE

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INTRODUCTION

Monarch Server Report Mining Server (RMS) Edition can be used through an API initiation request.

The original Version 01 implementation utilized a POST method and persists through all versions of the Product. Version 01 required SMB resolution for the input files and models/templates utilized during the session.

Since Version 14.0 (released January 2017), a second POST-based method was added to enable a better option for integration considerations by utilizing the following:

❑ HTTP POST method for uploading of the input reports instead of SMB;

❑ The Server Library for the storing and retrieval of models and templates, negating the need for an SMB file share and the security concerns this typically raises.

The initiation request for both versions is sent using the HTTP POST method. It can be generated in a client browser by sending an HTML form with the fields named according to the corresponding parameters of the initiation request.

The initiation request contains instructions to determine the type of presentation to be provided. The type of presentation can be either

❑ a full interactive mining application session for the user to select views and interact with the report and the various data views or

❑ a session-less request to publish a single export of data, based on a predefined set of mining rules to a particular data format.

A number of integrations exist for third party systems. These all make use of the GET/POST based APIs to integrate RMS functionality with other vendor products. As of this document's publication date, the existing integrations are as follows:

❑ **ASG Mobius**

Integration is part of the Mobius Product and maintained by Vendor. Altair provides a test framework to assist with validating the connectivity.

❑ **IBM Content Navigator (ICN)**

Integration is via a plugin for the ICN Browser based interface offered as an alternative to the CMOD Thick Client (The Flat Client has separate integration options for Monarch Desktop).

❑ **McKesson Portal**

Integration is part of the McKesson Product and maintained by Vendor. Altair provides a test framework to assist with testing the connectivity. This reference can be used for other Content Management solutions or integrations.

❑ **Hyland OnBase**
Integration is part of the OnBase Product and maintained by Vendor.

API VERSION 1 (INPUT VIA SMB)

INTRODUCTION

Monarch Server Report Mining Server (RMS) Edition can be used through an initiation request.

The initiation request can be accomplished in several steps.

1. Send the first request using the HTTP POST method to initialize the RMS session. The result of this request is a unique session ticket.

2. Upload the necessary reports using the SMB Share common to the source report provider and the RMS Server.

3. Utilize an SMB Share for retrieval of required models and templates

4. Submit session ticket in a client browser to analyze the uploaded reports.

RMS recognizes the request and then queries the report, model, and template data to determine the user's available views.

The initiation request contains the following information:

❑ **Initiation Request Type**. A request to provide a full interactive mining application.

❑ **Report Retrieval information**. This is a complete resolvable path to a source report to be used by RMS.

❑ **Model Retrieval information**. A complete resolvable path(s) to models to be used by RMS. A folder path is allowed. The folder shall be scanned for .xmod/.dmod files to obtain a list of all available models.

❑ **Template Retrieval information** (Excel templates and ES Style style sheets). Provides complete resolvable path(s) to templates to be used by RMS.

❑ **Model to Template associations**. The templates of types Excel and ES Style shall be associated with a particular model for correct data extraction and processing.

❑ **The List of Allowed Views**.

❑ **User ID**. User identifier.

❑ **Document Type ID**. Server Library Folder identifier.

❑ **Default View**. The initial view to be presented to the user. The user can navigate to other available views.

❑ **Dynamic filter**. The initial dynamic filter for Data, Summary, and ES Style Views.

Monarch Server Report Mining Edition Export View Request

RMS recognizes the request and then publishes the data in the format defined by the initiation request.

The initiation request contains the following information:

❑ **Initiation Request Type**. A request to provide a single export of data.

❑ **Report Retrieval Information**. This is a complete resolvable path to a source report to be used by RMS. Multiple report segments can be specified for processing. They will be concatenated together and then processed.

❑ **Model Retrieval Information**. A complete resolvable path to a model to be used by RMS.

- ❏ **Template Retrieval Information** (Excel templates and ES Style style sheets). Provides complete resolvable path to a template to be used by RMS.
- ❏ **Model to Template Associations**. The templates of types Excel and ES Style shall be associated with a particular model for correct data extraction and processing.
- ❏ **Data View**. The format of the single export view to be provided to the user.
- ❏ **User ID**. User identifier.
- ❏ **Dynamic filter**. The initial dynamic filter for Data, Summary, and ES Style Views.

Entry Point for Initial Request

The initiation request is sent to the RMS entry point. The URL of entry point is

```
http://<host name>:<portnumber>/
        <RMS virtual directory>/RequestTypeAnalyze/AnalyzeRequest
```

where

- ❏ `<host name>` is the name of the computer where the target Monarch Server RMS WebServer component is installed
- ❏ `<port number>` is the port number on which the RMS WebServer is listening
- ❏ `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default).

The request is sent using the HTTP POST method. All parameters are passed as the fields of the POST request.

The request's response will be HTML, PDF, CSV, XLS(X), PRF content, or an HTTP error.

SELECTING THE PRESENTATION TYPE

The initiation request contains instructions to determine the type of presentation provided. You can select interactive, export, or external type of presentation in Monarch Server RMS Edition.
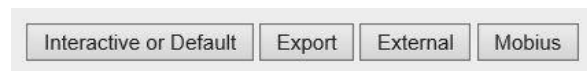
- ❏ To open a fully interactive mining application, click the **Interactive or Default** button. This type of presentation is used for the user to select views.
- ❏ To open an export (session-less) presentation, click the **Export** button. This type of presentation is used to publish a single export of data on the basis of a predefined set of mining rules to a particular data format. The request's response will be HTML, PDF, CSV, XLS(X), PRF content, or an HTTP error.
- ❏ To open an external MECM test framework presentation, click the **External** button. This type of presentation is used for imitating a request from the McKesson portal. For more information about the external view request, see the section '*Monarch Server Report Mining Edition Export View Request*'.

MONARCH SERVER REPORT MINING EDITION INTERACTIVE VIEW REQUEST

RMS recognizes the request and then queries the report, model, and template data to determine the user's available views. As a result, the page with the appropriate request parameters will be displayed.

The page contains the following items:

❑ **Host** field: Enter the name of the host where the report is located. The default value is the data retrieved by the initiation request to the server. This field is mandatory.

❑ **All paths are UNC** check box: Select this check box if the report host is not set so that the report path is equally accessible by any exporter.

❑ **Reports** field: Enter a complete resolvable path to the source report(s) or a folder that contains reports. This field is mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the web server during installation and are located in `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer where the target RMS WebServer component is installed.

- `<port number>` is the port number on which the RMS WebServer is listening.

- `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default).

❑   **Models** field: Enter a complete resolvable path to the source models (non-template-bound), a folder with templates, or a model definition ID. This field is mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the web server during installation and are located at `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

*   `<host name>` is the name of the computer where the target RMS WebServer component is installed

*   `<port number>` is the port number on which the RMS WebServer is listening

*   `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default)

Important: This parameter should list only table/summary models and not template-bound models.

❑   **Templates** field: Complete resolvable path to the source template(s) or a template definition ID. This field is mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the web server during installation and are located at `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

*   `<host name>` is the name of the computer where the target RMS WebServer component is installed

*   `<port number>` is the port number on which the RMS WebServer is listening

*   `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default)

Important: If this parameter is absent, XFORM data views will not be available.

❑ **Models to Templates** field: Enter the model-to-template association. Model and template definition IDs can be
used as the input here instead of paths.

The default value are the data retrieved by the initiation request to the server. The data are added automatically
to the web server during installation and are located at `http://<host name>:<port number>/<RMS`
`virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer where the target RMS WebServer component is installed

- `<port number>` is the port number on which the RMS WebServer is listening

- `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by
default)

> **NOTE** The list items should be separated with a comma (**,**):
>
> *<template_1_path>;<model_1_path>;<template_2_path>;<model_2_path>…*
>
> *<template_n_path>;<model_n_path>*

Important: If this parameter is absent, XFORM data views will not be available.

❑ **Dynamic Filter**: Enter the initial dynamic filter for Data, Summary, and ES Style Views.

> **NOTE** It consists of a value pair of column name and filter value:
>
> *FILTERCOLUMN=[ColumnName];FILTERVALUE=[FilterValue];FILTEROPERATOR=[EQ
> .NEQ,GT,LT,GTE,LTE,CONTAINS,STARTSWITH,ENDSWITH]*
>
> The date format for the filter value is YYYYMMDD.

❑ **Join Password** field: Enter join password for logging on to an external data source.
❑ **User ID** field: Enter user identifier.

NOTE	This identifier is used for getting user preferences and for authentication.

❑ **User Password** field: Enter user password.

NOTE	If a password is not provided, a new dynamic user is created in the RMS DB. This user is assigned to the user group that is specified in the web.config file of the RMS Client. If a password is provided, then the user with the USER_ID and PASSWORD should already exist and be assigned with the RMS user privilege to login to RMS Client.

❑ **Server Library Folder** field: Enter a Server Library Folder identifier to make all the models and templates contained in the group available to the user, provided the user has the necessary access permissions.

NOTE	This identifier is also used when the user saves a model to the server. If DOCTYPE_ID is not provided, the model cannot be saved to the server. If DOCTYPE_ID is provided, then the model can be stored on the RMS and can be re-used in the following user sessions.

❑ **Allowed Views** field: Specify data views that will be available for the user. By default, all views are listed.

NOTE	The list items should be separated with a comma (**,**): `<data_view_1 >; < data_view_2>; … <data_view_n>`.
	
	`<data_view_n>` is one of the following constants:
	
	    • HTML_REPORT
	    • DYNAMIC
	    • TABLE
	    • SUMMARY
	    • XLS_TABLE
	    • XLS_SUMMARY
	    • PRF
	    • XFORM
	    • REMOTE_PORTLETS

❑ **Default View** field: Specify the name of the view to show initially. The default value is **Welcome**.

NOTE	The view name can be one of the values permitted for the **Allowed Views** parameter. If no view name is specified, **My Home page** will be displayed.

- ❑ **Reports Encoding** field: Select the encoding type of incoming reports from the following:
  - ANSI
  - ASCII
  - UTF8
  - UTF16LE
  - UTF16BE

  > **NOTE**   If the value is not defined, the default encoding type specified by admin will be used.

- ❑ **Locale** field: Select the locale to be used in the current session. It can be one of the following:
  - English
  - Deutsch (German - Germany)
  - Français (French – France)

  > **NOTE**   If the value is not defined, the default locale specified by the admin will be used.

- ❑ **Delete Reports** check box: Select this check box to remove the source report after user session ends.
- ❑ **Delete Models** check box: Select this check box to remove the source models after user session ends.
- ❑ **Delete Templates** check box: Select this check box to remove the source templates after user session ends.
- ❑ **Admin Mode** check box: Select this check box to allow uploading of shared models and deleting of models.
- ❑ **Checksum** field: Contains the digital signature for the initiation request's parameters. The field is non-editable.
  - **Checksum button**: Click the button to generate a symmetric checksum.
  - **Checksum Asymmetric button**: Click the button to generate an asymmetric checksum.

  > **NOTE**   Checksum type is defined by the administrator.

- ❑ **Timestamp** field: Contains the timestamp of the request. The field is non-editable.

  > **NOTE**   Timestamp is represented as a number of milliseconds elapsed since Jan 01, 1970 (Java-style date/time representation).

- ❑ **Connect** button: Click the button to proceed to the application.
- ❑ **Connect in a New Window/Tab** button: Click the button to open the application in a new window/tab.
- ❑ **Reset** button: Click the button to clear insertions.

MONARCH SERVER REPORT MINING EDITION EXPORT VIEW REQUEST

RMS recognizes the request and then queries the report, model, and template data. As a result, the page with the appropriate request parameters will be displayed.

The page contains the following items:

❑ **Host** field: Enter the name of the host where the report is located. The default value is the data retrieved by the initiation request to the server. This field is mandatory.

❑ **All paths are UNC** check box: Select this check box if the report host is not set so that the report path is equally accessible by any exporter.

❑ **Reports** field: Enter a complete resolvable path to the source report. This field is mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the web server during installation and are located at `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer where the target RMS WebServer component is installed

- `<port number>` is the port number on which the RMS WebServer is listening

- `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default)

> **NOTE**   Only one report can be published at a time.

❑ **Models** field: Enter a complete resolvable path to the source model (non-template-bound) or a model definition ID. This field is mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the web server during installation and are located at `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

`<host name>` is the name of the computer where the target RMS WebServer component is installed

`<port number>` is the port number on which the RMS WebServer is listening

`<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default)

> **NOTE**   Only one model can be used at a time.

Important: This parameter should only list table/summary models; template-bound models will not be resolved.

❑ **Templates** field: Complete resolvable path to the source template or a template definition ID. This field is mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the web server during installation and are located at `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer where the target RMS WebServer component is installed
- `<port number>` is the port number on which the RMS WebServer is listening.
- `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default)

> **NOTE**   Only one template can be used at a time.

❑ **Models to Templates** field: Enter the model-to-template association. Object definition IDs can be used alongside object paths.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the web server during installation and are located at `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer where the target RMS WebServer component is installed
- `<port number>` is the port number on which the RMS WebServer is listening
- `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default)

> **NOTE**   Only one template-to-model can be used at a time. The items of this parameter should be separated with a comma (**,**) and have the following format:

```
<template_1_path>;<model_1_path>
```

❑ **Dynamic Filter** field: Enter the initial dynamic filter for Data, Summary, and ES Style Views.

> **NOTE**   It consists of a value pair of column name and filter value:
>
> FILTERCOLUMN=[ColumnName];FILTERVALUE=[FilterValue];FILTEROPERATOR
> =[EQ.NEQ,GT,LT,GTE,LTE,CONTAINS,STARTSWITH,ENDSWITH]
>
> The date format for the filter value is YYYYMMDD.

❑ **Join Password** field: Enter join password for logging on to an external data source.

❑ **User ID** field: Enter user identifier.

> **NOTE**   This identifier is used for getting user preferences and for authentication.

❑ **User Password** field: Enter user password.

> **NOTE**   If a password is not provided, a new dynamic user is created in the RMS DB. This user is assigned to the user group that is specified in the web.config file of the RMS Client. If a password is provided, then the user with the USER_ID and PASSWORD should already exist and be assigned with the RMS user privilege to login to RMS Client.

❑ **Default View** field: Specify the name of the view for report display from the following:
  • HTML_REPORT
  • TABLE
  • SUMMARY
  • XLS_TABLE
  • XLS_SUMMARY
  • PRF
  • XFORM

> **NOTE**   If the value is not defined, the default encoding type specified by the admin will be used.

❑ **Reports Encoding** field: Select the encoding type of incoming reports from the following:
  • ANSI

- ASCII
- UTF8
- UTF16LE
- UTF16BE

> **NOTE** If the value is not defined, the default encoding type specified by the admin will be used.

❑ **Locale** field: Select the locale to be used in the current session. It can be one of the following:
- English
- Deutsch (German - Germany)
- Français (French – France)

> **NOTE** If the value is not defined, the default locale specified by the admin will be used.

❑ **Delete Reports** check box: Select this check box to remove the source report after user session ends.

❑ **Delete Models** check box: Select this check box to remove the source models after user session ends.

❑ **Delete Templates** check box: Select this check box to remove the source templates after user session ends.

❑ **Export to** field: Select export format from the following:
- HTML
- PDF
- CSV
- XLS
- PRF

> **NOTE** Different export formats are available depending on the selected **Default View** for report display.

❑ **Checksum** field: Contains the digital signature for the initiation request's parameters. The field is non-editable.
- **Checksum button**: Click the button to generate a symmetric checksum.
- **Checksum Asymmetric button**: Click the button to generate an asymmetric checksum.

> **NOTE** The checksum type (symmetric/asymmetric) is defined by the administrator.

❑ **Timestamp** field: Contains the timestamp of the request. The field is non-editable.

> **NOTE** Timestamp is represented as the number of milliseconds that has elapsed since Jan 01, 1970 (Java-style date/time representation).

- ❑ **Connect** button: Click the button to open a report.
- ❑ **Connect in a New Window/Tab** button: Click the button to open a report in a new tab.
- ❑ **Reset** button: Click the button to clear insertions.

Request Parameters Reference

Quick Reference Sheet

PARAMETER NAME	TYPE M=Mandatory, O=Optional		DESCRIPTION
	INTERACTIVE	EXPORT	
REQUEST_TYPE	O		Type of request. Valid values are "**I**" for interactive or "**E**" for a single export view of mined data. If the type is not specified, the default type is set to interactive.
REPORT_PATH	M	M	Complete resolvable path to the source report(s). Paths to multiple reports are separated with a semicolon. Can be a local path (accompanied by a host name passed via REPORT_HOST) or a UNC path.
REPORT_HOST	O	O	Name of the host where the report is located. If the report host is not set, then the report path must be a UNC path to be equally accessible to any exporter.
MODEL_PATHS	M	M	Complete resolvable path to the source models (non-template-bound) or a model definition ID. RMS supports the following formats for this parameter: ❑ path to a single model ❑ list of paths to the models. This list should be in the following format: `<model_1_path>;<model_2_path>; … <model_n_path>` ❑ path to the folder which contains models ❑ model definition ID This parameter should list only table/summary models and not template-bound models. The template-bound models should be specified in the TEMPLATES_MODELS parameter.
TEMPLATE_PATHS	O	O	Complete resolvable path to the source templates or a template definition ID. RMS supports the following formats for this parameter: ❑ path to a single template

			❑ list of paths to the templates. This list should be in the following format: `<template_1 path>;< template _2_path>;… <template_n path>`
			❑ path to the folder which contains templates
			❑ template definition ID
			If this parameter is absent, XFORM data views should not be available.
TEMPLATES_MODELS	O	O	The list of model-to-template associations. Paths or object definition IDs can be used. Parameter format: `<template_1_path>;<model_1_path>; < template _2_path>;<model_2_path>… <template_n_path>;<model_n_path>` If this parameter is absent, XFORM data views should not be available. The template-bound models should be specified in this parameter only and not in MODEL_PATHS.
CHECKSUM	M	M	Contains digital signature for initiation request's parameters.
USER_ID	M	M	User identifier. This identifier used for getting user preferences and for authentication.
USER_PASSWORD	O	O	User password. If a password is not provided, a new dynamic user is created in the RMS DB. This user is assigned to the user group that is specified in the web.config file of the RMS Client. If a password is provided, the user with the USER_ID and PASSWORD should already exist and be assigned with the RMS user privilege to login to RMS Client.
DOCTYPE_ID	O	N/A	Server Library Folder identifier. If a Server Library Folder identifier is provided, all the models and templates contained in the folder are made available to the user (if the user has the necessary access permissions). This identifier is also used when the user saves a model to the server. If DOCTYPE_ID is not provided, the model cannot be saved to the server. If DOCTYPE_ID is provided, then the model can be stored in RMS and can be re-used in the next user sessions.
DYNAMIC_FILTER	O	O	The initial dynamic filter for Data, Summary, and ES Style Views. It consists of a value pair of column name and filter value: `FILTERCOLUMN=[ColumnName];FILTERV ALUE=[FilterValue];FILTEROPERATOR =[EQ.NEQ,GT,LT,GTE,LTE,CONTAINS,S TARTSWITH,ENDSWITH]` The date format for the filter value is YYYYMMDD.
ALLOWED_VIEWS	O	N/A	The list of data views that should be available

				for the user. Parameter format: *<data_view_1 >;< data_view_2>;… < data_view_n>*, where *<data_view_n>* is one of the following constants: ❑ HTML_REPORT ❑ DYNAMIC ❑ TABLE SUMMARY ❑ XLS_TABLE XLS_SUMMARY PRF XFORM ❑ REMOTE_PORTLETS
TIMESTAMP	M	M	Timestamp of the request. This is the number of milliseconds that has elapsed since Jan 01, 1970 (Java-style date/time representation)
JOINPASSWORD	O	O	Join password for logging into an external data source.
DEFAULT_VIEW	O	M	Name of the view to show initially. Default is the Welcome page. The view name can be one of the values permitted for the ALLOWED_VIEWS parameter or the "WELCOME" value for the Welcome page. The parameter is mandatory for export type request to identify the requested view.
EXPORTTO	N/A	M	Defines the format of the exported view. Can be one of the following: **For HTML_REPORT:** ❑ PDF ❑ HTML **For TABLE:** ❑ PDF ❑ HTML ❑ CSV **For SUMMARY:** ❑ PDF ❑ HTML **For XLS_TABLE:** ❑ XLS ❑ CSV **For XLS_SUMMARY:** ❑ XLS **For PRF:** ❑ PRF **For XFORM:**

			❑ PDF
			❑ HTML
DELETE_REPORTS	O	O	Report removal flag. Set to "true," "1", or "on" to remove source report after user session ends.
DELETE_MODELS	O	O	Model removal flag. Set to "true," "1", or "on" to remove source models after user session ends.
DELETE_TEMPLATES	O	O	Template removal flag. Set to "true," "1", or "on" to remove source templates after user session ends.
ADMIN	O	N/A	Admin mode flag. Set to "true," "1", or "on" to allow uploading shared models and deleting models.
REPORT_ENCODING	O	O	Encoding of incoming reports. Can be one of the following: ❑ ANSI ❑ ASCII ❑ UTF8 ❑ UTF16LE ❑ UTF16BE If the value is not defined or invalid, ANSI will be used.
LOCALE	O	O	The locale to be used in the current session. Can be one of the following: ❑ **en** (English) ❑ **fr-FR** (French-France) ❑ **de-DE** (German-Germany) If the value is not defined or invalid, **en** (English) will be used.

Passing Report Paths

The REPORT_PATH should be a local path at the report storage machine, the host name of which is REPORT_HOST. The parameter may include a path to one report or to multiple reports, in which case the paths must be separated by semicolons. The RMS will access the report(s) directly in the following occasions:

❑ The Monarch Server Report Mining Edition that is performing the data processing is located at the machine described by the REPORT_HOST parameter.

❑ REPORT_PATH is a UNC path.

In all other cases, the RMS searches for the RmsContentServiceHost component to perform report data transfer.

Checksum Generation

The initial request is protected by a checksum — a type of digital signature.

The generation of a checksum includes computing a secure hash for significant attributes of the current request and then signing this hash with a secret key using an XOR operation.
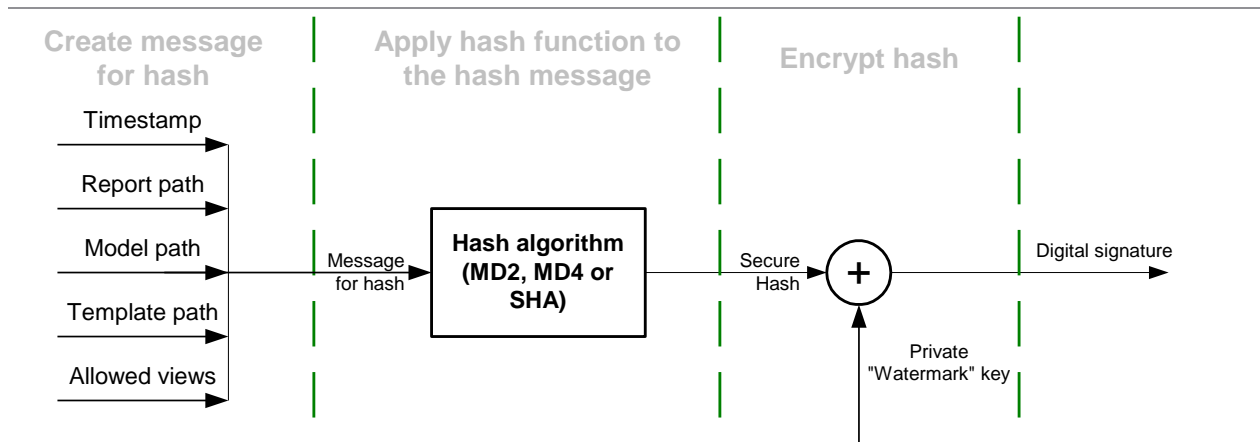
Figure 1. Computing a Checksum

The digital signature should be hex-encoded into symbolic representation before passing into RMS.

Code example — hashing a message

To create a hash message, the request's parameters should be concatenated into one string in the following order: timestamp, report path, model path, template path, allowed views. The code below shows a simple C# function for generating a hash message:

```
// Create message for hash function

public static String GetHashMessage(

        long timestamp,

        String host,

        String reportPath,

        String modelPath,

        String templatePath,

        String allowedView)

{

        StringBuilder sb = new StringBuilder();

        // Concantenate all parameters into one String

        sb.Append(timestamp);

        sb.Append(host);

        sb.Append(reportPath);

        sb.Append(modelPath);

        sb.Append(templatePath);

        sb.Append(allowedView);

        // Return result

        return sb.ToString();
```

```
                        }
```

RMS supports all hash algorithms from the C# library. The algorithms are as follows.

The active algorithm can be set via RMS's configuration file.

Below is a simple C# function for hashing a message:

```
            // Hashing

                private static byte[] GetHash(String message, String
        hashAlgorithmName)

                {

                        byte[] buf = Encoding.UTF8.GetBytes(message);


                        // Create hash algorithm instance

                        HashAlgorithm algorithm =
        HashAlgorithm.Create(hashAlgorithmName);

                        // Hash message

                        return algorithm.ComputeHash(buf);

                }Code example — hash encryption
```

The hash shall be encrypted by an XOR operation with a secret key. The secret key's length is large enough to provide strong encryption. The key can be set differently for every instance of RMS to increase security. It is stored in the RMS configuration file and can be changed by the administrator.

Below is a simple C# function for hash encryption:

```
                public static String Encrypt(String message, String
        watermarkString, String hashAlgorithmName)

                {

                        byte[] hash = GetHash(message, hashAlgorithmName);

                        byte[] watermarkKey =
        StreamHelper.HexStringToByteArray(watermarkString);

                        // Check key Length

                        if (hash.Length > watermarkKey.Length)

                                throw new RmsWebServerException("Incorrect
        \"watermark\" key.");

                        // XOR

                        byte[] encryptedHash = new byte[hash.Length];

                        for (Int32 i = 0; i < hash.Length; i++)

                        {

                                encryptedHash[i] = (byte)(hash[i] ^ watermarkKey[i]);

                        }

                        // Return result

                        return StreamHelper.ByteArrayToHexString(encryptedHash);
```

```
        }        }
```

API VERSION 02 (INPUT VIA HTTP POST)

INTRODUCTION

Monarch Server Report Mining Server (RMS) Edition can be used through an initiation request.

The initiation request can be accomplished in several steps.

1. Send the first request using the HTTP POST method to initialize the RMS session. The result of this request is a unique session ticket.

2. Upload the necessary reports using the HTTP POST method (unlike Version 01, which requires SMB Share).

3. Reference required models and templates from the Server Library (unlike Version 01, which requires SMB Share).

4. Submit session ticket in a client browser to analyze the uploaded reports.

ENTRY POINT FOR INITIATION REQUEST

The initiation request is sent to the RMS entry point. The URL of the entry point is

`http://<host name>:<port number>/<RMS virtual directory>/TestFramework/TestAPI`

where

❑ `<host name>` is the name of the computer in which the target RMS WebServer component is installed

❑ `<port number>` is the port number on which the RMS WebServer is listening

❑ `<RMS virtual directory>` is the virtual directory in which the application is installed (RMSClient by default)

REPORT MINING EDITION TEST API

RMS recognizes a request and then queries the report, model, and template data to determine the user's available views. The page with the appropriate request parameters will be displayed.

The RMS Test API page contains the following items:

❑ **RMS URL field**: URL: `http://<host name>:<port number>/<RMS virtual directory>`,

where

- `<host name>` is the name of the computer in which the target RMS WebServer component is installed
- `<port number>` is the port number on which the RMS WebServer is listening
- `<RMS virtual directory>` is the virtual directory in which the application is installed (RMSClient by default)

❑ **API key field**: API key, which is generated in MSAdmin (System Settings -> System Preferences -> RMS Settings -> RMS API Keys).

NOTE	The value of the key is generated automatically when a new API key is added.

❑ **Chunk size (bytes) field**: Parts size, based on which a report is divided when loading.

❑ **Reports field with Browse button**: Click this button to select one or more reports from the file system.

❑ **Server Library Folder field**: Name of the existing Server Library Folder that contains models; click the **Get models folder list** button, and then select the name of the folder from the drop-down list.

❑ **Host field**: The name of the host where the report is located. The default value is the data retrieved by the initiation request to the server.

NOTE	This field is mandatory if you will use the Reports, Models, Templates, and Models to Templates fields.

❑ **All paths are UNC check box**: Select this check box if the report host is not set so that the report path is equally accessible with any exporter.

❑ **Reports field**: Enter a complete resolvable path to the source report(s) or a folder which contains reports.

> **NOTE**   This field is not mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the WebServer during installation. The location is `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer in which the target RMS WebServer component is installed

- `<port number>` is the port number on which the RMS WebServer is listening

- `<RMS virtual directory>` is the virtual directory in which the application is installed (RMSClient by default)

> **NOTE**   RMS supports the following formats for this parameter:
>
> ❑ Path to a single report
>
> ❑ List of paths to the reports. The list items should be separated with a semicolon (;): `<report_1_path>;<report_2_path>;… <report_n_path>`
>
> ❑ Path to the folder that contains reports (only .prn, .pdf, and .xps files are retrieved)

❑ **Models field**: A complete resolvable path to the source models (non-template-bound), a folder with templates, or a model definition ID.

> **NOTE**   This field is not mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the WebServer during installation. The location is `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer where the target RMS WebServer component is installed

- `<port number>` is the port number on which the RMS WebServer is listening

- `<RMS virtual directory>` is the virtual directory in which the application is installed (RMSClient by default)

> **NOTE**   RMS supports the following formats for this parameter:
>
> ❑ Path to a single model

❑ List of paths to the models. The list items should be separated with a semicolon (;): `<model_1_path>;<model_2_path>;… <model_n_path>`

❑ Path to the folder that contains models

❑ Model Definition ID. The model object is available to the user (if the user has the necessary access permissions)

This parameter should list only table/summary models and not template-bound models.

❑ **Templates field**: Complete resolvable path to the source template(s) or a template definition ID.

NOTE	This field is not mandatory.

The default value is the data retrieved by the initiation request to the server. The data are added automatically to the WebServer during installation. The location is `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer in which the target RMS WebServer component is installed

- `<port number>` is the port number on which the RMS WebServer is listening

- `<RMS virtual directory>` is the virtual directory in which the application is installed (RMSClient by default)

NOTE	RMS supports the following formats for this parameter:

❑ Path to a single template

❑ List of paths to the templates. The list items should be separated with a semicolon (;): `<template_1_path>;< template _2_path>;… <template_n_path>`

❑ Path to the folder that contains templates (only .xls, and .xlsx files are retrieved)

❑ Template Definition ID. The template object is available to the user (if the user has the necessary access permissions)

If this parameter is absent, XFORM data views will not be available.

❑ **Models to Templates field**: The model-to-template association. Model and Template Definition IDs can be used as input here instead of paths.

The default value is data retrieved by the initiation request to the server. The data are added automatically to the WebServer during installation. The location is at `http://<host name>:<port number>/<RMS virtual directory>/TestPage/Files`

where

- `<host name>` is the name of the computer in which the target RMS WebServer component is installed

- `<port number>` is the port number on which the RMS WebServer is listening

- <RMS virtual directory> is the virtual directory in which the application is installed (RMSClient by default)

NOTE	The list items should be separated with a semicolon (;):
	<template_1_path>;<model_1_path>;<template_2_path>;
	<model_2_path>…<template_n_path>;<model_n_path>
	If this parameter is absent, XFORM data views will not be available.

❑ **Dynamic Filter field**: The initial dynamic filter for Data, Summary, and ES Style Views.

NOTE	It consists of a value pair of column name and filter value:
	FILTERCOLUMN=[ColumnName];FILTERVALUE=[FilterValue];FILTEROPERATOR =[EQ.NEQ,GT,LT,GTE,LTE,CONTAINS,STARTSWITH,ENDSWITH]
	The date format for the filter value is YYYYMMDD.

❑ **User ID field**: Entry for user identifier.

NOTE	This identifier used for getting user preferences and for authentication.

❑ **User Password field**: Entry for user password.

NOTE	If a password is not provided, a new dynamic user is created in the RMS DB. This user is assigned to the user group that is specified in the web.config file of the RMS Client. If a password is provided, the user with the USER_ID and PASSWORD should already exist and be assigned with the RMS User privilege to login to RMS Client.

❑ **Allowed Views field**: Specifies the data views that will be available for the user. By default, all views are listed.

NOTE	The list items should be separated with a semicolon (;): <data_view_1 >; < data_view_2>; … <data_view_n>,
	where *<data_view_n>* is one of the following constants:
	❑ HTML_REPORT
	❑ DYNAMIC

    ❑ TABLE

    ❑ SUMMARY

    ❑ XLS_TABLE

    ❑ XLS_SUMMARY

    ❑ PRF

    ❑ XFORM

    ❑ REMOTE_PORTLETS

❑ **Default View field**: Specifies the name of the view to be shown initially. The default value is **Welcome**.

NOTE	The view name can be one of the values permitted for the Allowed Views parameter. If no view name is specified, My Home page will be displayed.

❑ **Report Encoding field**: Encoding type of incoming reports from the following:

- ANSI
- ASCII
- UTF8
- UTF16LE
- UTF16BE

NOTE	If the value is not defined, the default encoding type specified by the admin will be used.

❑ **Locale field**: The locale to be used in the current session. It can be one of the following:

- English
- Deutsch (German – Germany)
- Français (French – France)

NOTE	If the value is not defined, the default locale specified by the admin will be used.

❑ **Delete Reports check box**: Removes source report after user session ends.

NOTE	The reports selected via the Choose Files button will not be removed.

❑ **Delete Models check box**: Removes source models after user session ends.

> **NOTE**   The models from the Server Library Folder will not be removed.

- **Delete Templates check box**: Removes source templates after user session ends.
- **Admin mode check box**: Allows uploading of shared models and deleting of models.
- **Get models folder list button**: Click this button to get a list of folders with models from the Server Library.
- **Upload button**: Click this button to get a URL built for the connection to the Monarch Server RMS. The built URL is available via the link that appears beside this button.
- **Log field disabled by default**: Displays all errors and downloaded files.

REPORT MINING EDITION API CONFIGURATION

You can change the settings of RMS API in the **config.xml** file.

The RMS Content Host involves the following settings in this file:

- `<appSettings>`

    …

    `<add key="ApiUploadStoragePath" value="" />`

     …

    `</appSettings>`

Enter the path in which the temporary folder will be created with the uploaded reports. Path by default is \\<host name>\C:\Windows\Temp\DatawatchRmsApiUploadStorage.

> **NOTE**   The folder with the uploaded reports will be removed after the session ends.

- `<appSettings>`

      …

    `<add key="ApiUploadSessionTimeOut" value="01:00:00" />`

…

    `</appSettings>`

Enter the time after which the session will finish.

> **NOTE**   The resulting link will be not available after the session ends.

API REFERENCE

The following is a complete reference of methods supported by the Report Mining Edition API.

Server Library folder

Get the Server Library folder list.

GET method

`http://localhost/RMSClient/api/v1/folder/list`

Parameters:

❑ apiKey (string) – RMS API Key (should be created in System Settings)

❑ objectTypes (string) – List of object types separated by ";". If set, only the folders containing objects of these types will be returned. The possible types are

- MODEL
- GROUP
- TEMPLATE

Response:

❑ Id (int) – Folder ID

❑ Name (string) – Folder name

❑ Description (string) – Folder description

❑ ParentId (int) – Parent folder ID

Existence of Server Library objects

Check if the Server Library folder has objects of the aforementioned types.

GET method

`http://localhost/RMSClient/api/v1/folder/hasobjects`

Parameters:

❑ apiKey (string) – RMS API key (should be created in System Settings)

❑ folderName (string) – Server Library folder name

❑ objectTypes (string) – List of object types separated by ";"

Response:

❑ HasObjects (Boolean) – True/false

Starting of file upload session

Start file upload session.

POST method

`http://localhost/RMSClient/api/v1/upload/beginsession`

Parameter:

❑ apiKey (string) – RMS API key (should be created in System Settings)

Response:

❑ TicketId (string) – Ticket ID used to add files

File uploading

Initiate an upload of a new file.

POST method

`http://localhost/RMSClient/api/v1/upload/file`

Parameters:

❑ FileName (string) – File name
❑ TicketId (string) – Ticket ID

Response:

❑ FileId (string) – File ID used to upload a file's content

File content uploading

Upload file content. This can be called several times for chunked uploading.

The content of the file or file chunk should be passed in the request body.

POST method

`http://localhost/RMSClient/api/v1/upload/file/{FileId}`

Parameter:

❑ FileId (string) – File ID

Response:

❑ ChunkSize (int) – Size of received file content

End of file upload session

End file upload session and return the URL to the RMS interface with the uploaded files.

POST method

`http://localhost/RMSClient/api/v1/upload/endsession`

Parameters:

❑ TicketId (string) – Ticket ID used to add files
❑ Host (string) – RMS host
❑ ReportPaths (string) – A complete resolvable path to the source report(s) or a folder which contains reports
❑ ModelPaths (string) – A complete resolvable path to the source models (non-template-bound), a folder with templates, or a model definition ID
❑ TemplatePaths (string) – Complete resolvable path to the source template(s) or a template definition ID

- ❑ TemplatesToModelsMap (string) – Association between the model and template. Model and Template Definition IDs can be used as input here instead of paths.

- ❑ DynamicFilter (string) – The initial dynamic filter for Data, Summary, and ES Style Views.

- ❑ UserName (string) – User identifier

- ❑ Password (string) – User password

- ❑ ModelsFolder (string) – Refers to the Server Library password

- ❑ AllowedViews (string) – Data views that will be available for the user

- ❑ DefaultView (string) – Specifies the name of the view to be shown initially

- ❑ Encoding (string) – Encoding type of incoming reports

- ❑ Locale (string) – The locale to be used in the current session

- ❑ DeleteReports (bool) – Removes source report after user session ends

- ❑ DeleteModels (bool) – Removes source models after user session ends

- ❑ DeleteTemplates (bool) – Removes source templates after user session ends

- ❑ AdminMode (bool) – Allows uploading of shared models and deleting of models

Response:

- ❑ URI – RMS URL to RMS interface with uploaded files

EXISTING INTEGRATIONS

Existing RMS integrations are as follows:

❑ Hyland OnBase

❑ IBM Content Navigator (ICN)

❑ ASG Mobius

HYLAND ONBASE

Accessing Mobius Test Framework Presentation Type

The Mobius test framework type of presentation is used to imitate a request from the Mobius Portal. This integration requires the availability and configuration of the 'Report Mining Integration for Datawatch Report Mining Server' module for OnBase as part of the OnBase instance configuration. The integration is based on the 'API VERSION 1 (INPUT VIA SMB)' available in all versions of Monarch Server.

For further information on this OnBase module, please refer to your OnBase Account Representative.

For further information on configuring this OnBase module, please refer to the OnBase modules documentation. An overview of the OnBase configuration follows:

❑ The option is visible in the OnBase Client as the 'Data Mining' option in the context menu;
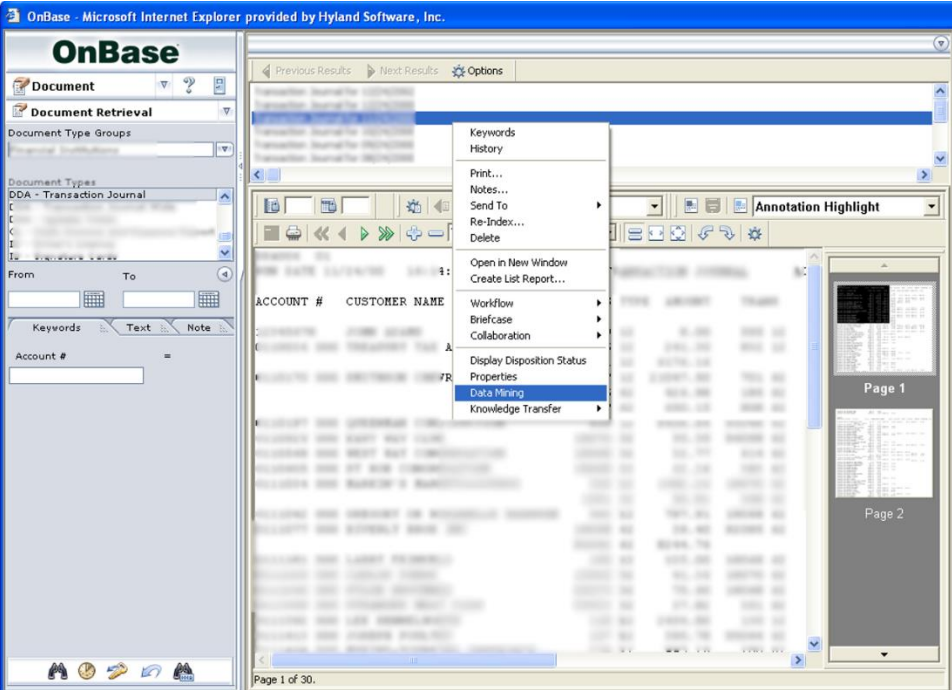
❑ The module is configured via the OnBase web.config, using the following settings (taken from OnBase Module Reference documentation);

Data Mining Tab

The settings on this tab are used for the Report Mining Integration for Datawatch Report Mining Server.

Web Application Management Console Field	Web Server Web.Config Setting
Data Mining	enableDataMine
Data Mining Temp Directory	DataMiningTempDirectory
Data Mining Report Server Name	DataMiningReportServerName
Data Mining URL	DataMiningURL
Additional Models	DataMiningAdditionalModels

❑ And subsequently, configuration of the datamine.aspx and datamineredirect.aspx pages (refer to OnBase documentation for specifics relating to your environment):

• DataMine.aspx

• DataMineRedirect.aspx

IBM CONTENT NAVIGATOR (ICN)

This integration requires the availability and configuration of the "Report Mining Server ICN Plugin" module for ICN.

NOTE	The ICN Plugin is not part of the official RMS product distribution. It is provided 'as is' to facilitate generic connectivity between ICN and RMS. It can be used as a template for further optimization/refinement based on customer specific requirements. It is also dependent on several aspects of the ICN environment, specifically:

> ❑ The CMOD / ICN Versions combination
>
> ❑ The underlying version of WebSphere being used to host the ICN instance
>
> ❑ The underlying OS used to host the overall ICN instance
>
> ❑ When upgrading to a newer version of the above, it is imperative that the functionality be validated as part of a test cycle to ensure compatibility with the proposed platform combination
>
> ❑ Where an issue is determined, in the first instance, Altair Support can be contacted to see if a newer Plugin version exists, and/or if other configuration is required to enable functionality.
>
> If the issue cannot be resolved, then Altair will review options to ascertain if an alternative solution can be provided; if local ICN development resources exist, they should be considered also to review the issue and ascertain if local resolution is feasible.

The integration is based on the "API Version 1 (INPUT VIA SMB" available in all versions of Monarch Server.

For further information on this plugin, please contact Altair Support.

MCKESSON PORTAL

Introduction

Monarch Server Report Mining Server (RMS) Edition can be used through an initiation request. The request is sent using the HTTP POST method. It can be generated in a client browser by sending an HTML form with the fields named according to the corresponding parameters of the initiation request.

Entry Point for Initiation Request

The initiation request is sent to the RMS entry point. The URL of the entry point is

```
http://<host name>:<port number>/<RMS virtual
directory>/TestFramework/ChoiceRequestType
```

where

❑   `<host name>` is the name of the computer where the target RMS WebServer component is installed

❑   `<port number>` is the port number on which the RMS WebServer is listening

❑   `<RMS virtual directory>` is the virtual directory under which the application is installed (RMSClient by default)

The request is sent using the HTTP POST method. All parameters are passed as fields of the POST request.

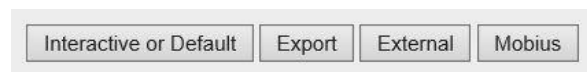The URL for the [external MECM test framework view request](#) is

```
http://<host name>:<port number>/<RMS virtual
directory>/TestFramework/ExternalTestLogin
```

The URL for the MECM web service entry point is

```
http://<host name>:<port number>/<RMS virtual
directory/Api/ExternalLaunchApi/GetLaunchUrl
```

Selecting MECM Test Framework Presentation Type

The initiation request contains instructions to determine the type of presentation provided. You can select interactive, export, or external type of presentation in Monarch Server RMS.

The external MECM test framework type of presentation is used to imitate a request from the McKesson portal.

To open the external MECM test framework presentation

❑   Click the **External** button in Monarch Server RMS.

For information about the interactive and export types of presentation, see the section [Selecting the Presentation Type](#).

Monarch Server Report Mining Edition MECM Test Framework

RMS recognizes a request and then queries the report and model data to determine the user's available views. As a result, the page with the appropriate request parameters will be displayed.

The page contains the following items:

- ❑ **Session ID** field: User session ID.
- ❑ **MECM Secure token** field: Security ticket ID.
- ❑ **MECM User ID** field: MECM user ID.
- ❑ **MECM User Password** field: MECM user password.

NOTE	If a password is not provided, a new dynamic MECM user is created in the RMS DB. This user is assigned to the user group that is specified in the web.config file of the RMS Client. If a password is provided, the MECM user with the USER_ID and PASSWORD should already exist and be assigned with the RMS user privilege to login to RMS Client.

- ❑ **MECM User Display Name** field: The full name of the MECM user.
- ❑ **MECM Content Type** field: The name of the existing Server Library Folder that contains models and templates for ES Type View.

- ❑ **Allowed Views** field: Specify data views that will be available for the user. By default, all views are listed.

- **Default View** field: Specify the name of the view to show initially. The default value is **Welcome**.

- **Locale** field: Select the locale to be used in the current session. It can be one of the following:
  - English
  - Deutsch (German – Germany)
  - Français (French – France)

- **Dynamic Filter** field: The initial dynamic filter for Data, Summary, and ES Style Views.
  It consists of a value pair of column name and filter value:

  FILTERCOLUMN=[ColumnName];FILTERVALUE=[FilterValue];FILTEROPERATOR=[EQ.NEQ,GT,LT,GTE,LTE, CONTAINS,STARTSWITH,ENDSWITH]

  The date format for the filter value is YYYYMMDD.

- **Content Details** fields. Includes the following fields:
- **MECM Content ID** field: MECM content ID.

- **MECM Content Version** field: MECM content version.

- **File MIME Type** field: File MIME type.

❑ **Add** button: Click this button to add a new report.

❑ **Remove** button: Click this button to remove the report.

❑ **Get launch URL** button: Click this button to get a URL built for connection to Monarch Server RMS. The built URL is available via the **Launch RMS** link that appears below the button.

❑ **Launch in new window** button: Click this button to launch Monarch Server RMS in a new window.

❑ **Reset** button: Click the button to clear insertions.

MECM Downloader Servlet Configuration

You can find the parameters of the MECM downloader servlet in RMS Settings in the Admin application. To access the MECM settings page on the navigation tree, select **System Settings**, **System Preferences**, **RMS Settings** tab, and **HECM Settings** tab.

(By default, the HECM Settings tab is hidden. To enable the tab, set the key ShowHecmSettings to **true** in the file web.config of the Admin application in the path: C:\inetpub\wwwroot\MSAdmin).

Example:

```
<appSettings>
 ...
 <add key="ShowHecmSettings" value="true" />
 ...
</appSettings>
```

The MECM downloader servlet parameters include the following:

❑ **File Downloader URL -** The URL to the MECM file downloader servlet. The URL is in the format `http://<hostname>:<port>/<HecmFileDownloader>`
where

- `<host name>` is the name of the computer where the HECM File Downloader Servlet is installed

- `<port number>` is the number of the port on which the HECM File Downloader Servlet is listening

- `<HecmFileDownloader>` is the path to the HECM File Downloader Servlet

 (The default value is `http://localhost/RMSClient/MECMFileDownloader/FileDownloader`. It is the test file downloader that emulates the HECM File Downloader Servlet).

❑ **File Downloader Block Size (kb) -** The maximum number of bytes to read in this retrieval.
(Default value: **1048576**)

❑ **File Downloader Connection Timeout -** The timeout while attempting to connect, after which the connection is terminated and an error is produced. If the value is equal to zero, then the timeout is not set.

 (Default value: **0**)

ASG MOBIUS

This integration is maintained by ASG as part of their product functionality. The integration is based on the Version 02 POST Method based API which is available in Monarch Server 14.0 and above.

For further information on this Mobius module, please refer to your ASG Account Representative.

For further information on configuring this Mobius feature, please refer to the Mobius documentation.

Entry Point for Initiation Request

The initiation request is sent to the RMS POST Method entry point.

The URL for the Mobius web service entry point is

```
http://<host name>:<port number>/<RMS virtual directory/ExternalLaunch/MobiusLaunch?
pageUrl=<page URL parameter>
```

where

❑   `<host name>` is the name of the computer where the target RMS Web Server component is installed

❑   `<port number>` is the port number on which the RMS Web Server is listening

❑   `<RMS virtual directory>` is the virtual directory under which the application has been installed (default: RMSClient)

❑   `<page URL parameter>` is a URI to the Mobius REST API endpoint to retrieve document content in the following format: `http://<mobius host>:<port>/<Mobius virtual directory>/rest/contentstreams/?id=<document id>&other_parameters`

Communication Flow of RMS and Mobius

The communication between RMS and Mobius is illustrated below. In the illustration, numbers are used to mark the processes involved. Refer to the corresponding description that follows.
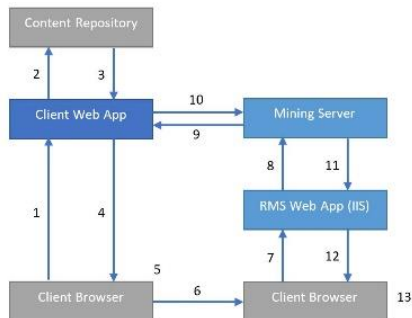
1.   The user requests results from the content repository.

2.   The Web App processes the request.

3.   The Web App fulfills the request.

4.   The requested content reference information is returned to Client.

5.   The user chooses to open a mining session.

6.   Client launches a browser with RMS URI with session parameters.

7.   The browser automatically submits the URI with RMS session parameters.

8.   The mining request is submitted to the Mining Server.

9.   Document data and metadata are requested from the Client REST API.

10. The Mining Server returns the report data via API from the Client Web App.

> **NOTE**   RMS sends the following additional requests to Mobius REST API to acquire

metadata of the provided document:

❑ HEAD request to URI passes through the `<page URL parameter>` to get the ContentType.

❑ GET request to `http://<mobius host>:<port>/<Mobius virtual directory>/rest/documents/<document id>/parents` to retrieve the parent folders of the specified document. The response contains a list of folder IDs.

❑ GET request to `http://<mobius host>:<port>/<Mobius virtual directory>/rest/folders/<folder id>/children`. RMS matches the response to the provided document ID to get the metadata of the document and the ReportID.

RMS considers a model from the Server Library with the same name as the value of the ReportID from the metadata of a particular document.

11. The Mining Server retrieves the associated model from the Server Library according to the document metadata and processes the report with the model returning the data or object.
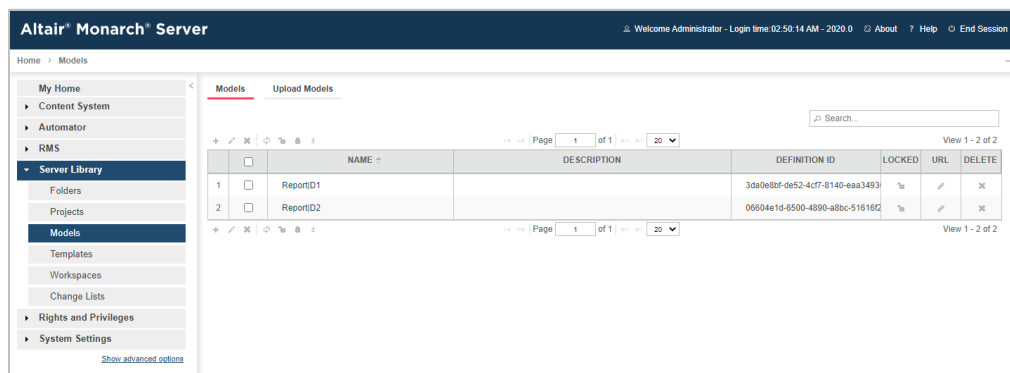
12. The Web App formats the presentation if needed and provides client presentation.

13. Temporary files (if used) are deleted upon session termination.

To open the Mobius test framework presentation

The Mobius test framework can be accessed through the following URI:

```
http://<host name>:<port number>/<RMS virtual
directory>/TestFramework/ChoiceRequestType
```

and clicking on the button labeled Mobius, where:

❑ `<host name>` is the name of the computer where the target RMS Web Server component is installed

❑ `<port number>` is the port number on which the RMS Web Server is listening

❑ `<RMS virtual directory>` is the virtual directory under which the application has been installed (default: RMSClient)
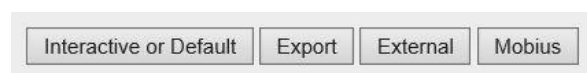

The Mobius request is sent using the HTTP GET method. All parameters are passed as fields of the GET request.

The direct URL for the Mobius test framework view request is

```
http://<host name>:<port number>/<RMS virtual directory>/TestFramework/ MobiusTest
```

RMS recognizes the request and then queries the content of the document and model to display views with the appropriate data. As a result, the page with the appropriate request parameters will be displayed.
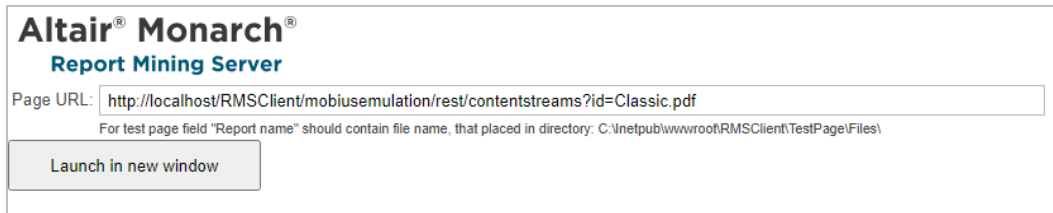
The page contains the following items:

❑   **Page URL** field: URL for downloading the content of the document.

CONTACT US

GET IN TOUCH

We'd love to hear from you. Here's how you can reach us.

SALES CONTACT INFORMATION

Portal: Contact Altair

US: + 1.800.445.3311

International: + 1.978.441.2200

SUPPORT CONTACT INFORMATION

Customer Portal: https://community.altair.com/community
Email: dasupport@altair.com
US: +1 800.988.4739
Canada: +1 978.275.8350
Europe, Middle East, Africa: +44 (0) 8081 892481