



Web Service API for Report Sources

Introduction

This document describes how to use the MIT S Report 1.1 Web Service API to programmatically perform the following actions from outside of the MIT S Report user interface:

- List all Report Sources associated to a particular database file
- List all columns associated with a Report Source
- Do a full update on a Report Source
- Do a Dynamic Change Update on a Report Source

Each section of this document will be presented in the following manner:

1. Description
2. Required Information
3. Request Example
4. Response Example

More information about individual tags can be found under the section entitled *Report Source API Element Definitions* on page 6. A copy of the schema used by this API can be found under the section entitled *Report Source API Schema Reference* on page 10.

Posting Method

Report Source API requests are sent via HTTP (using the POST method) to the *webservices/reportSourceService* subdirectory of the MIT S Report Server. For example, if MIT S Report was installed on the local machine with a port setting of 8080, it would look like this:
<http://localhost:8080/webServices/reportSourceService>

Authentication Requirements

A MIT S Report User account will be needed to use this API. Web Service functionality is dependent on User account security settings. (Updating a Report Source will require certain permissions, columns may be restricted by column level security, etc.) More information on security settings can be found in the *MIT S Report Administration Guide* and the *MIT S Report Source Reference Guide*.

Authentication is performed using the base64 encoding provided by *HTTP Basic Authentication*. The following line will need to be included in the header of each request:

Authorizati on: Basic username: password

(where username and password are replaced with their encoded MIT S Report User values. For example: bdonis:ilikemits Encoded: YmRvbmlzOmlsaWtlbW10cw==)

Important Terminology

Report Source ID

The number that MITS Report Server uses to reference a Report Source is called the *Report Source ID*. In this document, this number is referred to as follows:

```
<mitsReportSourceInternalId
```

There are two ways to obtain this number. The first uses the Report Source API. The second method can be accomplished from within the MITS Report interface.

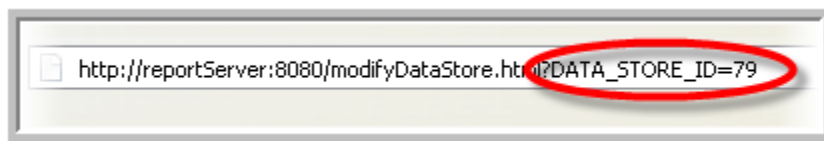
Using the API

To use this method, you must know the absolute path and name of the database file used to create the Report Source. (See the section entitled *List Report Sources* on page 3.) The Report Source ID will be placed within the `<mitsReportSourceInternalId>` tag of the response.

Using the MITS Report Interface

To use this method, you must have **Access** and **Configure** permissions to the appropriate Report Source. For more information about permissions, see the document entitled *MITS Report Administration Guide*.

1. From within MITS Report, click the Sources tab.
2. Click the appropriate Source Title
3. The Report Source ID will be found in the browser's address bar, listed as DATA_STORE_ID



Column ID

The number that MITS Report Server uses to refer to a column within MITS Report is called a *Column ID*. It is returned by `listColumns`, and used in/with the MITS Report User Security API. See the document named *MITS Report Web Service API for User Security* for more information.

List Report Sources

Description

Lists all Report Sources created from a particular source file in the source database account along with their internal IDs. The Report Source IDs are used for updating Report Sources.

WARNING: The returned list may be influenced by User security settings.

Required Information

- Absolute path to the database account where the source database file is located
- Name of the source file for the Report Source

Request Example

```
<listReportSources>
  <listFilter>
    <sourceAccount>C:\IBM\UV\MITS.REPORT</sourceAccount>
    <fileName>INVOICES</fileName>
  </listFilter>
</listReportSources>
```

Response Example

```
<mitsReportSources>
  <mitsReportSource>
    <mitsReportSourceInternalId>42</mitsReportSourceInternalId>
    <sourceAccount>C:\IBM\UV\MITS.REPORT</sourceAccount>
    <fileName>INVOICES</fileName>
    <label>Invoice Small</label>
    <description>This has a small sample.</description>
    <currentStatus>Available</currentStatus>
  </mitsReportSource>
</mitsReportSources>
```

List Columns

Description

This will list all columns associated with a Report Source. The column information returned can be used when performing User security updates. See the document named *MITS Report Web Service API for User Security* for more information.

WARNING: The returned list may be influenced by User security settings.

Information Required

Internal ID for a Report Source (see the section entitled *Report Source API Element Definitions* on page 6.)

Request Example

```
<listReportSourceColumns>
  <mitsReportSourceInternalId>1675</mitsReportSourceInternalId>
</listReportSourceColumns>
```

Response Example

```
<mitsReportSourceColumns>
  <mitsReportSourceColumn>
    <title>Extended Cost</title>
    <dictId>EXTENDED. COST</dictId>
    <securityId>2964</securityId>
  </mitsReportSourceColumn>
  <mitsReportSourceColumn>
    <title>Extended Sales</title>
    <dictId>EXTENDED. SALES</dictId>
    <securityId>2965</securityId>
  </mitsReportSourceColumn>
</mitsReportSourceColumns>
```

Report Source Update

Full Report Source Update

Description

This will perform a full update on a Report Source.

WARNING: User security settings may prevent a Report Source from updating.

NOTE: This will clear all data from the Report Source before updating. Some Report Sources can take a long time to update or can cause significant system load. Be sure you are aware of the potential impact before initiating an update of this kind.

Information Required

Internal ID for a Report Source (see the section entitled *Report Source API Element Definitions* on page 6.)

Request Example

```
<updateReportSource>
  <mi tsReportSourceInternalId>44</mi tsReportSourceInternalId>
</updateReportSource>
```

Response Example

```
<successResponse>
  <responseTime>2007-06-22 09:45:32.5</responseTime>
</successResponse>
```

Dynamic Change Update

Description

This will update a Report Source using the *Dynamic Change Update* feature. See the *MIT S Report Source Reference Guide* for more information about Dynamic Change Update.

WARNING: User security settings may prevent a Report Source from updating.

Information Required

Internal ID for a Report Source (see *Report Source API Element Definitions* on page 6.)

Request Example

```
<changeDataCaptureUpdateReportSource>
  <mi tsReportSourceInternalId>44</mi tsReportSourceInternalId>
</changeDataCaptureUpdateReportSource>
```

Response Example

```
<successResponse>
  <responseTime>2007-06-22 09:45:32.5</responseTime>
</successResponse>
```

Report Source API Element Definitions

changeDataCaptureUpdateReportSource

Definition	Request tag: Initiates a Dynamic Change Update to the Report Source referenced within the <mitsReportSourceInternalId> child.
Child of	None
Parent of	mitsReportSourceInternalId
Content Format	Container
Example	<changeDataCaptureUpdateReportSource>

currentStatus

Definition	Response tag: When listing Report Sources, it will be one of four different values, representing the current state of a Report Source: Available, Unavailable, Pending, or Updating.
Child of	mitsReportSource
Parent of	None
Content Format	Enumerated String
Example	<currentStatus>Available</currentStatus>

description

Definition	Response tag: When listing Report Sources, it is the description that was given to the Report Source when the Report Source was created.
Child of	mitsReportSource
Parent of	None
Content Format	String
Example	<description>This source has a sample of the available fields.</description>

dictId

Definition	Response tag: When listing Report Source columns, this is the name of the database source file field.
Child of	mitsReportSourceColumn
Parent of	None
Content Format	String
Example	<dictId>EXTENDED.COST</dictId>

fileName

Definition	Request tag: When listing Report Sources, this is the database file name that was used in the creation of a Report Source.
Child of	ListFilter, mitsReportSource
Parent of	None
Content Format	String
Example	<fileName>INVOICES</fileName>

Label

Definition	Response tag: When listing Report Sources, it is the title that was given to the Report Source when the Report Source was created.
Child of	mitsReportSource
Parent of	None
Content Format	String
Example	<label>Invoices Small</label>

ListFilter

Definition	Request tag: When listing Report Sources, it is the database file name that was used in the creation of a Report Source as well as the absolute path to its location.
Child of	listReportSources
Parent of	sourceAccount, fileName
Content Format	Container
Example	<listFilter>

ListReportSourceColumns

Definition	Request tag: Gets a list of all columns associated with the Report Source referenced within the <mitsReportSourceInternalId> child.
Child of	None
Parent of	mitsReportSourceInternalId
Content Format	Container
Example	<listReportSourceColumns>

ListReportSources

Definition	Request tag: Gets a list of all Report Sources associated with the database file name referenced within the <listFilter> child.
Child of	None
Parent of	listFilter
Content Format	Container
Example	<listReportSources>

mitsReportSourceInternalId

Definition	Both a Request tag and a Response tag: A number used by MITS Report Server to reference the Report Sources internally. More information can be found in the Internal Ids section, below.
Child of	listReportSourceColumns, mitsReportSource, updateReportSource, changeDataCaptureUpdateReportSource
Parent of	None
Content Format	Integer
Example	<mitsReportSourceInternalId>43</mitsReportSourceInternalId>

mitsReportSource

Definition	Response tag: When listing Report Sources, it lists information about a Report Source.
Child of	mitsReportSources
Parent of	mitsReportSourceInternalId, sourceAccount, fileName, label, description, currentStatus
Content Format	Container
Example	<mitsReportSource>

mitsReportSourceColumn

Definition	Response tag: When listing Report Sources, it lists information about a Report Source column.
Child of	mitsReportSourceColumns
Parent of	title, dictId, and securityId
Content Format	Container
Example	<mitsReportSourceColumn>

mitsReportSourceColumns

Definition	Response tag: When listing Report Source columns, it contains one or more <mitsReportSourceColumn> child tags.
Child of	mitsReportSources
Parent of	mitsReportSourceInternalId, sourceAccount, fileName, label, description, currentStatus
Content Format	Container
Example	<mitsReportSourceColumns>

mitsReportSources

Definition	Response tag: When listing Report Sources, it contains one or more <mitsReportSource> child tags.
Child of	None
Parent of	mitsReportSource
Content Format	Container
Example	<mitsReportSources>

responseTime

Definition	Response tag: When updating a Report Source, this tag contains the date and time that a Report Source update initialized. It is given in the following format: YYYY-MM-DD HH:MM:SS
Child of	None
Parent of	mitsReportSourceInternalId
Content Format	Date and Time
Example	<responseTime>2007-06-25 09:45:32</responseTime>

sourceAccount

Definition	Request tag: When listing Report Sources, this is the absolute path to the source database file referenced in the <fileName> child.
Child of	listFilter
Parent of	None
Content Format	String
Example	<sourceAccount>C:\IBM\UV\MITS.REPORT</sourceAccount>

securi tyI d

Definition	Response tag: When listing Report Source columns, this is the column ID.
Child of	mitsReportSourceColumn
Parent of	None
Content Format	Integer
Example	<securi tyI d>1475</securi tyI d>

successResponse

Definition	Response tag: Verifies a Report Source update has been initialized.
Child of	None
Parent of	responseTime
Content Format	Container
Example	<successResponse>

ti tle

Definition	Response tag: When listing Report Source columns, this is the column's title.
Child of	mitsReportSourceColumn
Parent of	None
Content Format	String
Example	<ti tle>Extended Cost</ti tle>

updateReportSource

Definition	Request tag: Initiates a Full Update to the Report Source referenced within the <mitsReportSourceInternalId> child.
Child of	None
Parent of	mitsReportSourceInternalId
Content Format	Container
Example	<updateReportSource>

Report Source API Schema Reference

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <!--published methods-->

  <!--
  Depending on the data types given listReportSources will return a list of report sources.
  Data types: sourceAccount and/or fileName. Types are defined by listFilterType.
  -->
  <xs:element name="listReportSources">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="listFilter" type="listFilterType" minOccurs="0"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <!--
  Given an id of a report source this method will return a list of the Report Source's columns.
  -->
  <xs:element name="listReportSourceColumns">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="mitsReportSourceInternalId" type="xs:integer"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <!--
  Given an id of a report source this method will return a mitsReportSourceType.
  -->
  <xs:element name="getReportSource">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="mitsReportSourceInternalId" type="xs:integer"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <!--
  Updates a report source based on its id.
  -->
  <xs:element name="updateReportSource">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="mitsReportSourceInternalId" type="xs:integer"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <!--return types-->
  <xs:element name="mitsReportSource" type="mitsReportSourceType"/>

  <!--
  A list of Report Sources
  -->
  <xs:element name="mitsReportSources">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="mitsReportSource" type="mitsReportSourceType" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <!--
  A list of Columns in a Report Source
  -->
  <xs:element name="mitsReportSourceColumns">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="mitsReportSourceColumn" type="mitsReportSourceColumnType" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <!--
  Success Response for an update
  -->
  <xs:element name="successResponse">

```

```

    <xs:complexType>
      <xs:sequence>
        <xs:element name="responseTime" type="xs:dateTime" minOccurs="0"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <!--
  Failure response for an update
  -->
  <xs:element name="failureResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="failureReason" type="failureReasonEnumType"/>
        <xs:element name="errorMessage" type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <!--data types-->
  <xs:complexType name="listFilterType">
    <xs:sequence>
      <xs:element name="sourceAccount" type="xs:string" minOccurs="0"/>
      <xs:element name="fileName" type="xs:string" minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>

  <!--
  This defines what a mits report source that will be returned by the published retrieval methods.
  -->
  <xs:complexType name="mitsReportSourceType">
    <xs:sequence>
      <xs:element name="mitsReportSourceInternalId" type="xs:integer"/>
      <xs:element name="sourceAccount" type="xs:string"/>
      <xs:element name="fileName" type="xs:string"/>
      <xs:element name="label" type="xs:string"/>
      <xs:element name="description" type="xs:string"/>
      <xs:element name="currentStatus" type="currentStatusEnumType"/>
    </xs:sequence>
  </xs:complexType>

  <!--
  Defines a MitsReportSourceColumn that will be returned by the published retrieval methods
  -->
  <xs:complexType name="mitsReportSourceColumnType">
    <xs:sequence>
      <!-- The title of the Column (As displayed in the Reports) -->
      <xs:element name="title" type="xs:string"/>
      <!--The Dictionary Item's ID-->
      <xs:element name="dictId" type="xs:string"/>
      <!--The Security ID to use when setting permissions-->
      <xs:element name="securityId" type="xs:integer"/>
    </xs:sequence>
  </xs:complexType>

  <!--
  The current status of a report source.
  -->
  <xs:simpleType name="currentStatusEnumType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Available"/>
      <xs:enumeration value="Updating"/>
      <xs:enumeration value="Failed"/>
      <xs:enumeration value="Unavailable"/>
    </xs:restriction>
  </xs:simpleType>

  <xs:simpleType name="failureReasonEnumType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="MitsReportSourceNotFound"/>
      <xs:enumeration value="Unknown"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>

```

Index

A

API

- authentication 1
- element definitions 6
- posting method 1
- request 1
- schema 10

authentication 1

C

Column ID

- definition 2
- identifying, using the API 2
- identifying, using the interface 2

columns

- list 4

D

dynamic change update 5

F

full update 5

H

HTTP

- authentication 1
- posting method 1

I

identify

- column 2
- Report Source, using the API 2
- Report Source, using the interface 2

internal ID

- column 2
- Report Source 2

L

list

- columns 4
- Report Sources 3

P

posting

- authentication 1
- method 1

R

Report Source API schema 10

Report Source ID

- definition 2
- identifying, using the API 2
- identifying, using the interface 2

Report Sources

- list 3
- updating 5

request

- authentication, for post 1
- posting method 1

S

schema

- Report Source 10

T

tag definitions 6

tags

- changeDataCaptureUpdateReportSource 6
- columnId 2
- currentStatus 6
- description 6
- dictId 6
- fileName 6
- label 7
- listFilter 7

listReportSourceColumns 4, 7
listReportSources 3, 7
mitsReportSource 8
mitsReportSourceColumn 8
mitsReportSourceColumns 8
mitsReportSourceInternalId 2, 7
mitsReportSources 8
responseTime 8
securityId 9
sourceAccount 9
sourceId 2
successResponse 9
title 9
updateReportSource 9

U

updating Report Sources 5

X

XML schema 10