

Welcome Pack Warehouse – General

Daily Package Download Process

Introduction	This document is designed to provide a guide on how to successfully download Morningstar data from the On Demand platform. There are two types of files that require differing download methods, our monthly “Warehouse” package and our daily packages such as RTPP (Real Time Price Package), RIPS (Re-Invested Price Package) and DR/NewDR (Daily Returns). This document will explain the process for our Daily Packages.
Solution Description	<p>The following steps should be followed for an automated process.</p> <ol style="list-style-type: none"> 1. Login to the system using valid credentials. The session will remain active for 2 hours after most recent login. After login, the client code will get back a cookie linked to this particular session, valid for 2 hours with a sliding expiration window. Also, the logged in ClientId will be returned in the response header. All subsequent calls should pass this cookie as part of the request to the methods, along with ClientId in the query string. 2. Download the file list: it will return the production file list with FileName, Produced Time, URL and so on information. 3. Loop the above list and take each file (file id) and call downloading function to download actual data for each file. For each request, please check the validity of the session and call the above login function to re-login if it's expired. 4. Logout of the system. <p><i>*Please ensure that Production Account is not a shared Personal Account.</i></p>
The details are as follow	<p>All steps mentioned above can be set up to be automatically processed. We are happy to share sample code written in “C# .Net” which is available for download via the On Demand homepage. Please see below for details of this process.</p> <p>1. Login to the system</p> <p>For programmatic Login to OnDemand, please refer sample code given in Sample code section below. The code shows how to log on to OnDemand UAT environment https://edw.morningstar.com/login.aspx using Web service API and HTTP API.</p> <p>As mentioned earlier in this document, once credentials have been confirmed, a valid session will be created. OnDemand responds with an authentication cookie along with ClientId in its response header. All subsequent web requests to OnDemand should include authentication cookie along with ClientId in the query string.</p> <p><u>Http API:</u> <u>Login Call:</u> Sample method call in the RemoteLogin class.. <code>remoteLoginTest.Login(RemoteLogin.LoginURL)</code></p>

Subsequent Call:

Sample post login method call, invoked using authentication cookie and ClientId.

```
remoteLoginTest.GetResponseContent(accessURL);
```

2. Download daily production feed

a. Download RTPP file list:

<https://edw.morningstar.com/GetRawPerformanceFileListXML.aspx?ClientId={ClientId}&Type=Price&ProductionType=&RegionId=&StartDate=YYYY-MM-DD&EndDate=YYYY-MM-DD>

This will return a file list in XML, see below:

```
<FileList>
- <File>
  <FileId>100427</FileId>
  <Date>2010-09-06</Date>
  <FileType>1</FileType>
  <FileTypeDesc>Price</FileTypeDesc>
  <FileName>RTPP_REG_ROW_TYPE_PRICE_20100906_PROD.ZIP</FileName>
  <FileSize>1557.81 kb</FileSize>
- <URL>
  http://edw.morningstar.com/download.aspx?ClientId={ClientId}&action=rawperformance&fileid=100427
</URL>
  <ProducedTime>2010-09-07 01:02</ProducedTime>
  <ProducedType>Full</ProducedType>
  <RegionId>ROW</RegionId>
</File>
- <File>
  <FileId>100428</FileId>
  <Date>2010-09-06</Date>
  <FileType>1</FileType>
  <FileTypeDesc>Price</FileTypeDesc>
  <FileName>RTPP_REG_ROW_TYPE_PRICE_20100906_CORRECTION.ZIP</FileName>
  <FileSize>566.78 kb</FileSize>
- <URL>
  http://edw.morningstar.com/download.aspx?ClientId={ClientId}&action=rawperformance&fileid=100428
</URL>
  <ProducedTime>2010-09-07 01:02</ProducedTime>
  <ProducedType>Full</ProducedType>
  <RegionId>ROW</RegionId>
</File>
```

We recommend the following data points are stored in the clients' database: FileName, URL, ProducedTime, ProducedType, RegionId, etc.

- **ProducedType:** Full (daily export of all updates) and Partial (intraday updates)
- **ProducedTime:** allows user to determine when the file was created.
- **RegionId:** ROW, NA, AUNZ, etc

As an ongoing process, daily jobs can be defined that will check and download RTPPP files by specifying the StartDate and/or EndDate

b. Download New DR/DR file list

<https://edw.morningstar.com/GetNewDRPackageListXML.aspx?ClientId={ClientId}>

This will return a file list in XML, see below

```
<FileList>
- <File>
  <FileId>2</FileId>
  <FileType>1</FileType>
  <FileTypeDesc>DailyReturn</FileTypeDesc>
  <FileName>DR_CATEGORIES_CCY_BAS_20100913.zip</FileName>
  <FileSize>3397.67 kb</FileSize>
- <URL>
  http://edw.morningstar.com/download.aspx?ClientId={ClientId}&action=newdr&fileid=2
</URL>
  <ProducedTime>2010-09-13 14:18</ProducedTime>
  <Currency>Base Currency</Currency>
  <Currency_ISO>BAS</Currency_ISO>
</File>
- <File>
  <FileId>3</FileId>
  <FileType>1</FileType>
  <FileTypeDesc>DailyReturn</FileTypeDesc>
  <FileName>DR_CATEGORIES_CCY_CHF_20100913.zip</FileName>
  <FileSize>505.43 kb</FileSize>
- <URL>
  http://edw.morningstar.com/download.aspx?ClientId={ClientId}&action=newdr&fileid=3
</URL>
  <ProducedTime>2010-09-13 14:18</ProducedTime>
  <Currency>Swiss Franc</Currency>
  <Currency_ISO>CHF</Currency_ISO>
</File>
```

We recommend the following data points are stored in the clients' database: FileName, URL, ProducedTime, Currency & Currency_ISO etc.

- **ProducedTime:** allows user to determine when the file was created.

c. Download RIPS file list:

<https://edw.morningstar.com/GetRipsFileListXML.aspx?ClientId={ClientId}&StartDate=YYYY-MM-DD&EndDate=YYYY-MM-DD&ProductionType=&RegionId=>

This will return a file list in XML, see below

```

- <File>
  <FileId>11530</FileId>
  <Date>2010-08-10</Date>
  <FileType>1</FileType>
  <FileTypeDesc>Rips</FileTypeDesc>
  <FileName>RIPS_REG_ROW_20100810_CORRECTION_1.ZIP</FileName>
  <FileSize>2820.95 kb</FileSize>
- <URL>
  http://edw.morningstar.com/download.aspx?ClientId={ ClientId }&action=Rips&fileid=11530
</URL>
  <ProducedTime>2010-08-09 22:04</ProducedTime>
  <ProducedType>Partial</ProducedType>
  <RegionId>ROW</RegionId>
</File>
- <File>
  <FileId>11539</FileId>
  <Date>2010-08-10</Date>
  <FileType>1</FileType>
  <FileTypeDesc>Rips</FileTypeDesc>
  <FileName>RIPS_REG_ROW_20100810_PROD.ZIP</FileName>
  <FileSize>12648.47 kb</FileSize>
- <URL>
  http://edw.morningstar.com/download.aspx?ClientId={ ClientId }&action=Rips&fileid=11539
</URL>
  <ProducedTime>2010-08-10 03:08</ProducedTime>
  <ProducedType>Full</ProducedType>
  <RegionId>ROW</RegionId>
</File>

```

We recommend the following data points are stored in the clients' database: FileName, URL, ProducedTime, ProducedType, RegionId, etc.

- **ProducedType:** Full (daily export of all updates) and Partial (intraday updates)
- **ProducedTime:** allows user to determine when the file was created.
- **RegionId:** ROW, NA, AUNZ, etc

As an ongoing process, daily jobs could be defined that will check and download RIPS files by specifying the StartDate and/or EndDate.

d. Download the actual file

Extract the URL from the above list and make a HTTP call to download the actual file. The file will be delivered as a ZIP compressed TXT file

DailyProductionPackageType will be any one of the following values:

- RTPP,
- DR,
- Rips,
- NewDR,
- MEP,
- MasterFile,
- CalculationGroup,
- MarketHolidays,
- Proprietary

Output fileName can be used when storing the file onto a local server.

Important Note: There is a column called "Deleted" in the daily production files. If "Deleted" = 1, please delete the record from your database; for "Deleted" = 0, please insert the data into your database or update the data that you already have stored

The below method call has the sample code showing how to download a file onto local hard drive.

```
remoteLoginTest.SaveResponseToFile(accessURL, @"D:\File1.zip")
```

3. Download Extended Masterlist (Master file)

The Masterlist file contains two TXT files: "Master" and "AFS". The Master file provides information about the whole universe Morningstar carries. It contains mapping information between third party identifiers (such as ISIN) and Morningstar's internal identifiers. Examples of data points that could be of interest are "legal structure", whether an investment is "Active" or "Obsolete", base currency, income/accumulation flag, CUSIP, ISIN, SEDOL, pricing frequency/delay. AFS file contains countries available for sale.

Here is the function to retrieve the Master file information:

<https://edw.morningstar.com/download.aspx?ClientId={ClientId}&action=ExtendedMasterlist>

This will return a file list in the following XML format:

```
<FileList>
- <File>
  <FileId>1</FileId>
  <FileName>Master.zip</FileName>
  <FileSize>1140000</FileSize>
  <URL>http://edw.morningstar.com/download.aspx?
    ClientId={ClientId}&action=ExtendedMasterlist</URL>
  <ProducedTime>2010-05-13 14:56:00</ProducedTime>
</File>
</FileList>
```

4. Sample Code

Please download the code from the OnDemand user interface or download the Sample Postman Collection

The screenshot shows the Morningstar OnDemand user interface. At the top, there is a navigation bar with tabs: Home, Warehouse, Documents, RTPP, ESG, Legacy DR, DR, RIPS, MEP, and Dictionary. Below the navigation bar, the 'Documentation' section is visible on the left, and 'On Demand Release Notes' is on the right. In the 'Documentation' section, a list of links is shown, with 'Sample Code' and 'Sample Postman Collection' highlighted by a red rectangular box. The 'On Demand Release Notes' section on the right lists various release notes, including 'Primary Share in Market Indicator', 'ESG Pillar Score Data Point Retirement', 'Detailed Asset Allocation Methodology Update', 'On Demand European MIFID (EMT) 3.1', 'Morningstar On Demand ESG SFDR Release', 'OnDemand Disaster Recovery Test', and 'OnDemand Valuation Data Point Change'.

Disclaimer. Please ensure that the production account is not shared with any other personal usage. A client's universe rights are defined contractually. Clients may have access to a larger universe via On Demand but the contractual right must be respected. Please contact your Morningstar Implementation Manager for any questions on how to ensure that the implementation complies with the contractual obligations.