MSRS Roadmap

As of February 20, 2019
<table>
<thead>
<tr>
<th>Product - Action Required</th>
<th>Deadline</th>
<th>Who May Be Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSRS - Update processes to use basic authentication</td>
<td>March 13</td>
<td>All MSRS Users. Change is <strong>required</strong> for continued use of browserless.</td>
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## MSRS Roadmap

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<tr>
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<th>Jan</th>
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<th>May</th>
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<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tbody>
<tr>
<td><strong>Browserless Authentication</strong></td>
<td></td>
<td></td>
<td><img src="image" alt="Start Date" /></td>
<td><img src="image" alt="End Date" /></td>
<td><img src="image" alt="Start Date" /></td>
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<tr>
<td>Production</td>
<td>Jan 24</td>
<td></td>
<td><img src="image" alt="Start Date" /></td>
<td><img src="image" alt="End Date" /></td>
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<td><strong>SUMA Functionality</strong></td>
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**Legend**
- ![Start Date](image)
- ![End Date](image)
MSRS Basic Authentication

• Production on January 24th
• MSRS has been running in “Compatibility Mode” since 1/24
  – Old and New (Basic Authentication) authentication requests are valid
  – PJM will be removing Compatibility Mode on 3/13
    • Only New authentication requests will be valid
    • Non-complying members must update their processes for browserless requests
      – Filetransfer.jar will no longer work
      – Username/Password in URL will no longer work
• Email mss@pjm.com with questions/comments

• FAQs

• December, 2018 MSS
  – https://pjm.com/-/media/committees-groups/subcommittees/mss/20181213/20181213-item-01a-basic-authentication-and-suma-functionality.ashx

• January, 2019 Tech Change Forum

• MSRS Browserless Basic Authentication Examples:
Browserless Basic Authentication
Technical Details
• The MSRS browserless reporting interface requires username and password in the URL. Example:


• Current format fully encrypted via HTTPS in transport

• However -- deprecated practice due to security issues
  – Any visible passwords create a risk
Browserless Authentication Release Details

- Browserless requests must change to post credentials using basic authentication
- The filetransfer.jar interface will no longer work for MSRS

This will no longer work: java -cp oreilly.jar;filetransfer.jar; com.pjm.FileTransfer
debug=true username="YourUsername" password="YourPassword" app=msrs
action=download format=x version=l report="Billing" start=01/01/2012 stop=01/31/2012
result="billing.csv"

- Easy replacements for filetransfer.jar include curl and wget, available on both Windows and Linux
- PJM also provides examples in Java 8 and Python 3
MSRS Browserless Basic Authentication Examples

Browser Popup (IE, Chrome, Firefox)  Java Code Snippet

```
String authString = username +:" + password;
String basicAuth = Basic + java.util.Base64.getEncoder().encodeToString(authString.getBytes());
URL url = new URL(url);
HttpURLConnection urlConnection = (HttpURLConnection) url.openConnection();
urlConnection.setRequestProperty("Authorization", basicAuth);
BufferedReader responseBuffer = new BufferedReader(new InputStreamReader(urlConnection.getInputStream()));
String responseOutput;
while ((responseOutput = responseBuffer.readLine()) != null) { System.out.println(responseOutput); } System.out.println("*** END ***");
```

Command Line using curl

```
Enter host password for user 'MyUsername':
```

Full examples can be found here

PJM.com → Markets & Operations → Billing, Settlements & Credit → MSRS Reports Documentation
Browserless Authentication Release Impact

- No change to user interface logins from PJM.com and PJM Tools
- Browserless documentation is currently up to date on pjm.com
- Implemented with Single User Multi-Account (SUMA) changes to allow users to make changes for both at the same time

<table>
<thead>
<tr>
<th>Impact</th>
<th>Action Required</th>
<th>Outage</th>
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<tbody>
<tr>
<td>User Interface</td>
<td>n/a</td>
<td>n/a</td>
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<tr>
<td>Browserless</td>
<td>Members will need to update their processes to use basic authentication</td>
<td>1 hour</td>
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Product Details
Market Settlements Reporting System (MSRS) is a tool used by market participants to retrieve market settlements reports and monthly billing statements.

Key Product Features

- 200+ settlement reports
- Provide settlement and billing details
- Viewable in the browser
- CSV and XML download capability