

ByAllAccounts DataConnect API Samples

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OVERVIEW

The Morningstar® ByAllAccountsSM service provides normalized aggregation of client account data from more than 15,000 financial institutions using sophisticated artificial intelligence to automatically gather and transform financial data.

About this document

This document provides sample request and response XML for account setup using DataConnect API operations. The code samples illustrate the complex protocols of establishing complete account financial institution credentials for an account within the ByAllAccounts system.

Where to get more information

- The DataConnect API provides additional operations that you may wish to use depending on your needs. For more information, refer to *DataConnect V4 Ultra User Guide* posted at http://www.byallaccounts.net/Manuals/DataConnect/DataConnect_V4_Ultra_User_Guide.PDF.
- For details on managing single sign on (SSO) users refer to *AccountView Single Sign-on Guide* http://www.byallaccounts.net/Manuals/Accountview/AccountView_SingleSignOn.pdf

ACCOUNTS WITH CHALLENGE SECURITY QUESTIONS

This section demonstrates adding an account credential and account for an institution that uses security challenge questions and answers. The operations in sequence are as follows:

1. **Add an account credential** to the system with the core credential information required by the institution. Page [2](#).
2. **Test the account credential** – use the credential to attempt access to the institution thereby discovering additional security challenges (such as a security question) requiring a user response. Page [3](#).
3. **Resolve Security Question challenges (SQAs)** – receive back the security challenge questions to present to the user to obtain answers; repeat the Test and Resolve Security Question challenge steps until there are no more challenges. Page [6](#).
4. **Discover accounts available** on an account credential. Page [10](#).
5. **Add accounts to the credential.** Page [14](#).
6. **Aggregate the newly added accounts.** Page [16](#).

Add account credential

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>

  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTCREDADDRQ>
    <PROFILE_ID>14385</PROFILE_ID>
    <NAME>DataConnect Account Discovery/Credential Test FI 002 - 11</NAME>
    <FI_ID>31244</FI_ID>
    <ACCOUNT_LOGIN>username</ACCOUNT_LOGIN>
    <ACCOUNT_PIN>`</ACCOUNT_PIN>
  </ACCTCREDADDRQ>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDADDRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <PROFILE_ID>14385</PROFILE_ID>
    <ID>11761</ID>
  </ACCTCREDADDRS>
</DATACONNECTRS>
```

Test account credential

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>

  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTCREDTESTRO_A>
    <PROFILE_ID>14385</PROFILE_ID>
    <ID>11761</ID>
    <ALLOW_USERINPUT_RESPONSE></ALLOW_USERINPUT_RESPONSE>
  </ACCTCREDTESTRO_A>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDTESTRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation started</ERRMSG>
    </STATUS>
    <PROFILE_ID>14385</PROFILE_ID>
    <RECEIPT>5384026238050795670</RECEIPT>
    <RECEIPT_EXP>20161212204555 [-5:EST]</RECEIPT_EXP>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </ACCTCREDTESTRS_A>
</DATACONNECTRS>
```

<DATACONNECTRO>

<VERSION>VERSION4.0</VERSION>

<LOGINRO>

<LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>

<LOGIN_PW>xxxxxx</LOGIN_PW>

</LOGINRO>

<DATACLAIMRO>

<RECEIPT>5384026238050795670</RECEIPT>

</DATACLAIMRO>

</DATACONNECTRO>

<DATACONNECTRS>

<VERSION>VERSION4.0</VERSION>

<LOGINRS>

<STATUS>

<ERRCODE>0</ERRCODE>

<ERRMSG>Success</ERRMSG>

</STATUS>

</LOGINRS>

<ACCTCREDTESTRS_A>

<STATUS>

<ERRCODE>0</ERRCODE>

<ERRMSG>Success</ERRMSG>

</STATUS>

<PROFILE_ID>14385</PROFILE_ID>

<ACCOUNT_CREDENTIAL_STATUS>

<ID>11761</ID>

<LAST_AUTHENTICATION_ATTEMPT>20161212184555 [-5:EST]</LAST_AUTHENTICATION_ATTEMPT>

<AUTHENTICATION_STATUS_ERRCODE>1007</AUTHENTICATION_STATUS_ERRCODE>

<AUTHENTICATION_STATUS_INFO>Error 1007 accessing account credential on Dec 12, 2016 6:45:55 PM.

WebPortfolio could not determine an answer for the security question: 'In what city did you meet your spouse for the first time?' Please provide the answer to this question and try again.</AUTHENTICATION_STATUS_INFO>

<FAILEDSQLIST>

<SQA>

<ID>45803</ID>

<AC_ID>11761</AC_ID>

<QUESTION>In what city did you meet your spouse for the first time?</QUESTION>

</SQA>

</FAILEDSQLIST>

</ACCOUNT_CREDENTIAL_STATUS>

</ACCTCREDTESTRS_A>

</DATACONNECTRS>

Resolve SQAs

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTCREDMODRO>
    <PROFILE_ID>14385</PROFILE_ID>
    <ID>11761</ID>
    <ACCOUNT_LOGIN>username</ACCOUNT_LOGIN>
    <ACCOUNT_PIN>xxx</ACCOUNT_PIN>
    <SQA>
      <ID>45803</ID>
      <QUESTION>In what city did you meet your spouse for the first time?</QUESTION>
      <ANSWER>Boston</ANSWER>
    </SQA>
  </ACCTCREDMODRO>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDMODRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </ACCTCREDMODRS>
```

```
</STATUS>
<PROFILE_ID>14385</PROFILE_ID>
<ID>11761</ID>
</ACCTCREDMODRS>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRQ>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRQ>
  <ACCTCREDTESTRO_A>
    <PROFILE_ID>14385</PROFILE_ID>
    <ID>11761</ID>
    <ALLOW_USERINPUT_RESPONSE></ALLOW_USERINPUT_RESPONSE>
  </ACCTCREDTESTRO_A>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDTESTRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation started</ERRMSG>
    </STATUS>
    <PROFILE_ID>14385</PROFILE_ID>
    <RECEIPT>7073779809167822014</RECEIPT>
    <RECEIPT_EXP>20161212204604 [-5:EST]</RECEIPT_EXP>
```

```
<CLAIM_WAIT>1000</CLAIM_WAIT>
</ACCTCREDTESTRS_A>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <DATACLAIMRO>
    <RECEIPT>7073779809167822014</RECEIPT>
  </DATACLAIMRO>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDTESTRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <PROFILE_ID>14385</PROFILE_ID>
    <ACCOUNT_CREDENTIAL_STATUS>
      <ID>11761</ID>
      <LAST_AUTHENTICATION_ATTEMPT>20161212184604 [-
5:EST]</LAST_AUTHENTICATION_ATTEMPT>
      <AUTHENTICATION_STATUS_ERRCODE>1006</AUTHENTICATION_STATUS_ERRCODE>
```

```
</ACCOUNT_CREDENTIAL_STATUS>  
</ACCTCREDTESTRS_A>  
</DATACONNECTRS>
```

Discover accounts

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTDISCRO_A>
    <FP_ID>14385</FP_ID>
    <ID>11761</ID>
    <INCREMENTAL/>
  </ACCTDISCRO_A>
</DATACONNECTRO>

<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTDISCRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation started</ERRMSG>
    </STATUS>
    <FP_ID>14385</FP_ID>
    <RECEIPT>5300697352928205114</RECEIPT>
    <RECEIPT_EXP>20161212204610 [-5:EST]</RECEIPT_EXP>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </ACCTDISCRS_A>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <DATACLAIMRO>
    <RECEIPT>5300697352928205114</RECEIPT>
  </DATACLAIMRO>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <DATACLAIMRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation in progress</ERRMSG>
    </STATUS>
    <RECEIPT>5300697352928205114</RECEIPT>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </DATACLAIMRS>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <DATACLAIMRO>
```

```
<RECEIPT>5300697352928205114</RECEIPT>
</DATACLAIMRO>
</DATACONNECTRO>

<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTDISCRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <FP_ID>14385</FP_ID>
    <DISCOVEREDACCOUNT_STATUS>
      <ID>11761</ID>
      <DISCOVEREDACCOUNT_STATUS_TIMESTAMP>2016-12-12
18:46:11</DISCOVEREDACCOUNT_STATUS_TIMESTAMP>
      <DISCOVEREDACCOUNT_STATUS_INFO>Account Discovery successful on Dec 12, 2016
6:46:11 PM.
    </DISCOVEREDACCOUNT_STATUS_INFO>

    <DISCOVEREDACCOUNT_STATUS_ERRCODE>1005</DISCOVEREDACCOUNT_STATUS_ERR
CODE>
  </DISCOVEREDACCOUNT_STATUS>
  <DISCOVEREDACCOUNTLIST>
    <DISCOVEREDACCOUNT>
      <ID>184561</ID>
      <ACCOUNT_NUMBER>123456789</ACCOUNT_NUMBER>
      <ACCOUNT_NAME>Test Account-1 XXXXX6789</ACCOUNT_NAME>
      <TAX_ID>222333444</TAX_ID>
    </DISCOVEREDACCOUNT>
```

```
<DISCOVEREDACCOUNT>
<ID>184562</ID>
<ACCOUNT_NUMBER>987654321</ACCOUNT_NUMBER>
<ACCOUNT_NAME>Test Account-2 XXXXX4321</ACCOUNT_NAME>
<TAX_ID>222333444</TAX_ID>
</DISCOVEREDACCOUNT>
<DISCOVEREDACCOUNT>
<ID>184563</ID>
<ACCOUNT_NUMBER>444555666</ACCOUNT_NUMBER>
<ACCOUNT_NAME>Test Account-3 XXXXX5666</ACCOUNT_NAME>
<TAX_ID>111777444</TAX_ID>
</DISCOVEREDACCOUNT>
<DISCOVEREDACCOUNT>
<ID>184564</ID>
<ACCOUNT_NUMBER>Joe & Jennifer's IRA</ACCOUNT_NUMBER>
<ACCOUNT_NAME>Joe & Jennifer's Individual Retirement
Account</ACCOUNT_NAME>
<TAX_ID>008675309</TAX_ID>
</DISCOVEREDACCOUNT>
<DISCOVEREDACCOUNT>
<ID>184565</ID>
<ACCOUNT_NUMBER>3141592653</ACCOUNT_NUMBER>
<ACCOUNT_NAME>Account with lt and gt symbols in it: x&lt;2,x&gt;0.
XXXXXX2653</ACCOUNT_NAME>
<TAX_ID>314159265</TAX_ID>
</DISCOVEREDACCOUNT>
</DISCOVEREDACCOUNTLIST>
</ACCTDISCRS_A>
</DATACONNECTRS>
```


Add accounts to credential

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTADDRQ>
    <USER_IDENT>
      <PERSON_ID>15013</PERSON_ID>
    </USER_IDENT>
    <NAME>Test Account-1 XXXXX6789</NAME>
    <AC_ID>11761</AC_ID>
    <ACCOUNT_NUMBER>123456789</ACCOUNT_NUMBER>
    <GATHER_LOTS>0</GATHER_LOTS>
    <DISCOVERED_ACCOUNT_ID>184561</DISCOVERED_ACCOUNT_ID>
  </ACCTADDRQ>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTADDRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <USER_IDENT>
      <PERSON_ID>15013</PERSON_ID>
```

**</USER_IDENT>
<FP_ID>14385</FP_ID>
<ID>452047</ID>
</ACCTADDRS>
</DATACONNECTRS>**

Aggregate accounts

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTUPDRQ_A>
    <FP_ID>14385</FP_ID>
    <ACCOUNT_ID>452047</ACCOUNT_ID>
    <FP_ID>14385</FP_ID>
    <ACCOUNT_ID>452050</ACCOUNT_ID>
    <FP_ID>14385</FP_ID>
    <ACCOUNT_ID>452051</ACCOUNT_ID>
    <FP_ID>14385</FP_ID>
    <ACCOUNT_ID>452048</ACCOUNT_ID>
    <FP_ID>14385</FP_ID>
    <ACCOUNT_ID>452049</ACCOUNT_ID>
  </ACCTUPDRQ_A>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTUPDRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation started</ERRMSG>
    </STATUS>
  </ACCTUPDRS_A>
</DATACONNECTRS>
```

```
</STATUS>  
<FP_ID>14385</FP_ID>  
<RECEIPT>1603151565227966107</RECEIPT>  
<RECEIPT_EXP>20161212204613 [-5:EST]</RECEIPT_EXP>  
<CLAIM_WAIT>1000</CLAIM_WAIT>  
</ACCTUPDRS_A>  
</DATACONNECTRS>
```

```
<DATACONNECTRO>  
<VERSION>VERSION4.0</VERSION>  
<LOGINRO>  
<LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>  
<LOGIN_PW>xxxxxx</LOGIN_PW>  
</LOGINRO>  
<DATACLAIMRO>  
<RECEIPT>1603151565227966107</RECEIPT>  
</DATACLAIMRO>  
</DATACONNECTRO>
```

```
<DATACONNECTRS>  
<VERSION>VERSION4.0</VERSION>  
<LOGINRS>  
<STATUS>  
<ERRCODE>0</ERRCODE>  
<ERRMSG>Success</ERRMSG>  
</STATUS>  
</LOGINRS>  
<ACCTUPDRS_A>  
<STATUS>  
<ERRCODE>0</ERRCODE>  
<ERRMSG>Success</ERRMSG>  
</STATUS>  
<FP_ID>14385</FP_ID>  
<ACCOUNT_STATUS>
```

```
<ID>452047</ID>
<LAST_UPDATE_ATTEMPT>20161212184613 [-5:EST]</LAST_UPDATE_ATTEMPT>
<LAST_UPDATED>20161212184615 [-5:EST]</LAST_UPDATED>
<UPDATE_STATUS_ERRCODE>1005</UPDATE_STATUS_ERRCODE>
<UPDATE_STATUS_INFO>Update successful on Dec 12, 2016 6:46:15 PM.
</UPDATE_STATUS_INFO>
</ACCOUNT_STATUS>
<ACCOUNT_STATUS>
<ID>452050</ID>
<LAST_UPDATE_ATTEMPT>20161212184613 [-5:EST]</LAST_UPDATE_ATTEMPT>
<UPDATE_STATUS_ERRCODE>1005</UPDATE_STATUS_ERRCODE>
<UPDATE_STATUS_INFO>Update successful on Dec 12, 2016 6:46:15 PM.
</UPDATE_STATUS_INFO>
</ACCOUNT_STATUS>
<ACCOUNT_STATUS>
<ID>452051</ID>
<LAST_UPDATE_ATTEMPT>20161212184613 [-5:EST]</LAST_UPDATE_ATTEMPT>
<UPDATE_STATUS_ERRCODE>1005</UPDATE_STATUS_ERRCODE>
<UPDATE_STATUS_INFO>Update successful on Dec 12, 2016 6:46:15 PM.
</UPDATE_STATUS_INFO>
</ACCOUNT_STATUS>
<ACCOUNT_STATUS>
<ID>452048</ID>
<LAST_UPDATE_ATTEMPT>20161212184613 [-5:EST]</LAST_UPDATE_ATTEMPT>
<UPDATE_STATUS_ERRCODE>1005</UPDATE_STATUS_ERRCODE>
<UPDATE_STATUS_INFO>Update successful on Dec 12, 2016 6:46:15 PM.
</UPDATE_STATUS_INFO>
</ACCOUNT_STATUS>
<ACCOUNT_STATUS>
<ID>452049</ID>
<LAST_UPDATE_ATTEMPT>20161212184613 [-5:EST]</LAST_UPDATE_ATTEMPT>
<UPDATE_STATUS_ERRCODE>1005</UPDATE_STATUS_ERRCODE>
<UPDATE_STATUS_INFO>Update successful on Dec 12, 2016 6:46:15 PM.
</UPDATE_STATUS_INFO>
</ACCOUNT_STATUS>
</ACCTUPDRS_A>
```

</DATACONNECTRS>

ACCOUNTS WITH ACTIVATION CODE SECURITY CHALLENGES

This section provides code samples that demonstrate how to add an account credential and account for an institution that uses activation code security challenges, also known as In Session Activation Codes (ISAC). The operations in sequence are as follows:

1. **Add an account credential to the system** with the core credential information required by the institution. Page [21](#).
2. **Test the account credential** – use the credential to attempt access to the institution thereby discovering additional security challenges (such as a security question) requiring a user response; provide user prompts to enable the user to complete the security challenge by choosing the means of receiving the activation code (email, text message, etc.) and then entering the activation code into the system. Page [22](#).
3. **Discover accounts available** on an account credential. Page [32](#).
4. **Add the discovered accounts** to the system. Page [36](#).
5. **Aggregate the newly added accounts**. Page [38](#).

Add account credential

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>

  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTCREDADDRO>
    <PROFILE_ID>14385</PROFILE_ID>
    <NAME>Fidelity (Demo ISAC) 7</NAME>
    <FI_ID>32098</FI_ID>
    <ACCOUNT_LOGIN>yourname_1212</ACCOUNT_LOGIN>
    <ACCOUNT_PIN>1212</ACCOUNT_PIN>
  </ACCTCREDADDRO>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDADDRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <PROFILE_ID>14385</PROFILE_ID>
    <ID>11762</ID>
  </ACCTCREDADDRS>
</DATACONNECTRS>
```


Test account credential (ISAC Process)

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>

  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTCREDTESTRO_A>
    <PROFILE_ID>14385</PROFILE_ID>
    <ID>11762</ID>
    <ALLOW_USERINPUT_RESPONSE></ALLOW_USERINPUT_RESPONSE>
  </ACCTCREDTESTRO_A>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDTESTRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation started</ERRMSG>
    </STATUS>
    <PROFILE_ID>14385</PROFILE_ID>
    <RECEIPT>7109086977648823592</RECEIPT>
    <RECEIPT_EXP>20161212214821 [-5:EST]</RECEIPT_EXP>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </ACCTCREDTESTRS_A>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <DATACLAIMRO>
    <RECEIPT>7109086977648823592</RECEIPT>
  </DATACLAIMRO>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <DATACLAIMRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation in progress</ERRMSG>
    </STATUS>
    <RECEIPT>7109086977648823592</RECEIPT>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </DATACLAIMRS>
</DATACONNECTRS>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
```

```
</STATUS>
</LOGINRS>
<ACCTCREDTESTRS_A>
  <STATUS>
    <ERRCODE>0</ERRCODE>
    <ERRMSG>Operation paused, awaiting user input result.</ERRMSG>
  </STATUS>
  <PROFILE_ID>14385</PROFILE_ID>
  <RECEIPT>7109086977648823592</RECEIPT>
  <USERINPUT>
    <INPUT>
      <INSTRUCTIONS>The institution needs to send you an identification
code.</INSTRUCTIONS>
    </INPUT>
    <INPUT>
      <INSTRUCTIONS>This is a time-sensitive process that may require more input from
you.</INSTRUCTIONS>
    </INPUT>
    <INPUT>
      <INSTRUCTIONS>Choose how you would like to receive the code:</INSTRUCTIONS>
    </INPUT>
    <INPUT>
      <INPUTRADIOGROUP>
        <IDENTIFIER>1</IDENTIFIER>
        <VALUE>2</VALUE>
        <INPUTRADIO>
          <INSTRUCTIONS>xxx-xxx-8989</INSTRUCTIONS>
          <IDENTIFIER>2</IDENTIFIER>
          <LABEL>Text</LABEL>
        </INPUTRADIO>
        <INPUTRADIO>
          <IDENTIFIER>3</IDENTIFIER>
          <LABEL>Voice</LABEL>
        </INPUTRADIO>
        <INPUTRADIO>
          <INSTRUCTIONS>xxx-xxx-7777</INSTRUCTIONS>
```

```
<IDENTIFIER>4</IDENTIFIER>
<LABEL>Text</LABEL>
</INPUTRADIO>
<INPUTRADIO>
  <IDENTIFIER>5</IDENTIFIER>
  <LABEL>Voice</LABEL>
</INPUTRADIO>
<INPUTRADIO>
  <INSTRUCTIONS> </INSTRUCTIONS>
  <IDENTIFIER>6</IDENTIFIER>
  <LABEL>r...y@comcast.net</LABEL>
</INPUTRADIO>
<INPUTRADIO>
  <IDENTIFIER>7</IDENTIFIER>
  <LABEL>Call to get a code</LABEL>
</INPUTRADIO>
</INPUTRADIOGROUP>
</INPUT>
<INPUT>
  <INSTRUCTIONS>If none of the above methods work, please contact technical support for
assistance.</INSTRUCTIONS>
</INPUT>
</USERINPUT>
<USERINPUT_EXP>20161212201822 [-5:EST]</USERINPUT_EXP>
<TIMEOUT_INTERVAL>90000</TIMEOUT_INTERVAL>
</ACCTCREDTESTRS_A>
</DATACONNECTRS>

<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>

  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <USERINPUTRESULTRO>
```

```
<RECEIPT>7109086977648823592</RECEIPT>
<USERINPUTRESULT>
  <USERINPUT>
    <INPUT>
      <INPUTRADIOGROUP>
        <IDENTIFIER>1</IDENTIFIER>
        <VALUE>2</VALUE>
      </INPUTRADIOGROUP>
    </INPUT>
  </USERINPUT>
</USERINPUTRESULT>
</USERINPUTRESULTRO>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <USERINPUTRESULTRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <RECEIPT>7109086977648823592</RECEIPT>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </USERINPUTRESULTRS>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
```

```
<LOGIN_PW>xxxxxx</LOGIN_PW>
</LOGINRQ>
<DATACLAIMRQ>
  <RECEIPT>7109086977648823592</RECEIPT>
</DATACLAIMRQ>
</DATACONNECTRQ>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <DATACLAIMRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation in progress</ERRMSG>
    </STATUS>
    <RECEIPT>7109086977648823592</RECEIPT>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </DATACLAIMRS>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRQ>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRQ>
  <DATACLAIMRQ>
    <RECEIPT>7109086977648823592</RECEIPT>
  </DATACLAIMRQ>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <DATACLAIMRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation in progress</ERRMSG>
    </STATUS>
    <RECEIPT>7109086977648823592</RECEIPT>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </DATACLAIMRS>
</DATACONNECTRS>
```

```
<DATACONNECTRQ>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRQ>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRQ>
  <DATACLAIMRQ>
    <RECEIPT>7109086977648823592</RECEIPT>
  </DATACLAIMRQ>
</DATACONNECTRQ>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
```

```
</STATUS>
</LOGINRS>
<ACCTCREDTESTRS_A>
  <STATUS>
    <ERRCODE>0</ERRCODE>
    <ERRMSG>Operation paused, awaiting user input result.</ERRMSG>
  </STATUS>
  <PROFILE_ID>14385</PROFILE_ID>
  <RECEIPT>7109086977648823592</RECEIPT>
  <USERINPUT>
    <INPUT>
      <INSTRUCTIONS>You should receive the identification code shortly.</INSTRUCTIONS>
    </INPUT>
    <INPUT>
      <INSTRUCTIONS>This process is time-sensitive. Enter and submit the code as soon as you
receive it.</INSTRUCTIONS>
    </INPUT>
    <INPUT>
      <INPUTTEXT>
        <INSTRUCTIONS>Hint : Use the string ABC123</INSTRUCTIONS>
        <IDENTIFIER>1</IDENTIFIER>
        <LABEL>Enter your temporary Identification Code </LABEL>
        <VALUE></VALUE>
      </INPUTTEXT>
    </INPUT>
  </USERINPUT>
  <USERINPUT_EXP>20161212201832 [-5:EST]</USERINPUT_EXP>
  <TIMEOUT_INTERVAL>90000</TIMEOUT_INTERVAL>
</ACCTCREDTESTRS_A>
</DATACONNECTRS>

<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
```



```
</LOGINRQ>
<USERINPUTRESULTRQ>
  <RECEIPT>7109086977648823592</RECEIPT>
  <USERINPUTRESULT>
    <USERINPUT>
      <INPUT>
        <INPUTTEXT>
          <IDENTIFIER>1</IDENTIFIER>
          <VALUE>ABC123</VALUE>
        </INPUTTEXT>
      </INPUT>
    </USERINPUT>
  </USERINPUTRESULT>
</USERINPUTRESULTRQ>
</DATACONNECTRQ>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <USERINPUTRESULTRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <RECEIPT>7109086977648823592</RECEIPT>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </USERINPUTRESULTRS>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
```

```
<LOGINRQ>
  <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
  <LOGIN_PW>xxxxxx</LOGIN_PW>
</LOGINRQ>
<DATACLAIMRQ>
  <RECEIPT>7109086977648823592</RECEIPT>
</DATACLAIMRQ>
</DATACONNECTRQ>

<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTCREDTESTRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <PROFILE_ID>14385</PROFILE_ID>
    <ACCOUNT_CREDENTIAL_STATUS>
      <ID>11762</ID>
      <LAST_AUTHENTICATION_ATTEMPT>20161212194856 [-
5:EST]</LAST_AUTHENTICATION_ATTEMPT>
      <AUTHENTICATION_STATUS_ERRCODE>1006</AUTHENTICATION_STATUS_ERRCODE>
    </ACCOUNT_CREDENTIAL_STATUS>
  </ACCTCREDTESTRS_A>
</DATACONNECTRS>
```

Discover accounts

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>

  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTDISCRQ_A>
    <FP_ID>14385</FP_ID>
    <ID>11762</ID>
    <INCREMENTAL/>
  </ACCTDISCRQ_A>
</DATACONNECTRO>

<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTDISCRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation started</ERRMSG>
    </STATUS>
    <FP_ID>b</FP_ID>
    <RECEIPT>7223661815225347981</RECEIPT>
    <RECEIPT_EXP>20161212214859 [-5:EST]</RECEIPT_EXP>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </ACCTDISCRS_A>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <DATACLAIMRO>
    <RECEIPT>7223661815225347981</RECEIPT>
  </DATACLAIMRO>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <DATACLAIMRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation in progress</ERRMSG>
    </STATUS>
    <RECEIPT>7223661815225347981</RECEIPT>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </DATACLAIMRS>
</DATACONNECTRS>
```

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>b</LOGIN_PW>
  </LOGINRO>
```

```
<DATACLAIMRQ>
  <RECEIPT>7223661815225347981</RECEIPT>
</DATACLAIMRQ>
</DATACONNECTRQ>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTDISCRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <FP_ID>14385</FP_ID>
    <DISCOVEREDACCOUNT_STATUS>
      <ID>11762</ID>
      <DISCOVEREDACCOUNT_STATUS_TIMESTAMP>2016-12-12
19:49:00</DISCOVEREDACCOUNT_STATUS_TIMESTAMP>
      <DISCOVEREDACCOUNT_STATUS_INFO>Account Discovery successful on Dec 12, 2016
7:49:00 PM.
    </DISCOVEREDACCOUNT_STATUS_INFO>
```

```
<DISCOVEREDACCOUNT_STATUS_ERRCODE>1005</DISCOVEREDACCOUNT_STATUS_ERR
CODE>
</DISCOVEREDACCOUNT_STATUS>
<DISCOVEREDACCOUNTLIST>
  <DISCOVEREDACCOUNT>
    <ID>184571</ID>
    <ACCOUNT_NUMBER>9876543</ACCOUNT_NUMBER>
    <ACCOUNT_NAME>IRA account XXX6543</ACCOUNT_NAME>
    <TAX_ID>111222333</TAX_ID>
```

</DISCOVEREDACCOUNT>
</DISCOVEREDACCOUNTLIST>
</ACCTDISCRS_A>
</DATACONNECTRS>

Add accounts to credential

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTADDRQ>
    <USER_IDENT>
      <PERSON_ID>15013</PERSON_ID>
    </USER_IDENT>
    <NAME>IRA account XXX6543</NAME>
    <AC_ID>11762</AC_ID>
    <ACCOUNT_NUMBER>9876543</ACCOUNT_NUMBER>
    <GATHER_LOTS>0</GATHER_LOTS>
    <DISCOVERED_ACCOUNT_ID>184571</DISCOVERED_ACCOUNT_ID>
  </ACCTADDRQ>
</DATACONNECTRO>
```

```
<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTADDRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
    <USER_IDENT>
      <PERSON_ID>15013</PERSON_ID>
```

**</USER_IDENT>
<FP_ID>14385</FP_ID>
<ID>452052</ID>
</ACCTADDRS>
</DATACONNECTRS>**

Aggregate accounts

```
<DATACONNECTRO>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRO>
    <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
    <LOGIN_PW>xxxxxx</LOGIN_PW>
  </LOGINRO>
  <ACCTUPDRQ_A>
    <FP_ID>14385</FP_ID>
    <ACCOUNT_ID>452052</ACCOUNT_ID>
  </ACCTUPDRQ_A>
</DATACONNECTRO>

<DATACONNECTRS>
  <VERSION>VERSION4.0</VERSION>
  <LOGINRS>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Success</ERRMSG>
    </STATUS>
  </LOGINRS>
  <ACCTUPDRS_A>
    <STATUS>
      <ERRCODE>0</ERRCODE>
      <ERRMSG>Operation started</ERRMSG>
    </STATUS>
    <FP_ID>14385</FP_ID>
    <RECEIPT>2320535735303328255</RECEIPT>
    <RECEIPT_EXP>20161212214903 [-5:EST]</RECEIPT_EXP>
    <CLAIM_WAIT>1000</CLAIM_WAIT>
  </ACCTUPDRS_A>
</DATACONNECTRS>

<DATACONNECTRO>
```

```
<VERSION>VERSION4.0</VERSION>
<LOGINRQ>
  <LOGIN_NAME>av-invrw-slim2</LOGIN_NAME>
  <LOGIN_PW>xxxxxx</LOGIN_PW>
</LOGINRQ>
<DATACLAIMRQ>
  <RECEIPT>2320535735303328255</RECEIPT>
</DATACLAIMRQ>
</DATACONNECTRQ>
```

```
<DATACONNECTRS>
<VERSION>VERSION4.0</VERSION>
<LOGINRS>
  <STATUS>
    <ERRCODE>0</ERRCODE>
    <ERRMSG>Success</ERRMSG>
  </STATUS>
</LOGINRS>
<ACCTUPDRS_A>
  <STATUS>
    <ERRCODE>0</ERRCODE>
    <ERRMSG>Success</ERRMSG>
  </STATUS>
  <FP_ID>14385</FP_ID>
  <ACCOUNT_STATUS>
    <ID>452052</ID>
    <LAST_UPDATE_ATTEMPT>20161212194903 [-5:EST]</LAST_UPDATE_ATTEMPT>
    <LAST_UPDATED>20161212194904 [-5:EST]</LAST_UPDATED>
    <UPDATE_STATUS_ERRCODE>1005</UPDATE_STATUS_ERRCODE>
    <UPDATE_STATUS_INFO>Update successful on Dec 12, 2016 7:49:04 PM.
  </UPDATE_STATUS_INFO>
</ACCOUNT_STATUS>
</ACCTUPDRS_A>
</DATACONNECTRS>
```