



SmarterMeasure
Inbound Single Sign On (SSO)
Version 1.3

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1. Revision History

Date	Version	Revised By	Section	Description
3/2010	1.0	Jason Fill	All	Initial Version
7/7/2010	1.1	Jason Fill	3.1	Added the parameter for including integration settings with the return URL.
10/03/2010	1.2	Jason Fill	3.1	Added the parameter to allow the return URL to be sent back with SSL or not.
11/18/2010	1.3	Jason Fill	3.1, 3.2	Added the ExtendedLoginParams parameter. Added section 3.2 - Extended Parameters.
11/24/2010	1.3	Jason Fill	3.1	Added the resource information that is used to create the signature for each request.

2. Overview

The SmarterMeasure inbound Single Sign On (SSO) process allows for seamless movement from an external system into the SmarterMeasure system without requiring the user to log in a second time. This process also avoids the need to distribute SmarterMeasure login information to your users.

Any external system must require a user to do the initial login. Once the user is logged in to the external system they will click a link which will initiate the SSO process from the system. The external system will then make a request to SmarterMeasure to start the sign in process.

SmarterMeasure will determine the validity of this request and respond accordingly. All requests will be responded with XML containing the details of the request. If the request was successful, the XML will contain a URL to redirect the user to. Any failures will be returned with a faultCode and faultMessage for debugging purposes.

This process can be used to establish both new SmarterMeasure assessments and retrieve existing SmarterMeasure assessments.

Please Note: All SSO requests **must connect with SSL** as all non-SSL requests will fail.

3. Generating Requests

3.1 POST to SmarterMeasure with credentials to being process

The first step in the process is to build the request that will be sent to SmarterMeasure. This request must be sent to SmarterMeasure as an HTTP POST and contain three special values in the HTTP header.

The production URL for the POST is:

[https:// www.SmarterMeasure .com/external/readi/ssoRequest](https://www.SmarterMeasure.com/external/readi/ssoRequest)

The resource that is used to create the signature is below; please see the [documentation](#) on creating request signatures for more information on that process.

/external/readi/ssoRequest

The values that are required in the HTTP header are as follows:

Parameter Name	Description	Example
READI_AccessKey	The access key is provided by SmarterMeasure to uniquely identify the account making the request.	%6U2AhDxWLGa29B
READI_Timestamp	Date/Time in ISO8601 format of the time the SSO request was generated. Note the precision is required down to seconds.	2010-02-22T01:19:19Z
READI_RequestSignature	The Message Authentication Code (MAC) is used to sign the contents of the request using a combination of a shared secret and a salt. Further details on how to generate this signature can be found in the Request Authentication document.	ooM4p86arU42ZodGk4jzHyd3dJc=

The table below outlines the parameters that are to be passed in the body of the request.

Parameter Name	Description	Required	Example
FirstName	The first name of the user	Required - unless READIUserID is specified.	John
LastName	The last name of the user	Required - unless READIUserID is specified.	Smith
Email	The email address of the user	Required - unless READIUserID is specified.	jsmith@mydomain.com
InternalID	The ID for this user in the external system.	Optional - if passed this field can be passed as the initial user request to attach the ID with the assessment. If this value is passed alone it is implied that you wish to sign the user in as a returning user. In this case the SmarterMeasure system will attempt to locate the latest assessment for this user and direct the user to it.	9874627
READIUsername	The Test Taker group this	Required	MyUsername

	user should be grouped under.		
ForceNewAssessment	If passed as "true" this will create a new assessment when the user accesses the system. Therefore if a match is found on InternalID that assessment will not be retrieved, rather a new assessment will be created.	Optional - default is false.	False
READIUserID	The userID that was assigned to this user by SmarterMeasure	Optional - if passed this is the only field that is required. This should be passed if you wish to log the user back into the system as a returning user.	8298723
IncludeSettings	If passed this will embed an integrationID in the URL that is returned. This specialized URL will be used to track any custom integration settings that are being used for your account. Some examples of this are cross domain support and layout customization. Any Boolean value is valid for this parameter.	Optional - default is false	1 or true
UseSSL	If passed as "true" the return URL will be returned as https://. The default is false which will return the standard http:// URL.	Optional - default is false	1 or true
ExtendedLoginParams	When using the InternalID to link the user to an external system you can also use this parameter further enforce which assessment is tied to the user. For example, if John Doe is enrolled in 2 classes you can pass in the parameterID(s) for this class to enforce whether John should receive a new assessment or not. This list of parameters MUST match any other	Optional - can be used in combination with InternalID to enforce assessment access	CourseID,TermID ----- The above combination would require the assessment to match InternalID, CourseID, and TermID.

parameters that are posted with the request. Please see the section below regarding additional parameters.

3.2 Including Extended Parameters with the post

In addition to the standard parameter set outlined above you may include any additional parameters that are setup as "Custom Account Requested Data Points" in your SmarterMeasure account. Including these parameters is as simple as adding the key / value pairs to the post request. This data will then be picked up by the SmarterMeasure system and stored along with the user's assessment.

In addition, these parameters can offer extended functionality in authenticating a user into SmarterMeasure. By including the ExtendedLoginParams parameter outlined above, you can specify which extended parameters are to be checked when the system is doing the lookup to see if the user is new or returning. For example, this can come in handy if you would like the user to take one assessment per term. In this case you would include the parameterID for the Term (as setup in your account) in the ExtendedLoginParams parameter and the system will use the term identifier in addition to the InternalID when looking up the user. This will ensure the user will have an assessment each term.

4. Response

If the request was successful and the user has been authenticated to enter the SmarterMeasure system, the response will be the following XML.

```
<?xml version="1.0" encoding="UTF-8" ?>
<ssso>
  <status>success</status>
  <timeStamp></timeStamp>
  <redirectUrl></redirectUrl>
</ssso>
```

The value contained in the redirectUrl element can be sent directly to the user as a redirect. This url is time-sensitive and is only valid for 30 seconds after it has been returned.

5. Error Handling

5.1 Errors

If the request fails, the SmarterMeasure system will response with different XML which will indicate the error. This XML will look like the following:

```
<?xml version="1.0" encoding="UTF-8" ?>
<ssso>
```

```

<status>failure</status>
<timeStamp></timeStamp>
<faultCode></faultCode>
<faultMessage></faultMessage>
</sso>

```

In the event of an error, the response will contain faultCode and faultMessage elements to help determine the exact cause of the problem. These responses will not contain the redirectUrl element. Please see the table below for more information about specific errors.

5.2 Error Codes

Error Code	Description	Notes
100	Authentication Failed - Invalid Access Key	The access key that is being used is not correct or your SmarterMeasure account is not setup to handle SSO requests.
101	Signature was too old.	The request has already expired. All URLs returned in the redirectUrl element are only valid for 30 seconds after they are returned.
102	Invalid request signature	Ensure the MAC signature was generated correctly. See our document outlining how to create the request signature for further information.
199	An unexpected error occurred	Something went wrong while trying to authenticate your request signature.
800	The request did not contain the proper values in the HTTP header. Please see the documentation for more information.	Please see section 3.1 for the requirements.
810	The correct data values were not in the request. Please see the documentation for more information on the data that can be passed.	Please see section 3.1 for the requirements.
820	The correct data values were not in the request or your account is not setup for SSO. Please see the documentation for more information on the data that can be passed or contact the help desk.	Please ensure you are sending the correct data in the request. If that is verified contact the help desk to ensure SSO is enabled on your account.
899	A general error has occurred. If this problem persists, please contact the help desk.	Something went wrong, contact the help desk if the problem persists.

6. Sample Code

Code samples are available in the programming languages listed below. Please contact the help desk for working samples.

- PHP
- ColdFusion