Providing a Test Mode for SUSHI Servers

Trial Use Period: August 1, 2011 – January 31, 2012

A Recommended Practice of the National Information Standards Organization
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Foreword

About this Recommended Practice


During the development of a SUSHI client, it is often time-consuming and, in general, difficult to get test credentials on the servers that the client intends to harvest usage from. In some cases access to the server is restricted due to the sensitive nature of the usage data. Some servers restrict the number of requests that can be submitted in a 24 hour period by a client, limiting the amount of testing. And even if servers do not restrict access, repeated tests on the part of a client may also add unnecessary strain on the server.

The SUSHI Standing Committee, whose role is to maintain the standard, promote its usage, and educate and assist implementers, proposed that a SUSHI Servers Working Group be established to develop a recommended practice for how Content Providers would provide access to their SUSHI Servers in a “test” mode. This proposal was approved by the Business Information Topic Committee in January 2011.

This recommended practice is the SUSHI Working Group’s deliverable. It describes how the server would be expected to behave normally (e.g. issuing errors when appropriate and responding with reports when appropriate); however, rather than delivering live usage data, they would just deliver sample reports. The expectation is that developers of clients would be able to get test credentials with minimal effort and that authentication requirements for the server running in test mode would be relaxed.

The overall objective is to make it easier for SUSHI Clients to be developed by reducing and eliminating common roadblocks. The advantage to the Content Provider is that it spends less time supporting Client Developers. Successful implementation of SUSHI means more accurate and timelier reporting. It is also in the Content Provider’s interest for librarians to have easy access to the necessary usage statistics to make informed collection development decisions.

NISO Topic Committee Members

The Business Information Topic Committee had the following members at the time it approved this Recommended Practice:

[to be added by NISO after approval]
NISO SUSHI Servers Working Group Members

The following individuals served on the NISO SUSHI Server Working Group, which developed and approved this Recommended Practice:

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Swets Information Services

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ScholarlyIQ

Acknowledgements

The SUSHI Servers Working Group wishes to acknowledge those outside the formal working group membership who contributed to this effort.

[to be added to final document as needed]

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Section 1: Introduction

1.1 Purpose and Scope

These recommended practices are intended to promote the adoption of the SUSHI standard by making it easier for developers to create SUSHI client software—applications that can harvest and analyze COUNTER reports.

This objective will be met by providing a series of recommended practices that Content Providers can follow to improve the accessibility of their SUSHI Servers to Client Developers. Accessibility will be improved by providing a test version (or test mode) for the SUSHI Server; by simplifying or eliminating the need for a SUSHI Client to be registered before it can access the test version of the SUSHI Server; and by providing technically equivalent responses to SUSHI Requests. The test version is not expected to respond with actual customer data.

The goal is to remove as many barriers as possible for the developers so that they can more rapidly develop and test the fundamentals of their client software using test data.

This document acknowledges that final testing of any client can only be performed on production data and for this, the SUSHI Server will need to impose the security measures needed to protect customer data.

1.2 Terms and Definitions

The following terms, as used in this recommended practice, have the meanings indicated.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Developer</td>
<td>A person who is creating an application that will act as a SUSHI Client that will retrieve information from the SUSHI Server.</td>
</tr>
<tr>
<td>Content Provider</td>
<td>The organization that provides COUNTER usage statistics on behalf of a publisher. For the purposes of this document, this is the organization responsible for the SUSHI Server and providing a test instance or test mode for that server.</td>
</tr>
<tr>
<td>COUNTER report</td>
<td>A usage report formatted to the specifications set out in the COUNTER Code of Practice that is delivered as the payload of the SUSHI response. With SUSHI, the COUNTER report is an XML document formatted to the COUNTER schema.</td>
</tr>
<tr>
<td>exception</td>
<td>In the context of SUSHI, an element within the SUSHI Schema for the SUSHI Response used to report to the client an error or other condition that indicates there were issues with completing the request. NOTE: An exception may be issued even though a COUNTER report is included with the Response; it could indicate that the Response differs from the Request.</td>
</tr>
<tr>
<td>production server</td>
<td>An instance of a SUSHI Server used to retrieve actual customer usage data.</td>
</tr>
<tr>
<td><strong>Term</strong></td>
<td><strong>Definition</strong></td>
</tr>
<tr>
<td>-----------------------</td>
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</tr>
<tr>
<td>SUSHI</td>
<td>Standardized Usages Statistics Harvesting Initiative. A NISO standard (<a href="http://www.niso.org/workrooms/sushi">ANSI/NISO Z39.93</a>). For more information, see <a href="http://www.niso.org/workrooms/sushi">www.niso.org/workrooms/sushi</a></td>
</tr>
<tr>
<td>SUSHI Client</td>
<td>Software that retrieves COUNTER reports from a SUSHI Server using the SUSHI standard. Typically used in conjunction with applications that store and analyze usage.</td>
</tr>
<tr>
<td>SUSHI Request</td>
<td>An XML message sent by the SUSHI Client to the SUSHI Server requesting the delivery of a COUNTER XML report for a specific customer.</td>
</tr>
<tr>
<td>SUSHI Response</td>
<td>The XML message returned by the SUSHI Server to the SUSHI Client. The SUSHI Response includes information about the Request, the COUNTER report (embedded as an XML document within the response), and may include one or more exceptions to indicate problems with the Request itself or processing of the Request.</td>
</tr>
<tr>
<td>SUSHI Server</td>
<td>A web service provided by a Content Provider for delivering COUNTER usage reports. Functionality is dictated by the SUSHI standard.</td>
</tr>
<tr>
<td>SUSHI Server registry</td>
<td>A website (<a href="http://sites.google.com/site/sushiserverregistry">http://sites.google.com/site/sushiserverregistry</a>) where Content Providers register details about their SUSHI Servers.</td>
</tr>
<tr>
<td>test server</td>
<td>An instance of the SUSHI Server (or an operational mode) that can be used to retrieve test data. The test server will not deliver actual data and will have less rigid authentication requirements.</td>
</tr>
</tbody>
</table>
Section 2: Expectations for SUSHI Servers

2.1 Registration Requirements for Client Testing

2.1.1 Requirement for Registration

The Content Provider may choose to require the registration of test clients to control access and offer debugging assistance by being able to identify the specific client making the request. If the client is identified in the request via the Requestor ID, then the Content Provider knows who to contact if there is a problem.

2.1.2 Registration process

If the Content Provider chooses to require the developer to register the client, registration should be a simple process managed by either an e-mail request or a web form.

In a Request the developer would declare the intent to access the test version of the Content Provider’s SUSHI Server and would be expected to provide the contact name, contact e-mail, organizational affiliation, the IP address of the test client, and a short description of the project.

In response the Content Provider would send the developer the URL to the test server, a Requestor ID, the Customer ID to use, and any other special instructions.

The registration process should take no longer than one business day.

2.1.3 Registration Instruction Included on SUSHI Server Registry

Registration instructions for developers should be made available through the SUSHI Server Registry as part of the instructions. The SUSHI Server Registry will include an entry for Test Server Instructions. The instructions could take the form of detailed instructions, a link to a separate web page with instructions, or an e-mail address for inquiries.

2.2 Relationship Between the Test Server and the Production Server

A Content Provider may choose to offer a separate SUSHI Server for testing. This is acceptable provided that server is technically equivalent to the production server. Following are points of clarification.

2.2.1 The Test Server May Be a Separate Instance

The Content Provider, at its option, may choose to keep a separate instance of its SUSHI Server for testing purposes. In the case where there is a separate instance, the URL to the test server should be provided in the SUSHI Server Registry or if the client must be registered, the URL may be provided to the Client Developer at the time the client is registered.

2.2.2 Test Server Must be Technically Equivalent

The test server, or the production server operating in test mode, must operate in a manner that is technically equivalent to the production server. Specifically, it must:

- Support the same reports as the production server
- Create SUSHI Responses that are structurally equivalent to the production server
- Create COUNTER reports that are structurally equivalent to the production server
• Respond to error conditions in the same manner as the production server

2.2.3 Test Server Does Not Need To Offer Equivalent Data

The test server must offer representative usage data for inclusion in the COUNTER reports; however, this data does not need to match production data. The purpose of the test server is to help a Client Developer in testing system functionality and not to retrieve live data.

2.3 Security Considerations

If the Content Provider offers a test mode that is open to anyone (no registration required), then no additional security challenges should be imposed.

If the Content Provider wishes to perform IP authentication or require additional security mechanisms, such as SOAP-level authentication, then it must offer an option for the Client Developer to register the client. (See section 2.1.)

If the Content Provider’s server includes non-standard authentication methods (i.e., any method that requires the Client Developer to create or use extensions to the SUSHI protocol), the test server must also emulate the same methods as the production server so that the Client Developer can make the necessary customizations to the client software before accessing the production server.

2.4 Operational Considerations

2.4.1 Requestor ID and Customer ID

If the Content Provider requires the developer to register the test client before access is granted, then the Content Provider will inform the developer of the Requestor ID and Customer ID to use for testing.

If the Content Provider offers a test mode that is open to anyone (no registration required), the following values would be expected in the SUSHI Request to use the server’s test mode:

- Requestor ID = test
- Customer ID = test

2.4.2 Report Definitions

The client would be expected to request valid COUNTER reports. The server would be expected to return a representative report if the report is supported or respond with the standard error messages for the standard server error conditions.

2.4.3 Usage Date Filters

The client is expected to provide a valid date range in the request. The server would respond with a representative report if the dates are within the supported range or the server would respond with the standard error messages for the standard server conditions, such as: “No Usage Available for Requested Dates” if the dates are not within the supported range or “Invalid Date Arguments” if the begin date is greater than the end date. (See section 6.2.3, Exceptions and Errors, in the SUSHI standard for more on standard error reporting.)

2.4.4 COUNTER Reports To Be Returned in the Response

The Content Provider can, at its option, respond with pre-set test reports for each of the supported COUNTER reports.
Each supported COUNTER report should provide sufficient data to demonstrate the nature and structure of the response; specifically:

- If multiple metric types can be provided, then each metric type should be represented in the response.
- If multiple databases and journals can be provided, then the report should include multiple entries.
- If a request is for multiple months, then the response should include multiple months of data for each item in the report.
- If titles in the report don’t all have identifiers, then it is recommended to include a sample of titles with and without identifiers.

2.4.5 Error Reporting

When the test server encounters an error condition that results in an exception being returned in the SUSHI Response, the server should include sufficient contextual information in either the Message or the Data elements to assist the Client Developer in diagnosing the error. For example, if a report is not supported, the Exception Number would be “3000” and the message could say that “Report name submitted (<name-submitted>) is not valid or not supported by this server.”

2.5 Logging of Client Activity on the SUSHI Server

It is recommended that the SUSHI Server log test SUSHI Requests to assist with debugging both the server and the clients. By recording the test request as well as the server’s response to that request (including errors generated by the request) the Content Provider can assist Client Developers by being able to spot errors in the client requests.

NOTE: This recommended practice sets no expectation that requires the Content Provider to offer debugging assistance to Client Developers; such assistance would at the discretion of the Content Provider.