



Debugging ESI Using the ESI Test Server

Akamai Technologies, Inc.

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Contents

Running the Debugger	3
The ESID Debug Report	4
Environment Variables	4
Syntax Messages	5
Evaluation Messages	6
Sample Debug Report.	7

Running the Debugger

The ESI Development Tool (ESID) provides a way for you to test, view, and debug your web pages containing ESI code.

When used with the ESI Test Server (ETS), you can debug your pages on a test site before deployment or modification.

To run the debugger:

1. When you run the ETS install program or when you reconfigure ETS, turn on the **ESI Debugging (ESID)** option.

For information on installing and configuring ETS, see the *ESI Test Server Users Guide*.

2. Using your browser, simply go to the page(s) you want to debug. If the code runs successfully, you'll see the normal web page. View the source code and you'll see the debug report-annotated page source.

The ESID Debug Report

However you run the debugger, the resulting page will include ESID debug report. Using the browser, the debugging section is hidden so that you need view the source code (e.g., choose **Source** or **Page Source** on the browser's **View** menu).

You can see an example resulting page starting on page 7.

The Debugging section contains the following subsections:

- **Enumerated source:** the ESI source code with line numbers prefixed to each line.
- **Environment Variables:** the resulting values for the ESI-supported variables.
- **Syntax messages:** information about any syntax errors found.
- **Evaluation messages:** the results of evaluating the ESI source code.

If you're using ESI nesting—the files you're fetching using ESI contain ESI code to fetch other files—the nested files are also debugged. The debug reports on the nested pages are themselves nested, appearing after the including line in the template page.

For example, in debugging `template.htm`, you might see following:

```
Debugging Section for template.htm.....  
.....  
    template.htm code says to include nested.htm  
        begin nested.htm debugging section  
        nested.htm debug report  
        end nested.htm debug  
    back to next line of template.htm debug report
```

Environment Variables

The environment variables section reports all ESI-supported environment variables and their values. For example:

```
<EnvironmentVariables>  
GEO: country_code=US,region_code=CA,georegion=246,city=SANJOSE,  
    dma=807,pmsa=7400,areacode=408,county=SANTACLARA,fips=06085,  
    lat=37.3353,long=121.8938,timezone=PST,network=reserved  
HTTP_ACCEPT: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, */*  
HTTP_ACCEPT_CHARSET:  
HTTP_ACCEPT_ENCODING:  
HTTP_ACCEPT_LANGUAGE:  
HTTP_CONTENT_LENGTH: 50  
HTTP_CONTENT_LOCATION:  
HTTP_CONTENT_TYPE: text/html  
HTTP_COOKIE:  
HTTP_HOST: 127.0.0.2:4567  
HTTP_REFERER:  
HTTP_USER_AGENT: curl/6.2 (i686-pc-linux-gnu) libcurl 6.2  
QUERY_STRING: esifrag=4  
REMOTE_ADDR: 127.0.0.1  
REQUEST_METHOD: GET  
REQUEST_PATH: /akcontrol.jsp  
HTTP_PRAGMA: no-cache  
HTTP_SERVER: WebLogic 6.0 Service Pack 1 03/04/2001 22:05:05 #101616  
HTTP_DATE: Mon, 07 May 2001 18:52:18 GMT  
HTTP_CONNECTION: keep-alive  
</EnvironmentVariables>
```

Syntax Messages

If you see a Syntax Messages section in your debug report, the page contains ESI syntax errors; you won't see it otherwise. These 1xxx series messages deal with ESI syntax only. If the message has to do with ESI processing, it will be a 2xxx Evaluation message, shown in the next section. The syntax messages you may see are as follows:

Table 1: Syntax Error Messages

NUMBER	TEXT (<i>n</i> = LINE NUMBER)	DESCRIPTION
1000	Line <i>n</i> . Error	A generic or unidentifiable error in an ESI statement.
1001	Line <i>n</i> . Unrecognized ESI tag	An ESI opening statement is incorrect. For example, " <code><esi:xyz...></code> " (" <code>xyz</code> " is not an ESI element).
1002	Line <i>n</i> . Unrecognized ESI attribute	An attribute, such as " <code>src</code> " in " <code>esi:include src,</code> " is misspelled or otherwise unrecognizable.
1003	Line <i>n</i> . Unrecognized ESI closing tag	The closing statement is not recognized. For example, you used " <code><esi:remove></code> " to open a block, and <code></esi:rem></code> to close it.
1004	Line <i>n</i> . Badly constructed include tag	For example, <code><esi:include somefile.htm/></code> . (The include statement must contain an " <code>src</code> " before the primary object to be fetched.)
1005	Line <i>n</i> . Illegal character in variable name.	In the <code><esi:set></code> tag, the name must be composed of up to 256 alphanumeric characters (A-z, 0-9), and can include underscores (<code>_</code>).
1006	Line <i>n</i> . Unknown variable type.	The <i>type</i> specified in the <code><esi:set></code> was either not known or was misspelled. ESI accepts only <code>type='string'</code> .
1007	Line <i>n</i> . Missing quotes for string constant.	In the short form of the <code><esi:set></code> statement, the string set in the <i>value</i> attribute must be surrounded by quotes.
1008	Line <i>n</i> . More than one name attribute in a <code><esi:set></code> or <code><esi:assign></code> tag.	The <code><esi:set></code> or <code><esi:assign></code> tag accepts only one <i>name</i> .
1009	Line <i>n</i> . More than one type attribute in a <code><esi:set></code> or <code><esi:assign></code> tag.	The <code><esi:set></code> or <code><esi:assign></code> tag accepts only one <i>type</i> .
1010	Line <i>n</i> . More than one value attribute in a <code><esi:set></code> or <code><esi:assign></code> tag.	The <code><esi:set></code> or <code><esi:assign></code> tag accepts only one <i>value</i> .
1011	Line <i>n</i> . One or more attributes are missing for the <code><esi:set></code> or <code><esi:assign></code> tag.	The <code><esi:set></code> or <code><esi:assign></code> tag must be followed by a <i>value</i> .
1012	Line <i>n</i> . Expecting a numerical value for attribute.	A numeric value was expected but not found, for example, with the include statement " <code>maxwait=</code> ".

Evaluation Messages

The Evaluation messages fall into three categories:

- **Info** messages advise you about general ESI processing.
- **Warning** messages occur when there has been an ESI processing problem but it is not necessarily a serious error that will affect page display.
- **Error** messages represent serious errors that will affect page display.

These 2xxx series messages deal with ESI processing. If the message has to do with ESI syntax, it will be a 1xxx message, shown in the preceding section.

Table 2: Evaluation Messages

NUMBER	TYPE	TEXT (<i>n</i> = LINE NUMBER)	COMMENTS
2000	Info	Line <i>n</i> . All WHEN expressions evaluated FALSE. Processing OTHERWISE block.	
2001	Info	Line <i>n</i> . All WHEN expressions evaluated FALSE. No OTHERWISE block.	In this case, ESI-processing continues as if there were no CHOOSE block.
2002	Info	Line <i>n</i> . WHEN expression evaluated TRUE.	The line number tells you which WHEN evaluated to true.
2003	Info	Line <i>n</i> . WHEN expression evaluated FALSE.	
2004	Info	Line <i>n</i> . Your code ran successfully	One of these two messages—2004 or 2005—will be the last line in the evaluation section.
2005	Error	Line <i>n</i> . Your code did not run successfully	
2006	Warning	Line <i>n</i> . Failed fetching fragment <i>name_of_fragment</i> .	There could be a number of causes: for example, the path or host for the fragment is not specified in your configuration metadata; the file doesn't exist; or there is a connectivity problem between EdgeSuite and the origin server.
2007	Info	Line <i>n</i> . Including fragment <i>name_of_fragment</i> .	
2008	Error	Line <i>n</i> . Failed fetching fragment <i>name_of_fragment</i> . Request hit resource boundary.	There are two limits, one or both of which may have been violated: 1) More than 5 levels of nesting (the initial "include" is the first level) 2) More than 50 "include" attempts on one page. The 50 attempts is the sum of the includes on the initial template plus all subsequent associated attempts, such as those on nested pages. The limit includes both "src" and "alt" attempts on any one page. A fetch on the "alt" object is only attempted and counted if the "src" fails. In processing a page, EdgeSuite attempts all "src" objects before attempting to fetch "alt" objects.
2009	Error	Line <i>n</i> . Failed fetching fragment <i>name_of_fragment</i> . Error in path or host.	The path specified in the code contains illegal characters or other format errors.
2010	Error	Your code is too big. Your total file size must be less than xx bytes.	The sum of the sizes of files to be fetched and included, including nested objects, exceeds 1 megabyte.
2011	Info	The document contains no ESI tags.	The file was nominated for ESI parsing by the configuration file or AK-control header metadata, but no ESI tags were found in the file.
2012	Error	Line <i>n</i> . Bad regular expression "text of bad expression."	A regular expression was formed incorrectly in the <i>matches</i> operator.

Sample Debug Report

The Debugging Section, not displayed in the normal browser window

```

<style>.hide {display:none;}</style>
<SPAN class="hide">
/*****Debugging Section*****/
<Debug>
<Source>
1  <html>
2  <header>
3  ESI 'contains' feature test
4  <header>
5  <body>
6  This is an ESI contains feature test, using 'has' inside a when tag.
7
8      Checking if the user agent contains the combination 'OTH' in it.
      <br>
9      <esi:choose>
10         <esi:when test="\$(HTTP_USER_AGENT{'os'}) has 'OTH'">
11             <esi:include src="http://labamba.akamai.com/esi/
other.html"/>
12         </esi:when>
13         <esi:otherwise>
14             OS doesn't include OTH.
15         </esi:otherwise>
16     </esi:choose>
17     <br>
18
19     Checking if the user cookie contains the combination 'name'
somewhere
20     in it. <br>
21     <esi:choose>
22         <esi:when test="\$(HTTP_COOKIE) has 'name'">
23             HTTP_COOKIE includes 'name': <esi:vars>\$(HTTP_COOKIE)</
esi:vars><br>
24         </esi:when>
25         <esi:otherwise>
26             HTTP_COOKIE does not include 'name' <br>
27         </esi:otherwise>
28     </esi:choose>
29     <br>
30
31     Checking if the query string contains the combination 'val'
somewhere
32     in it. <br>
33     <esi:choose>
34         <esi:when test="\$(QUERY_STRING) has 'val'">
35             QUERY_STRING has val: <esi:vars>\$(QUERY_STRING)</
esi:vars><br>
36         </esi:when>
37         <esi:otherwise>
38             QUERY_STRING does not contain 'val' <br>
39         </esi:otherwise>
40     </esi:choose>
41     <br>
42
43     Checking if the query string value of 'val' contains 'abc'
44     in it. <br>
45     <esi:choose>
46         <esi:when test="\$(QUERY_STRING{'val'}) has 'abc'">
47             QUERY_STRING{'val'} has abc:
<esi:vars>\$(QUERY_STRING{'val'})</esi:vars><br>

```

```

48         </esi:when>
49         <esi:otherwise>
50             QUERY_STRING{'val'} does not contain 'abc' <br>
51         </esi:otherwise>
52     </esi:choose>
53     <br>
54
55
56
57 </body>
58 </Source>

```

**Environment Variables
Subsection**

```

<EnvironmentVariables>
GEO: country_code=US,region_code=CA,georegion=246,city=SANJOSE,
    dma=807,pmsa=7400,areacode=408,county=SANTA CLARA,fips=06085,
    lat=37.3353,long=121.8938,timezone=PST,network=reserved
HTTP_ACCEPT: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, */*
HTTP_ACCEPT_CHARSET:
HTTP_ACCEPT_ENCODING:
HTTP_ACCEPT_LANGUAGE:
HTTP_CONTENT_LENGTH: 50
HTTP_CONTENT_LOCATION:
HTTP_CONTENT_TYPE: text/html
HTTP_COOKIE:
HTTP_HOST: 127.0.0.2:4567
HTTP_REFERER:
HTTP_USER_AGENT: curl/6.2 (i686-pc-linux-gnu) libcurl 6.2
QUERY_STRING: esifrag=4
REMOTE_ADDR: 127.0.0.1
REQUEST_METHOD: GET
REQUEST_PATH: /akcontrol.jsp
HTTP_PRAGMA: no-cache
HTTP_SERVER: WebLogic 6.0 Service Pack 1 03/04/2001 22:05:05 #101616
HTTP_DATE: Mon, 07 May 2001 18:52:18 GMT
HTTP_CONNECTION: keep-alive
</EnvironmentVariables>

```

There were no syntax errors, so there is no syntax error section

Evaluation Subsection

```

<Eval>
Info[2002]: Line 12. WHEN expression evaluated TRUE.
Info[2002]: Line 24. WHEN expression evaluated TRUE.
Info[2003]: Line 36. WHEN expression evaluated FALSE.
Info[2000]: Line 40. All WHEN expressions evaluated FALSE. Processing
    OTHERWISE block.
Info[2003]: Line 48. WHEN expression evaluated FALSE.
Info[2000]: Line 52. All WHEN expressions evaluated FALSE. Processing
    OTHERWISE block.
Info[2007]: Line 11. Including fragment "http://labamba.akamai.com/esi/
    other.html".
Info[2004]: Your code ran successfully.
</Eval>

```

End Debug

```

</Debug>
/*****End Debugging Section*****/

```

Begin Display Code

```

</SPAN>

<html>
<header>

```

**Begin Debug Section for
next section of ESI Code**

```
ESI 'contains' feature test
<header>
<body>
This is an ESI contains feature test, using 'has' inside a when tag.
```

**Environment Variables
Subsection**

```
    Checking if the user agent contains the combination 'OTH' in it. <br>
<style>.hide {display:none;}</style>
<SPAN class="hide">
/*****Debugging Section*****/
<Debug>
<Source>
1    Just a little file that says OTHER.
</Source>
```

Evaluation Subsection

```
<EnvironmentVariables>
HTTP_ACCEPT_LANGUAGE:
HTTP_COOKIE: first_name=somename;Akamai-UnencDebug=Akamai-
    DebugValue%3DOn
HTTP_HOST: labamba.akamai.com
HTTP_REFERER:
HTTP_USER_AGENT: Mozilla/4.0
QUERY_STRING:
GEO:
    country_code=US,region_code=VA,georegion=288,city=HERNDON,dma=511,
    pmsa=8840,areacode=703,county=FAIRFAX,fips=51059,lat=38.9696,long=
    77.3866,timezone=EST,network=reserved
REMOTE_ADDR: 127.0.0.1
</EnvironmentVariables>
```

End Debug

Begin Display Code

```
<Eval>
Info[2004]: Your code ran successfully.
</Eval>

</Debug>
/*****End Debugging Section*****/
</SPAN>

Just a little file that says OTHER.
<br>
Checking if the user cookie contains the combination 'name' somewhere
    in it. <br>

    HTTP_COOKIE includes 'name': first_name=somename;Akamai-
        UnencDebug=Akamai-DebugValue%3DOn<br>
<br>
Checking if the query string contains the combination 'val' somewhere
    in it. <br>

        QUERY_STRING does not contain 'val' <br>
        <br>

    Checking if the query string value of 'val' contains 'abc'
    in it. <br>

        QUERY_STRING{'val'} does not contain 'abc' <br>
        <br>
</body>
</html>
```