

## Saxon - Support #4697

### How to get details on XML parsing error during stylesheet compilation in Saxon 10.2 .NET

2020-08-26 17:29 - Martin Honnen

<b>Status:</b>	Closed	<b>Start date:</b>	2020-08-26
<b>Priority:</b>	Low	<b>Due date:</b>	
<b>Assignee:</b>	O'Neil Delpratt	<b>% Done:</b>	100%
<b>Category:</b>	s9api API	<b>Estimated time:</b>	0:00 hour
<b>Sprint/Milestone:</b>		<b>Spent time:</b>	0:00 hour
<b>Legacy ID:</b>		<b>Fix Committed on Branch:</b>	10, trunk
<b>Applies to branch:</b>	10, trunk	<b>Fixed in Maintenance Release:</b>	10.3

#### Description

While trying to integrate Saxon 10.2 .NET HE I have found that any errors reported by the XML parser during stylesheet compilation lack specific details given by the XML parser that are present in 9.9.1.7 HE.

#### Example:

```
Processor processor = new Processor();

XsltCompiler xsltCompiler = processor.NewXsltCompiler();

xsltCompiler.SetErrorList(new List<XmlProcessingError>());

string xslt = @"<xsl:stylesheet xmlns:xsl=""http://www.w3.org/1999/XSL/Transform""
version=""3.0""</xsl:stylesheet>";

XsltExecutable xsltExecutable;

using (StringReader xsltReader = new StringReader(xslt))
{
    try
    {
        xsltExecutable = xsltCompiler.Compile(xsltReader);
    }
    catch (Exception)
    {
        StringBuilder sb = new StringBuilder();
        sb.AppendFormat("Stylesheet compilation failed with {0} error(s):",
, xsltCompiler.GetErrorList().Count);
        sb.AppendLine();
        int errCount = 0;
        foreach (var error in xsltCompiler.GetErrorList())
        {
            errCount++;
            string message;
            try
            {
                message = error.InnerMessage;
            }
            catch (NullReferenceException)
            {
                message = error.Message;
            }

            sb.AppendFormat("Error {0} at line {1}:{2} : {3}"
, errCount, error.LineNumber, error.ColumnNumber, message);
            sb.AppendLine();
        }
        Console.WriteLine(sb.ToString());
    }
}
```

```
}  
}
```

with Saxon 10 only gives the general error

Stylesheet compilation failed with 1 error(s): Error 1 at line 1:79 : Error reported by XML parser

while the previous code for Saxon 9.9

```
Processor processor = new Processor();  
  
XsltCompiler xsltCompiler = processor.NewXsltCompiler();  
  
xsltCompiler.ErrorList = new List<StaticError>();  
  
string xslt = @"<xsl:stylesheet xmlns:xsl=""http://www.w3.org/1999/XSL/Transform""  
version=""3.0""</xsl:stylesheet>";  
  
XsltExecutable xsltExecutable;  
  
using (StringReader xsltReader = new StringReader(xslt))  
{  
    try  
    {  
        xsltExecutable = xsltCompiler.Compile(xsltReader);  
    }  
    catch (Exception)  
    {  
        StringBuilder sb = new StringBuilder();  
        sb.AppendFormat("Stylesheet compilation failed with {0} error(s):"  
, xsltCompiler.ErrorList.Count);  
        sb.AppendLine();  
        int errCount = 0;  
        foreach (StaticError error in xsltCompiler.ErrorList)  
        {  
            errCount++;  
            string message;  
            try  
            {  
                message = error.InnerMessage;  
            }  
            catch (NullReferenceException)  
            {  
                message = error.Message;  
            }  
            sb.AppendFormat("Error {0} at line {1}:{2} : {3}"  
, errCount, error.LineNumber, error.ColumnNumber, message);  
            sb.AppendLine();  
        }  
        Console.WriteLine(sb.ToString());  
    }  
}
```

outputs

```
Stylesheet compilation failed with 1 error(s):  
Error 1 at line 1:79 : Error reported by XML parser: Element type "xsl:stylesheet" must be followed by either attribute specifications, ">" or "/>".
```

i.e. has the precise message from the XML parser.

Is there any way to get that precise message raised by the XML parser in Saxon 10.2 .NET as well?

## History

## #1 - 2020-08-27 15:09 - Martin Honnen

The difference between 9.9 and 10.2 seems to be that the `InnerMessage` trying to concat `return exception.getMessage() + ": " + exception.getCause().Message` adds the parser error details (e.g. Element type "xsl:stylesheet" must be followed by either attribute specifications, ">" or ">") in 9.9 while it throws a `NullReferenceException` in 10.2.

Why is the `getCause()` null, is that something that has changed on the Java side or solely on the .NET side?

## #2 - 2020-08-27 15:41 - Martin Honnen

Saxon 9.9 has

```
public XsltExecutable Compile(TextReader input)
{
    try {
        JStreamSource ss = new JStreamSource(new JDotNetReader(input));
        if (baseUri != null)
        {
            ss.setSystemId(Uri.EscapeUriString(baseUri.ToString()));
        }

        return new XsltExecutable(xsltCompiler.compile(ss));
    }
    catch (JSaxonApiException ex) {
        throw new StaticError(ex);
    }
}
```

Saxon 10.2 has

```
public XsltExecutable Compile(TextReader input)
{
    try {
        JStreamSource ss = new JStreamSource(new JDotNetReader(input));
        if (baseUri != null)
        {
            ss.setSystemId(Uri.EscapeUriString(baseUri.ToString()));
        }

        XsltExecutable executable = new XsltExecutable(xsltCompiler.compile(ss));
        executable.InternalProcessor = processor;
        return executable;
    }
    catch (JSaxonApiException ex) {
        throw new StaticError(ex);
    }
}
```

Both have using `JSaxonApiException = net.sf.saxon.s9api.SaxonApiException;`

Saxon 9.9 has

```
public class StaticError : Exception
{
    private XPathException exception;
    internal bool isWarning;

    // internal constructor: Create a new StaticError, wrapping a Saxon XPathException

    internal StaticError(JException err)
    {
        if (err is XPathException)
        {
            this.exception = (XPathException)err;
        }
        else
        {
            this.exception = XPathException.makeXPathException(err);
        }
    }
}
```

Saxon 10.2

```
public class StaticError : Exception
```

```

{

    internal XPathException exception;
    internal bool isWarning;

    // internal constructor: Create a new StaticError, wrapping a Saxon XPathException

    internal StaticError(JException err)
    {
        if (err is XPathException)
        {
            this.exception = (XPathException)err;
        }
        else
        {
            this.exception = XPathException.makeXPathException(err);
        }
    }
}

```

Both with

```

using XPathException = net.sf.saxon.trans.XPathException;
using JException = java.lang.Exception;

```

So far the only difference I notice is private XPathException exception; in 9.9 versus internal XPathException exception; in 10.2

### #3 - 2020-09-07 11:26 - Michael Kay

- Assignee set to O'Neil Delpratt

### #4 - 2020-09-11 14:07 - O'Neil Delpratt

- Status changed from New to In Progress

Thanks for reporting this issue and the code which I have used to reproduce the error message. Currently investigating the bug issue.

### #5 - 2020-09-11 15:54 - O'Neil Delpratt

There has been a change in Saxon 10 in how we retrieve errors in the errorList. We now create a list of XmlProcessingError objects. This class is a subclass of StaticError. Somehow the XmlProcessingError object is not capturing all the details from the exception that coming through from the underlying compiler.

### #6 - 2020-09-14 08:56 - O'Neil Delpratt

- Category changed from .NET API to s9api API

- Applies to branch trunk added

I am marking this issue as a bug against the Java product. The following repo show how we can reproduce the error on Java:

```

public void testXmlProcessingError() {

    Processor processor = new Processor(false);

    XsltCompiler xsltCompiler = processor.newXsltCompiler();
    final List<StaticError> errors = new ArrayList<>(4);

    xsltCompiler.setErrorList(errors);

    String xslt = "
<xsl:stylesheet xmlns:xsl='http://www.w3.org/1999/XSL/Transform' version='3.0'>
";

    XsltExecutable xsltExecutable;

    StringReader xsltReader = new StringReader(xslt);

    try
    {
        xsltExecutable = xsltCompiler.compile(new StreamSource(xsltReader));
    }
    catch (Exception ex)
    {
        StringBuilder sb = new StringBuilder();
        sb.append("Stylesheet compilation failed with {0} error(s):");
    }
}

```

```

        int errCount = 0;
        ErrorReporter reporter = xsltCompiler.getErrorReporter();

        for (StaticError error : errors)
        {
            errCount++;
            String message;
            try
            {
                message = error.getMessage();
            }
            catch (Exception ex1)
            {
                message = ex1.getMessage();
            }
        }
    }
}

```

The getMessage() method only returns @Error reported by XML parser@

#### **#7 - 2020-09-14 10:25 - O'Neil Delpratt**

The parser message is lost in the method reportError(SAXParseException e, boolean isFatal) of the class StandardErrorHandler.

In this method we are concatenating the error message from the parser to the string Error reported by XML parser.

#### **#8 - 2020-09-14 11:20 - O'Neil Delpratt**

- Status changed from In Progress to Resolved
- % Done changed from 0 to 100
- Fix Committed on Branch 10, trunk added

Bug fixed in the StandardErrorHandler to capture the error message from the SAX parser. Added junit and nunit tests for Saxon 10 and 11.

#### **#10 - 2020-10-28 18:57 - O'Neil Delpratt**

Bug fix applied in the Saxon 10.3 maintenance release

#### **#11 - 2020-10-28 19:13 - O'Neil Delpratt**

- Status changed from Resolved to Closed
- Fixed in Maintenance Release 10.3 added