

Core Development - Bug #4073

code size limit exceeded

05/07/2019 09:14 AM - Ovidiu Maxiniuc

Status:	New	Start date:	
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:		case_num:	
billable:	No	version:	
vendor_id:	GCD		
Description			

History

#1 - 05/07/2019 09:22 AM - Ovidiu Maxiniuc

Today I added some new functionality to FWD and suddenly the client started to abend with

```
java.lang.NullPointerException
  at com.sun.proxy.$Proxy2.getSessionTooltips (Unknown Source)
  at com.goldencode.p2j.ui.chui.ThinClient.setSessionTooltips (ThinClient.java:3408)
  at com.goldencode.p2j.main.ClientCore.start (ClientCore.java:346)
  at com.goldencode.p2j.main.ClientCore.start (ClientCore.java:163)
  at com.goldencode.p2j.main.ClientDriver.start (ClientDriver.java:250)
  at com.goldencode.p2j.main.CommonDriver.process (CommonDriver.java:444)
  at com.goldencode.p2j.main.ClientDriver.process (ClientDriver.java:144)
  at com.goldencode.p2j.main.ClientDriver.main (ClientDriver.java:313)
```

This was quite known to me, but I did not exactly recalled why this happens. In fact, this NPE can be thrown because of a lot of factors because this is the first access to session internal data so all initializations occur here. I turned to server and investigated. I found the following hidden (I had to manually print it out because, by default is not displayed) exception:

```
java.lang.ExceptionInInitializerError
  at com.goldencode.p2j.util.HandleResource.<init> (HandleResource.java:136)
  at com.goldencode.p2j.util.HandleChain.<init> (HandleChain.java:225)
  at com.goldencode.p2j.util.HandleChain.<init> (HandleChain.java:198)
  at com.goldencode.p2j.util.HandleChain.<init> (HandleChain.java:185)
  at com.goldencode.p2j.ui.GenericWidget.<init> (GenericWidget.java:410)
  at com.goldencode.p2j.ui.BaseEntity.<init> (BaseEntity.java:225)
  at com.goldencode.p2j.ui.PaneEntity.<init> (PaneEntity.java:106)
  at com.goldencode.p2j.ui.WindowWidget.<init> (WindowWidget.java:197)
  at com.goldencode.p2j.ui.LogicalTerminal.init (LogicalTerminal.java:1255)
  at com.goldencode.p2j.security.ContextLocal.initializeValue (ContextLocal.java:655)
  at com.goldencode.p2j.security.ContextLocal.get (ContextLocal.java:494)
  at com.goldencode.p2j.security.ContextLocal.get (ContextLocal.java:430)
  at com.goldencode.p2j.ui.LogicalTerminal.locate (LogicalTerminal.java:11168)
  at com.goldencode.p2j.ui.LogicalTerminal.lambda$initialize$6 (LogicalTerminal.java:12282)
  at com.goldencode.p2j.util.TransactionManager$ContextContainer.obtain (TransactionManager.java:10112)
  at com.goldencode.p2j.util.TransactionManager.isHeadless (TransactionManager.java:2549)
  at com.goldencode.p2j.util.ErrorManager$ServerDataAccess.isHeadless (ErrorManager.java:2705)
  at com.goldencode.p2j.util.ErrorManager.isHeadless (ErrorManager.java:2120)
  at com.goldencode.p2j.util.SessionUtils$1.initialValue (SessionUtils.java:153)
  at com.goldencode.p2j.util.SessionUtils$1.initialValue (SessionUtils.java:137)
  at com.goldencode.p2j.security.ContextLocal.get (ContextLocal.java:492)
  at com.goldencode.p2j.security.ContextLocal.get (ContextLocal.java:430)
  at com.goldencode.p2j.util.SessionUtils.getSessionTooltips (SessionUtils.java:858)
  at com.goldencode.p2j.ui.LogicalTerminal.getSessionTooltips (LogicalTerminal.java:15403)
  at com.goldencode.p2j.ui.LogicalTerminalMethodAccess.invoke (Unknown Source)
  at com.goldencode.p2j.util.MethodInvoker.invoke (MethodInvoker.java:156)
  at com.goldencode.p2j.net.Dispatcher.processInbound (Dispatcher.java:757)
  at com.goldencode.p2j.net.Conversation.block (Conversation.java:412)
```

```
at com.goldencode.p2j.net.Conversation.run(Conversation.java:232)
at java.lang.Thread.run(Thread.java:745)
Caused by: java.lang.IllegalArgumentException: code size limit exceeded
at sun.misc.ProxyGenerator.generateStaticInitializer(ProxyGenerator.java:1261)
at sun.misc.ProxyGenerator.generateClassFile(ProxyGenerator.java:484)
at sun.misc.ProxyGenerator.generateProxyClass(ProxyGenerator.java:339)
at java.lang.reflect.Proxy$ProxyClassFactory.apply(Proxy.java:639)
at java.lang.reflect.Proxy$ProxyClassFactory.apply(Proxy.java:557)
at java.lang.reflect.WeakCache$Factory.get(WeakCache.java:230)
at java.lang.reflect.WeakCache.get(WeakCache.java:127)
at java.lang.reflect.Proxy.getProxyClass0(Proxy.java:419)
at java.lang.reflect.Proxy.newProxyInstance(Proxy.java:719)
at com.goldencode.p2j.util.handle.<clinit>(handle.java:335)
... 30 more
```

My question was: *Are we reaching some upper limit (var1.code.size() > 65535) with the handle hierarchy?*

Constantin responded by email:

I think the problem is with the HandleCommon interface - if you added a new interface there, we might reach a limit... see this, the bug looks reported but not solved: <https://bugs.openjdk.java.net/browse/JDK-7189284>

Try switching to our custom ProxyFactory.getProxy, and see how it behaves.

I was able to confirm this: meanwhile, I temporarily removed (commented out) one of the existing inetrfaces from extended interfaces in HandleCommon so FWD works now for me. I will try the custom proxy factory later and let you know of the outcome.

#2 - 05/07/2019 10:11 AM - Ovidiu Maxiniuc

I found the following patch to work fine:

```
--- src/com/goldencode/p2j/util/handle.java
+++ patched/src/com/goldencode/p2j/util/handle.java
@@ -1,4 +1,3 @@
-   ClassLoader cl = MultiClassLoader.class.getClassLoader();
-   Class<?>[] ifaces = new Class<?>[] { HandleCommon.class };
-   InvalidAttributeAccess handler = new InvalidAttributeAccess();
```

```

-     invalidAttrAccessProxy = (HandleCommon) Proxy.newProxyInstance(cl, ifaces, handler);
+     invalidAttrAccessProxy = ProxyFactory.getProxy(handle.class,
+                                     new Class<?>[] { HandleCommon.class },
+                                     new InvalidAttributeAccess());

```

I will add it to my currently assigned branch (3809c). If you encounter the NPE from description please use this until it gets into trunk.

#3 - 05/07/2019 02:57 PM - Ovidiu Maxiniuc

While working with the new proxy I encountered the following exception:

```

Caused by: java.lang.AbstractMethodError: Method com/goldencode/p2j/util/$__Proxy0.name()Lcom/goldencode/p2j/u
til/character; is abstract
    at com.goldencode.p2j.util.$__Proxy0.name(Unknown Source)
    [...]
```

I will investigate this issue tomorrow.

#4 - 05/08/2019 12:41 PM - Ovidiu Maxiniuc

Apparently, the exception was caused because the proxy was implementing only the declaring methods. In HandleCommon there are none, all methods being declared in its super-interfaces. I changed the factory method to one more explicit and, after recompiling the project, the AbstractMethodError is gone.

Here is the new patch (without the H-entry and imports updates). Notice the InvalidAttributeAccess must be public in order to be accessed from the inside.

```

--- src/com/goldencode/p2j/util/handle.java
+++ patched/src/com/goldencode/p2j/util/handle.java
@@ -329,10 +331,9 @@

     static
     {
-         ClassLoader cl = MultiClassLoader.class.getClassLoader();
-         Class<?>[] ifaces = new Class<?>[] { HandleCommon.class };
-         InvalidAttributeAccess handler = new InvalidAttributeAccess();
+         invalidAttrAccessProxy = (HandleCommon) Proxy.newProxyInstance(cl, ifaces, handler);
+         invalidAttrAccessProxy = ProxyFactory.getProxy(InvalidAttributeAccess.class,
+                                     new Class<?>[] { HandleCommon.class },
+                                     false, null);
     }

     /**
@@ -3601,7 +3602,7 @@
     /**
     * Handler for the {@link #invalidAttrAccessProxy} proxy.
     */
-     private static class InvalidAttributeAccess

```

```
+ public static class InvalidAttributeAccess
  implements InvocationHandler
  {
    /**
```

#5 - 05/09/2019 01:29 PM - Constantin Asofiei

Ovidiu, do you have a final fix for this?

#6 - 05/09/2019 01:36 PM - Ovidiu Maxiniuc

The update from note4 looks fine in my tests.