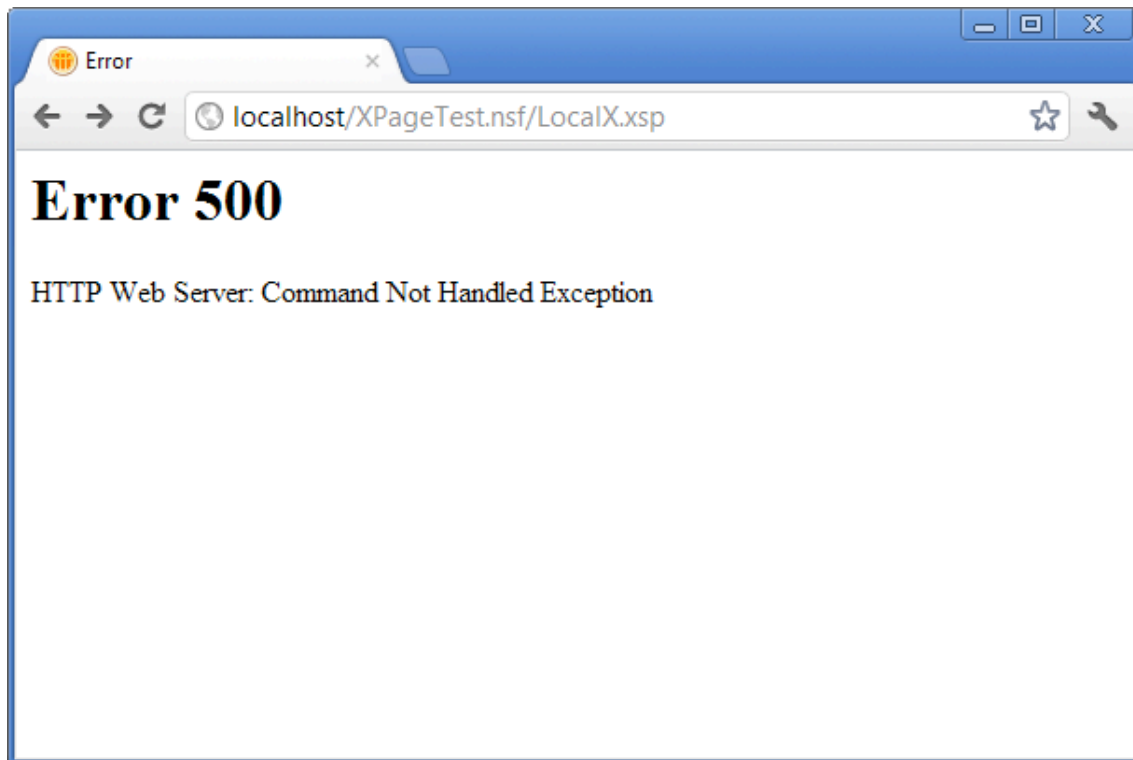


Troubleshooting Local XPages Preview

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Recently I was testing out a fairly simple XPage, and I kept getting the dreaded “Error 500: Command Not Handled Exception”.



If I viewed this XPage on a Domino server it worked fine, but if I tried to do a local preview from a local copy of the database I got the error. Strange thing was, I got the error on EVERY XPage I tried to access using local preview, even very simple ones. So I knew that something about my client setup was screwy.

In this article, I will discuss a few troubleshooting steps you can take to track down this sort of problem... and if you read all the way to the end, you'll also find the solution to my specific issue.

Cannot Connect to Localhost

If your browser is giving you errors along the lines of “cannot connect to server” (the message itself is different for different browsers), the first thing to do is to make sure the

local web preview task is running. The easiest way to do that is to open Task Manager and look for the nhttp.exe task, which should be running under your account.

If the task is not running, try to start it up from DDE by choosing a local database (not one on the server), highlighting an entry in the list of XPages in that database, and choosing the menu command “Design — Preview in web browser”. Wait for a few moments, and then check Task Manager again to see if nhttp.exe is now in the list.

PORT 80 CONFLICTS

If it's still not running (and you didn't get any obvious errors in DDE when you did the “Preview in web browser” command), this might mean that another program is already using port 80. This will often be Skype, a local instance of Domino, or another local web server. A good way to check to see if anything is listening on port 80 is to use the Sysinternals tool: TCPView (<http://technet.microsoft.com/en-us/sysinternals/bb897437>). Just download and run the program and check for anything listening on port 80 (or “http”).

THE WRONG NHTTP?

Because developers often have a local Domino server installed on their machines for testing, it is also important to make sure you are looking for (or at) the correct nhttp.exe task. In other words, you might look at Task Manager or TCPView and say “Well, nhttp is running, so the problem must be something else”, but in actuality it is the nhttp.exe for a local Domino server instead of your Notes client.

In TCPView, you can right-click an executable and choose “Process Properties” to determine the full path of the program file. Alternatively, if you're using Windows 7, you can right-click a task in Task Manager and choose “Properties” or “Open File Location” to see the full path.

FIREWALL SETTINGS

If the nhttp.exe task is indeed running, and you know it's your Notes client task, but you still get “cannot connect to localhost” types of errors, another thing to check is your firewall settings. Make sure that your firewall allows your client's nhttp.exe to listen to inbound requests. When in doubt, just have the firewall let nhttp.exe listen to TCP and UDP on all ports, and once it's working you can narrow the settings down from there.

Also make sure that your computer doesn't have multiple firewalls running. You might be surprised. I don't know if there is one sure way to diagnose this condition, but it's something else to look for.

WEB PREVIEW PORT IN DDE 8.5.3+

Another thing to check is which port the local preview process is using for HTTP. The default port is 80, but in DDE 8.5.3 they added an option to override the local preview port, so you could change it in case it conflicts with something else.

In DDE, choose the menu option File — Preferences, and go to the “Domino Designer” set of preferences. There is a “Web preview port” setting in the “General” section. If this is not set to port 80, you should adjust your URL from “<http://localhost/whatever>” to “<http://localhost:8080/whatever>” (for example, if your port setting is “8080”).

CLEAR YOUR BROWSER CACHE

If the nhttp task is running and you’ve checked all the things above, and you still can’t connect to localhost with your browser: totally clear your browser cache, restart your browser, and try again. Or try with a different browser. Sometimes the problem is that your browser is just caching an old problem and needs to be reset.

Error 500: Command Not Handled Exception

Another common scenario is that you have your local preview task running properly, but you get a page that says “Error 500 HTTP Web Server: Command Not Handled Exception”. Which means that your browser can connect just fine, but the local web server is having a problem displaying your XPage. Sometimes this is an issue with the code on your page, sometimes it’s something else.

TURN ON RUNTIME ERROR NOTIFICATION

The first thing to do is to open your database in DDE and go to the “Application Properties” sheet (not the Properties dialog in the Notes client, but the actual page in DDE). On the “XPages” tab, make sure that the “Display XPage runtime error page” setting is checked, and the error page is “Standard server error page”.

Now save the change (close the Properties sheet and choose “Save changes”) and try viewing the XPage in your browser again. If you see an “Unexpected runtime error” screen with problem descriptions and stack traces and whatnot, you can use this to troubleshoot the design of your XPage.

NOTE: you normally do not want to have this setting for your production databases, of course. Make sure you change the Application Properties back if this setting might make its way into production.

TEST ANOTHER DESIGN ELEMENT

If you’re still getting the generic “Error 500” message, try opening a different design element in the database (like a view or a document) to see if that works. If it does, your problem is XPage-specific. If not, you might still have a problem with your local web

preview process, or you might need to check the access levels in the database or something.

TEST A VERY SIMPLE XPAGE

Something else to try is to test a very, very simple XPage in the database. Create a new XPage and put a text label on it, then save (and build) it and try to look at it in local web preview. Does it work? If so, the problem is probably something to do with the XPage you were originally trying to test. If not, and you can view other design elements in the database but no XPages, the problem might have to do with your Notes client setup.

CHECK THE LOGS

Go to the folder called "IBM_TECHNICAL_SUPPORT" in your Notes Data directory and open up the "console.log" file. This should correspond to the current local preview process, and it reads much like a standard Domino server console log file. What you're looking for here is errors that have to do either with starting the HTTP server, or errors that happen at the time you are trying to view your XPage.

The Problem I Had, and the Solution

In my situation, this is how far I got. The local web preview process was running properly, other design elements would open, but NO XPages would render. All I got was "Error 500" for everything.

In my console.log file, there was a set of lines like this:

```
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM: Caused by:
03/18/2012 05:16:14 PM HTTP JVM: java.lang.ClassNotFoundException: Cannot load
"com.ibm.domino.xsp.adapter.osgi.OSGIService" because the bundle "update@../..../
shared/eclipse/plugins/com.ibm.domino.xsp.adapter.osgi_8.5.2.20100730-1730.jar"
cannot be resolved.
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM:    at
org.eclipse.osgi.framework.internal.core.BundleHost.loadClass(BundleHost.java:229)
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM:    at
org.eclipse.osgi.framework.internal.core.AbstractBundle.loadClass(AbstractBundle.java:
1274)
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM:    ... 9 more
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM:
java.lang.ClassNotFoundException
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM:    at
java.lang.ClassLoader.findClass(ClassLoader.java:365)
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM:    at
java.lang.ClassLoader.loadClass(ClassLoader.java:653)
```

```
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM: at
com.ibm.domino.http.bootstrap.BootstrapOSGIClassLoader.loadClass(BootstrapOSGIC
lassLoader.java:68)
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM: at
java.lang.ClassLoader.loadClass(ClassLoader.java:619)
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM HTTP JVM: at
com.ibm.domino.http.bootstrap.BootstrapClassLoader.findClass(BootstrapClassLoader.j
ava:79)
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM Xsp Initialization error - Could not load
class or methods
[0EB8:0002-0BCC] 03/18/2012 05:16:14 PM No statistics block. HTTP load statistics
will not be collected
[0EB8:0002-0BCC] 03/18/2012 05:16:15 PM HTTP Server: Started
[0EB8:0009-0E38] 03/18/2012 05:19:20 PM HTTP Web Server: Command Not
Handled Exception [/XPageTest.nsf/LocalX.xsp] Anonymous
```

At the end, you'll see that it shows "HTTP Server: Started", so I know that my local nhttp task is up and running (and able to serve up design elements like views and forms). However, right before that it has an "Xsp Initialization error" message, which means that the XPages engine couldn't start.

All this is consistent with the fact that my local preview is running, but I can't view any XPages. Okay, fine. Why? This message at the top is very suspicious:

```
Cannot load "com.ibm.domino.xsp.adapter.osgi.OSGIService" because the bundle
"update@../shared/eclipse/plugins/
com.ibm.domino.xsp.adapter.osgi_8.5.2.20100730-1730.jar" cannot be resolved.
```

It is suspicious because I am using DDE version 8.5.3, but the jar file that cannot be loaded has an 8.5.2 version stamp. Why would that be?

As it turns out, when I upgraded this Notes client from 8.5.2 to 8.5.3, something strange happened and some of my old 8.5.2 jar files stayed around. The offending ones were in my Notes/osgi/rcp and Notes/osgi/shared folders, which are folders that have (among other things) jar files that are used for running the XPages engine on the Domino server.

I went through the "plugins" and "features" subfolders of each of those directories (osgi/rcp and osgi/shared) and deleted all the duplicate jar files and folders I found. For example, if I saw these two files:

```
com.ibm.xsp.domino.server_8.5.2.20100730-1730.jar
com.ibm.xsp.domino.server_8.5.3.20110915-2025.jar
```

I would delete the one with the _8.5.2 version stamp, and leave the _8.5.3 one. I backed up all my files first, of course, and had the Notes client turned off while this surgery was going on.

I also deleted the entire Notes/data/domino/workspace directory, because that holds a cache of files and settings from the Notes/osgi folders that are used by the local preview process.

After all that, when I restarted Notes and DDE, I was able to successfully view my XPages using local preview. No more “Error 500”!

A Word of Caution

I will admit, I am a bit hesitant to recommend going into folders and deleting files as a fix to a problem. Normal caveats apply for this sort of thing, i.e.:

DO NOT DELETE FILES UNLESS YOU KNOW WHAT YOU ARE DOING.
AND EVEN THEN, MAKE SURE YOU HAVE A BACKUP.
THIS ADVICE IS OFFERED AS-IS, WITH NO WARRANTY, ETC.
THINGS MIGHT BREAK, AND IT’S NOT MY FAULT.

The thing is, Google searches revealed that a lot of other people have had this very problem, and the usual advice is “delete your entire Notes client and do a full reinstall”.

If you have the luxury of performing that sort of nuclear option, it’s probably the best thing to do. Reinstall if you can, completely removing the old client files first (don’t just reinstall over the old client). I might still end up doing that, just to avoid any other weird problems, since I obviously had a personal problem when I upgraded from 8.5.2 to 8.5.3.

For me though, I hate knowing that there’s a configuration issue somewhere, but not knowing where or what. I feel much better knowing that it’s because of a duplicate/conflicting file, because at least that explains what was going on.