

## Troubleshooting Non-Standard Installations with Metrology Xplorer

Product: [Metrology Xplorer®](#)

Version: 1.0.x

### Getting Metrology Xplorer to work properly in various situations

By its nature, Metrology Xplorer can be difficult to make operational under certain environments. Usually, when Metrology Xplorer is installed on a typical system, using the default installation method and selections, there are no problems implementing an operational system. However, under situations where the software is performing in a non-standard environment (directories in different places, using another existing web server, etc.), complications may arise that can make getting Metrology Xplorer operational more difficult.

This application note was written for those situations where Metrology Xplorer is in a non-standard installation, or there have been complications in getting the software to operate. This document is written with the assumption that you are unable to view any Metrology Xplorer screens, and that you may or may not be getting any error messages from Metrology Xplorer, or from the web server software. The assumption is also made that the troubleshooting methods listed in the Metrology Xplorer manual have not assisted in getting the system operational. It is important that you follow the instructions in this document in order from start to finish, even if you can skip a step or two if a certain section of this procedure is working correctly. Performing steps in the incorrect order may not be able to solve your problem since each test builds upon itself.

Each test in this document must pass in order for Metrology Xplorer to operate! If a test fails, then refer to instructions in the test for solutions to the problem. Do not continue until the system is able to pass the test. After correcting the problem, you may try to operate Metrology Xplorer to see if that was the problem preventing operation, or you may continue testing.

### Test 1: Web Server Installation

Before any other tests can be performed, you must first verify that all of the required web server software has been installed and located. It is not within the scope of this document to include troubleshooting procedures for every web server software package that Metrology Xplorer is compatible with. However, general testing procedures will be provided to verify that the web server you are using is operational and that you are comfortable with the location of special directories.

#### Step 1: Web Server Operation

Start a web browser on the server (if a browser is installed on it). For the URL (web site) enter localhost. Do not add "www" or anything else to the location – just enter "localhost". You will see one of two types of pages displayed (possibly after several seconds), one page should be either a welcoming page (such as the "welcome to the metrology lab web site" page included with Metrology Xplorer), or an error page or message. A welcoming page may be one that is included with the web server software. For example, when Apache is installed, a test page with links to [apache.org](http://apache.org) and other messages are displayed. If you see any page at all that is not an error (such as "page not found" or "site unavailable"), then your web server software on the server is operating correctly. If you received an error, then you have not installed the web server software on this computer, or it may not be running. Refer to the documentation provided with the web server software to check installation and configuration settings, and to correctly start the software.

#### Step 2: Network connection to the web server

With the web server software operating correctly, the next step is to test your connection to the server. To test your network connection, start a web browser on a computer other than the server that is connected to the same network as the server. For the web site location (URL), enter the network name of the computer, or its "TCP/IP" address (such as 192.168.0.5). You should see the same web page you saw in the previous test. If you do not see this page and get an error, then you may be entering the incorrect network address or name, or you may not have a complete network connection to the server. If you are running MET/BASE on the same server that you are attempting connection to, and MET/CAL operates on the computer you are at now, then you are probably entering the wrong network address. Contact your Information Services department to obtain the correct network name or address for the server.

#### Step 3: Web Server Directory Locations

A common problem with Metrology Xplorer installations is that the web server software is located in a directory other than what was initially thought at the time of installation. By default, Metrology Xplorer assumes that you are using Internet Information Server (IIS) as your web server software, and allows you to change the installation directory if you are using another web server (such as Apache). If the Metrology Xplorer CGI is located in a directory other than what the web server software is using, then Metrology Xplorer will not operate properly.

There are two directories that need to be located; these directories are referred to as "HTML" and "CGI-BIN". These directory names vary by software selected and version. The best way to find them is to locate the "top level" directory of the web server software (for example, "inetpub" for IIS or "apache" for Apache) and look below that directory for the directories that may contain HTML documents (the "HTML" directory), and CGI applications ("CGI-BIN"). To make sure that you have located the proper directories, follow these steps:

- Start (if not already running) the web server software on the server. If you had to start the web server software, then make sure it is running properly by performing STEP 1 listed above
- Locate the "top level" directory for your web server software. For IIS, it is usually "inetpub". For Apache, it is usually located under "program files/apache group/apache". You may need to refer to the documentation for the web server software for assistance in finding this directory. You may also proceed to the next step to help you locate the "top level" directory for your web server software.
- Locate the "HTML" and "CGI-BIN" directories on the server. If you are not completely sure if you have found the correct directory, then this is not a problem since the remaining steps will insure if you have or have not located the proper directories. The "CGI-BIN" directory is usually named just that – you can use the "find files" utility to locate this directory if you like. The "HTML" directory can have various names. Look for a directory that has several documents with the "HTM" or "HTML" extension.

This is probably your "HTML" directory. For IIS, the "HTML" directory is usually "wwwroot", and for Apache is usually "htdocs".

- In the directory you believe to be the "HTML" directory, create a temporary file named "test.html" and enter the following text into this new file:

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<HTML><HEAD>This is the HTML directory!</HEAD></HTML>
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- Start a web browser on the server (since you are already there) and enter the following for the URL: localhost/test.html. You should see a blank web page with the following text: "This is the HTML directory!". If you do, then you have located the proper "HTML" directory. If you get an error such as "page not found", then the directory you saved the test.html file in is not the "HTML" directory that your web server software is using. Perform a search on the server for files with a .HTM or .HTML extension to locate a possible "HTML" directory. Also refer to the documentation for the web server software you are using to assist in finding this directory.
- Once the "HTML" directory has been located, the "CGI-BIN" directory may be easy to find. Usually the "CGI-BIN" directory resides under the same directory level as the "HTML" directory. Verifying the correct "CGI-BIN" directory requires that you have the latest version of the Metrology Xplorer CGI. You can obtain a complete installation from our download site at: <http://www.ontimesupport.com/download.html>, or you may use Rsync to automatically obtain the latest version. Once you have obtained the latest version of the CGI, either install it (full installation) or copy it (met\_ex.exe only) into the directory you believe to be the "CGI-BIN" directory. Once you have done that, enter the following for the URL (still using the browser on the server): localhost/cgi-bin/met\_ex.exe?diag. You should see a page titled "MET\_EX.EXE CGI Output". If you see this page, then you have located the proper "CGI-BIN" directory, and have installed the Metrology Xplorer CGI into this directory. If you receive an error similar to "page not found", then the directory you are working with is not the "CGI-BIN" directory, or the directory has not been created (IIS only) correctly. Refer to the Metrology Xplorer manual or IIS documentation for creating the "CGI-BIN" directory and the associated virtual directory entry. If the browser attempts to download MET\_EX.exe rather than execute it, then "execute" permissions may not be granted on the "CGI-BIN" directory. This is usually the case with IIS; Apache already creates a "CGI-BIN" directory with execute permissions by default. Refer to the Metrology Xplorer manual for information on configuring the IIS "CGI-BIN" directory with execute permissions.

#### Step 4: CGI/Database Connection

After you have verified that the web server software is operational, and that the proper directories have been located and the permissions are proper, then it is time to verify that the CGI can connect to the database. Most Metrology Xplorer installation problems can be traced to an inability of the CGI to connect to the database.

The Metrology Xplorer CGI uses ODBC to connect to Sybase, and usually most connection problems involve improperly configured ODBC. At this point, check your configuration of the METEX ODBC datasource. Refer to the Metrology Xplorer manual for screenshots for reference if you like. Verify the proper configuration settings/steps for these items:

- Make sure the ODBC datasource name is "METEX". The name is not case-sensitive.
- Make sure that this datasource is listed under "System DSN" and not "User DSN" or "File DSN". If it is not in "System DSN", remove this entry and add a new one under "System DSN" using settings listed in the Metrology Xplorer manual.
- Check the "options" for this datasource. The "start command" should be similar to: c:\sqlany50\win32\dbclient.exe -x tcpip.

If the "METEX" ODBC datasource appears to be correct, then the next step is to actually attempt connection to the database with Metrology Xplorer. To do this, perform the following steps on the server:

- Open a DOS window.
- "CD" to the "CGI-BIN" directory where the Metrology Xplorer CGI resides. Enter "met\_ex diag" and press enter. Note that there is a space between "met\_ex" and "diag".
- The CGI will attempt to connect to the database and create a text log of troubleshooting messages.

At his point, one of several actions may happen depending on the connection problem (if it still exists). The CGI should not display any messages during operation and termination. If a "Connect to SQL Anywhere" login box appears, then the CGI is still unable to connect to the database – the CGI will need to be terminated using the task manager (CTRL-ALT-DEL, Task Manager, Processes, highlight any "MET\_EX.exe" entries and click on "End Process" – repeat until all "MET\_EX.exe" entries are gone).

If no database connection window appears, then open the "metex.log" text file located in the "CGI-BIN" directory. There should be several lines of messages, but in particular look for messages such as:

*Attempting connection to database using METEX datasource*

*Connection made*

If error messages are displayed after "attempting connection to database", then the CGI is still unable to connect to the database. Verify the following items:

- Is the database engine running? If not, start it and retry "MET\_EX diag".
- Have you registered the software? If the registration code for Metrology Xplorer has not been entered then the CGI will not operate. Register the software using the instructions in the Metrology Xplorer manual.

If the database engine is running and the software has been registered, then there are one of two problems that still exist. The first problem is a DLL mismatch or missing file in regards to ODBC, and the second is an inability of the Sybase database client to start communications with the database engine (even though they are on the same computer). If you are NOT using Microsoft Windows 2000, or Microsoft IIS version 5 or later, then the problem is usually ODBC. Follow the instructions below for updating

ODBC. If you are using Microsoft Windows 2000 or Microsoft IIS version 5 or later, then the problem exists with the Sybase client software. Follow the instructions below for updating the Sybase software on the server.

### Updating ODBC

- Obtain the file "MDAC\_TYP.EXE" from our FTP site at "/fixes/metex1/mdac\_typ.exe".
- Reboot the server to clear any ODBC DLLs in use.
- Run MDAC\_TYP.EXE, following instructions presented during the installation.
- Reboot the server again to install the new DLLs.
- Troubleshoot the CGI as listed above.

### Updating the Sybase Software

- Obtain the file "NTSE.ZIP" from our FTP site at "/fixes/metex1/ntse.zip".
- Prevent the Sybase Database Engine from starting upon reboot. If you are starting the database engine from the "startup" group (not recommended.....), then move that shortcut to the desktop. If you are using the Sybase Server Manager, then select "disable" for "startup".
- "Unzip" NTSE.ZIP into a temporary directory.
- Reboot the server.
- Make sure the Sybase Database Engine did not start. If it did, perform the steps necessary to prevent automatic startup and reboot again. The software cannot be updated if the engine has been running.
- Run "setup.exe" from the temporary directory where you unpacked NTSE.ZIP.
- Follow the instructions given, making sure to specify the proper directory where the Sybase software resides on this computer.
- Undo the changes made in step 2 (or 5!) to allow the database engine to startup automatically as normal.
- Reboot the server and verify correct startup of the Sybase database engine.
- Troubleshoot the CGI as listed above.

By this point, the CGI should perform diagnostics correctly. If so, then Metrology Xplorer should be completely operational.

If performing software updates does not result in proper execution of CGI diagnostics (no connection errors in the metex.log), then call On Time Support for technical assistance at (281) 296-6066. A more complicated problem is occurring that is beyond the scope of this document.

If you need on-site help, give us a call at ON TIME SUPPORT. We have a large amount of database, procedure, and networking experience and we can save you a lot of time. We are here to help. You can call us at (281) 296-6066 or visit us on the Internet at [www.ontimesupport.com](http://www.ontimesupport.com).

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