How to Use DTM for Windows System Logo Testing

A Step-by-Step Guide

Doc Rev 0.5

2/10/2008

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CONTENTS

1. Abstract

This paper provides information about how to use the Windows Logo Kit to perform system logo testing for Windows Vista®, Windows XP®. It contains guidelines for new users to set up, configure, test, submit, and diagnose tests by using Device Test Manager (DTM). It applies to Windows Logo Kit version 1.0.c.

This information applies for the following operating systems:

Windows XP

Windows Vista

Windows Server® 2003

2. Installing the DTM Controller

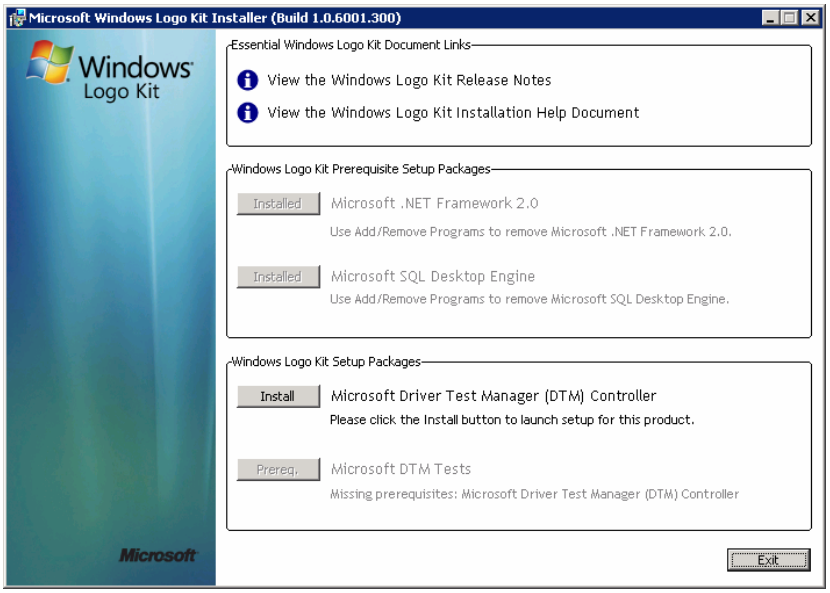
You can install Device Test Manager (DTM) Controller only on a computer that is running Windows Server® 2003 with Service Pack 1 (SP1) or Service Pack 2 (SP2).

Note: The screenshots in this document may appear different between different releases of the Windows Logo Kit (WLK) and DTM.

To install DTM Controller

1. To start Autorun, insert the WLK DVD into your DVD drive. If Autorun is disabled, you must manually start *Installer.exe*. You can click the button to install DTM Controller only if you are running Windows Server 2003 with SP1 or SP2.

   The **Microsoft Windows Logo Kit Installer** dialog box appears.

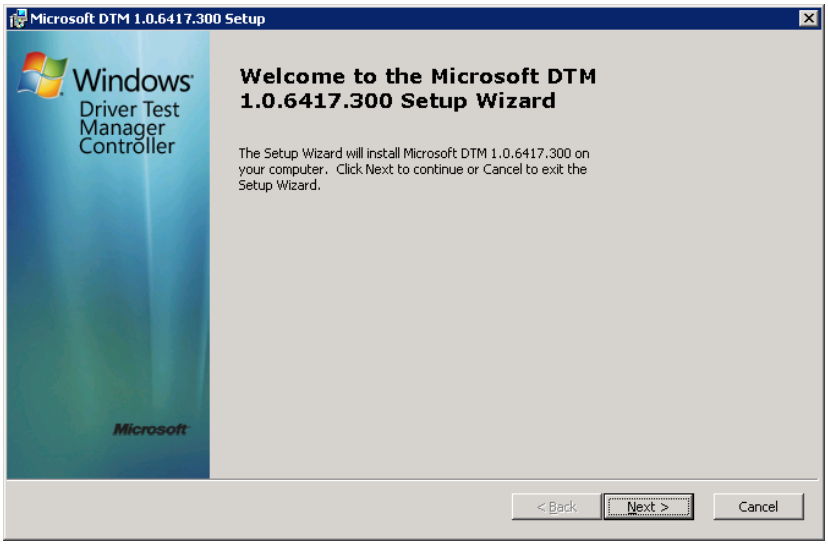


   If you do not have Microsoft .NET Framework 2.0 and the SQL Desktop Engine currently installed, install them from the **Windows Logo Kit Prerequisite Setup Packages** section before you proceed to install DTM Controller.

2. In the **Windows Logo Kit Setup Package** section, click the **Install** button next to **Driver Test Manager (DTM) Controller**.

> **Note:** If you plan to do system testing, make sure that you install only .NET Framework 2.0, SQL Desktop Engine, DTM Controller, and DTM Tests on the computer.

The **Microsoft DTM Setup** wizard appears.

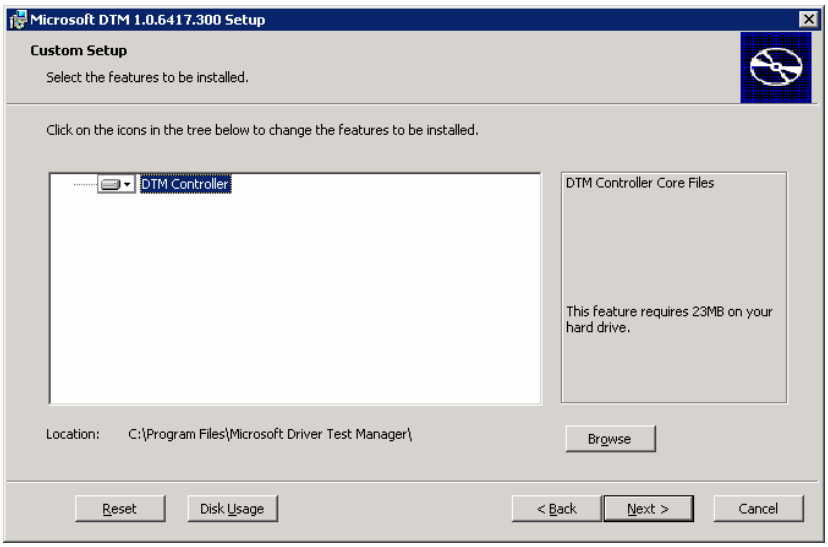


3. Click **Next**.

The **End-User License Agreement** page appears.

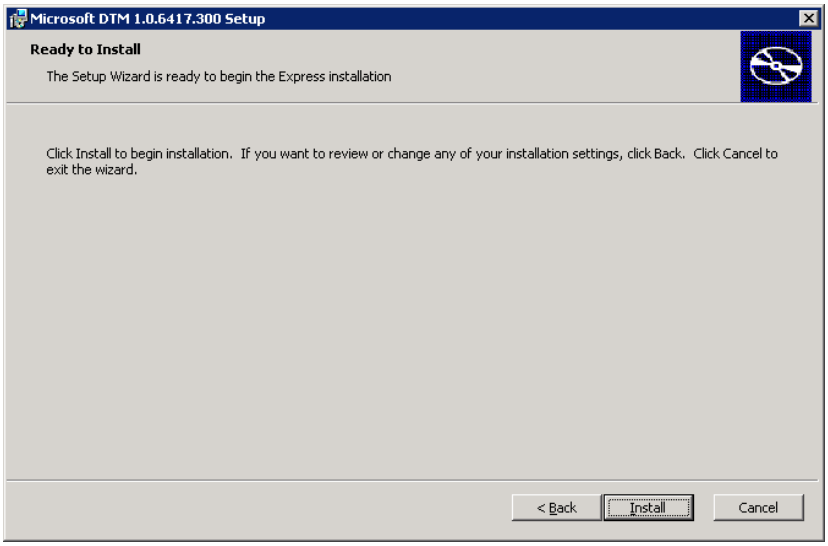
4. Read the EULA, click **I accept the terms in the License Agreement**, and then click **Next**.

   The **Custom Setup** page appears.



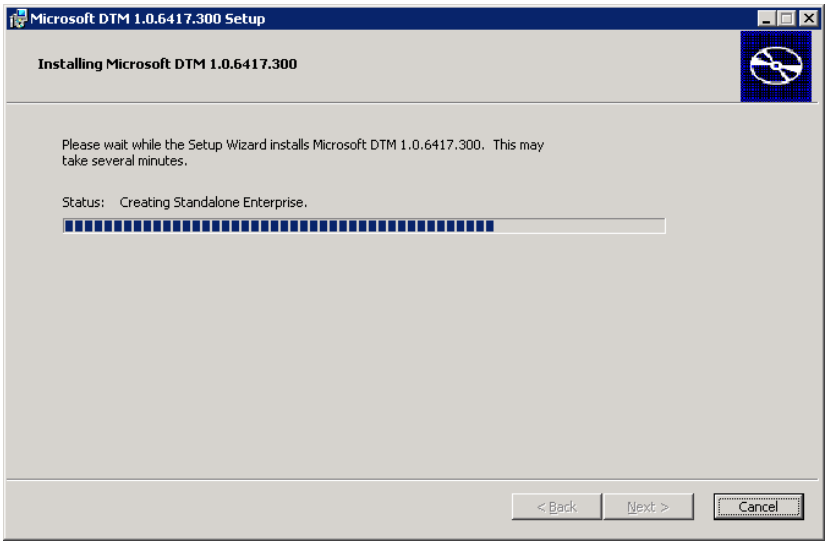
5. Click **Next**.

   The **Ready to Install** page appears.

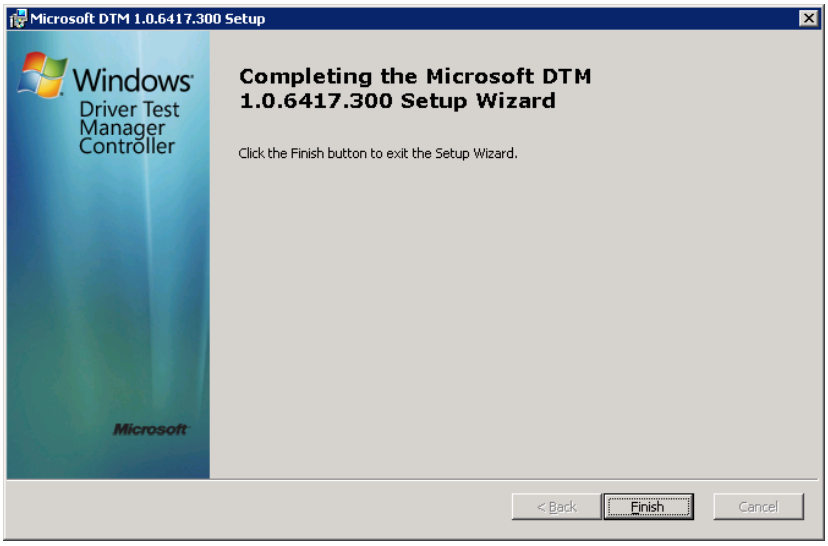


6. To begin installing DTM Controller, click **Install**.

> **Note:** This process can take a while. It may appear at times that the progress bar stops, but this is normal. During installation, you might see the following page for 20 or more minutes.



7. When the installation has completed, the following page appears. To complete the installation, click **Finish**.



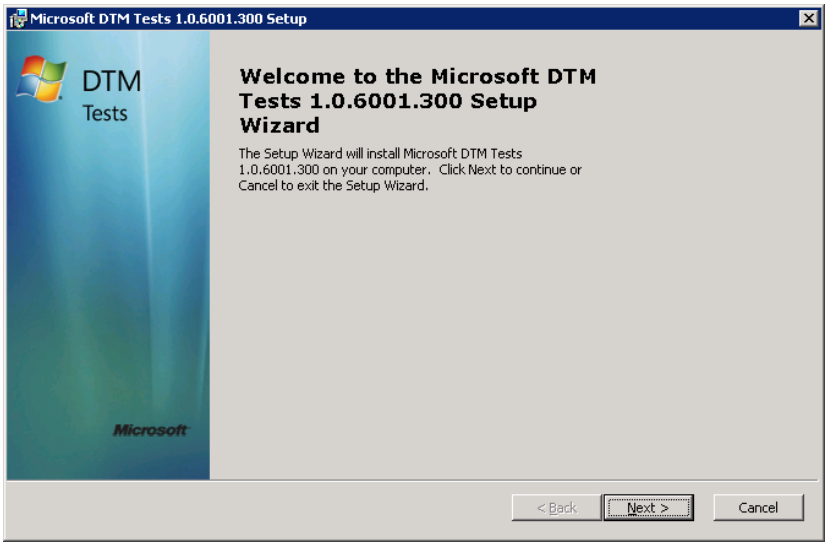
3. Installing DTM Tests

After installing the DTM Controller, you must install the DTM Logo tests separately.

To Install DTM Tests

1. In the **Microsoft Windows Logo Kit Installer** dialog box (shown in step 1 of the preceding procedure), under **Windows Logo Kit Setup Packages**, click the **Install** button next to **Microsoft DTM Tests**.

   The **Microsoft DTM Tests Setup** wizard appears.

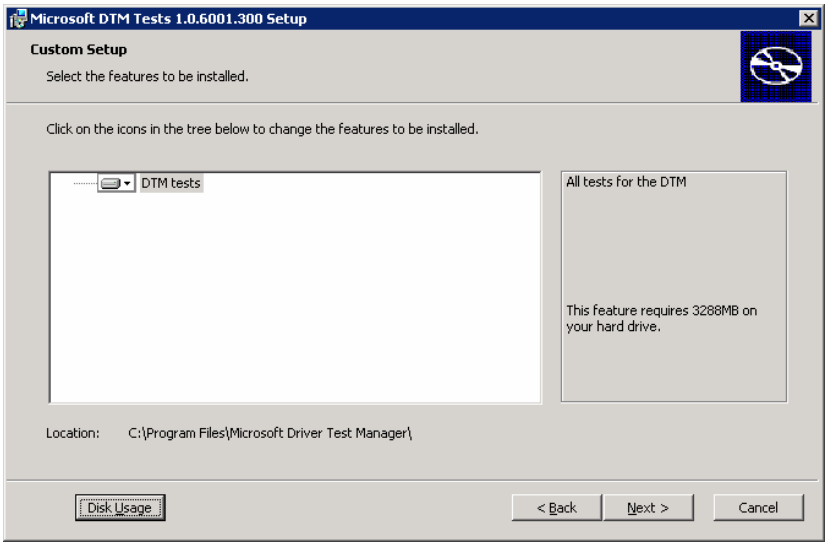


2. Click **Next**.

   The **End-User License Agreement** (EULA) page appears.

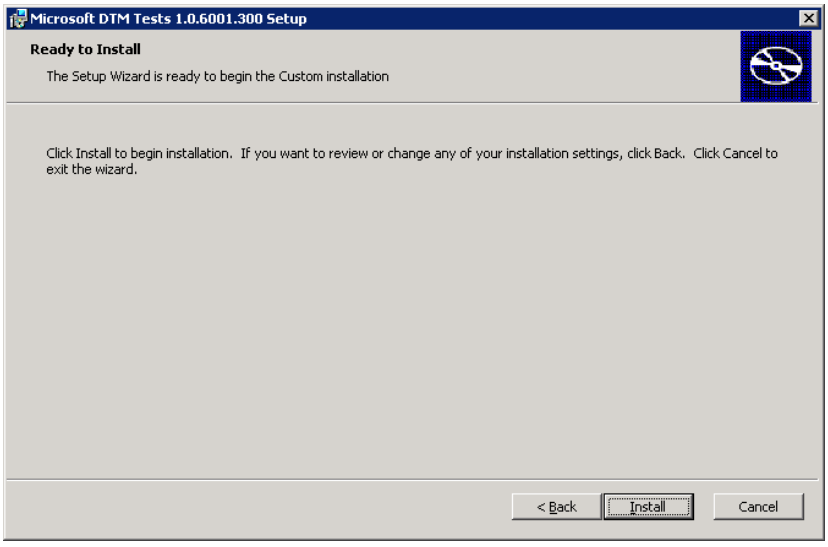
3. Read the EULA, click **I accept the terms in the License Agreement**, and then click **Next**.

   The **Custom Setup** page appears.



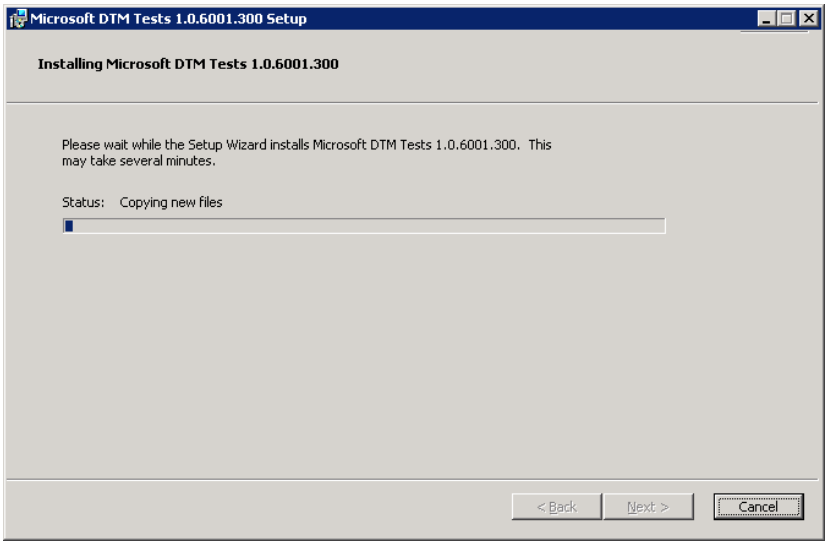
4. Click **Next**.

   The **Ready to Install** page appears.

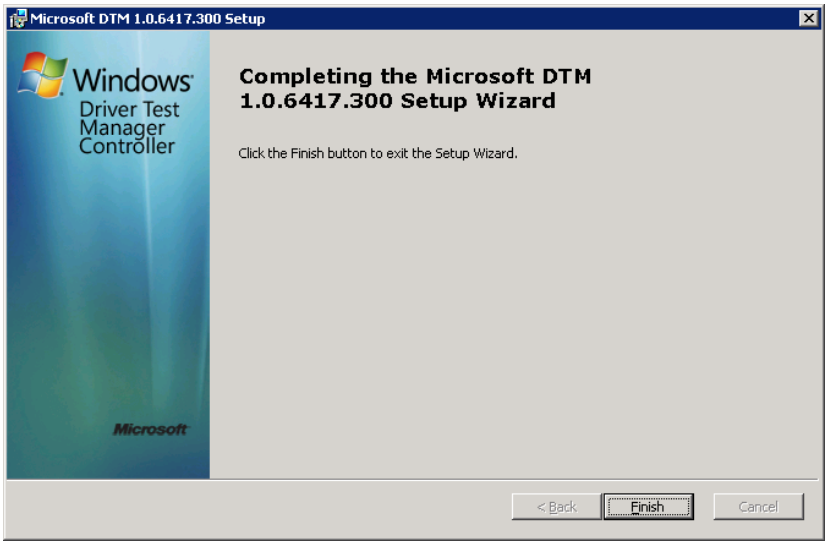


5. To begin installing Microsoft DTM Tests, click **Install**.

> **Note:** This process can take a while. It may appear at times that the progress bar stops, but this is normal. During installation, you might see the following page for 20 or more minutes.



6. When the installation has completed, the following page appears. To complete the installation, click **Finish**.



7. As appropriate, go to the WHDC Web site to download and install the latest Quick Fix Engineering (QFE) updates. Do not simply download the latest QFEs; install them only if they are needed.

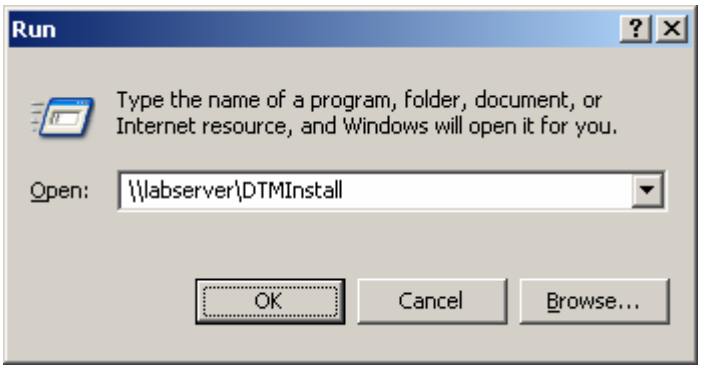
4. Installing DTM Studio

You can choose to install DTM Studio on the same computer on which you installed DTM Controller or to another computer that is in the same network as the controller. We recommend that you install DTM Studio on the same computer on which you installed DTM Controller. It is a good idea to make sure that the system under test is close to the server so that you can intervene with the manual tests when necessary. Do not install DTM Studio on a computer on which you plan to install DTM Client.

To install DTM Studio

1. On the taskbar, click **Start**, and then click **Run**.

2. In the **Run** dialog box, type *****servername*****DTMInstall, and then click **OK**.



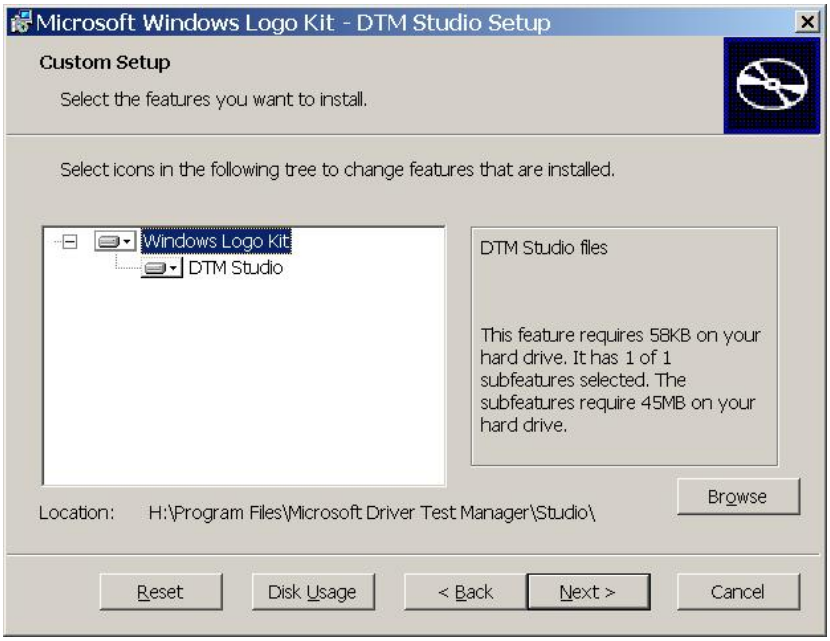
Note: When you installed DTM Controller, a share called `DTMInstall` was automatically created on the server computer.

3. In the Studio window (not shown here), navigate to the Studio folder and double-click **Setup.exe** to start the **Microsoft Windows Driver Kit – Studio Setup** wizard.

4. Click **Next**. The **End-User License Agreement** page appears (not shown here).

5. Read the EULA, click **I accept the terms in the License Agreement**, and then click **Next**.

   The **Custom Setup** page appears.



6. To accept the default settings, click **Next**. The **Ready to Install** page appears (not shown here).

7. To install DTM Studio, click **Install**. When the installation has completed, the **Completed** page appears (not shown here).

8. To complete the installation, click **Finish**.

5. Installing DTM Client

You cannot install DTM Client on the same computer on which you installed DTM Controller. Do not install DTM Client on any computer on which you plan to install DTM Studio or on any computer that already has DTM Studio installed. Install DTM Client on a test machine that is on the same network as the DTM Controller. Additionally, make sure that the DTM Client is running an appropriate operating system for which you want a logo.

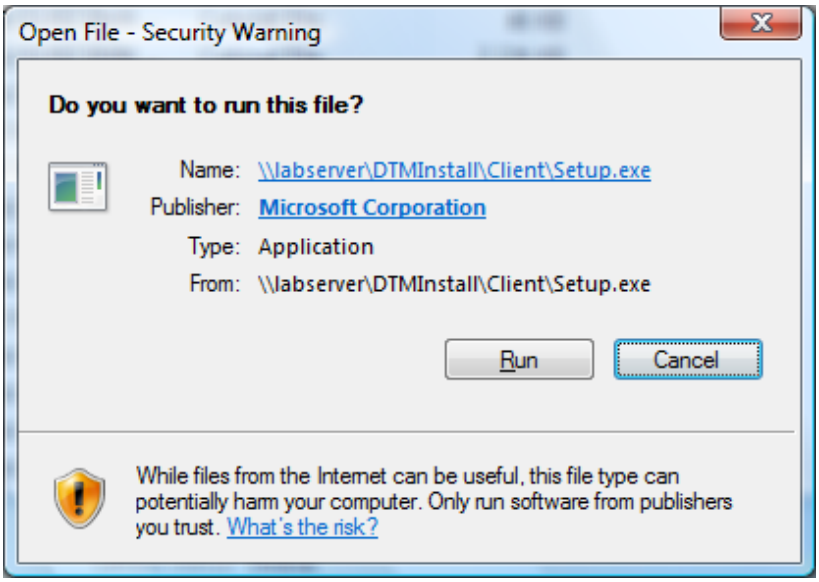
To install DTM Client

1. On the taskbar, click **Start**, and then click **Run**.

2. Type *servername*\DTMInstall, and then click **OK**.

3. In the Client window (not shown here), navigate to the Client folder and double-click **Setup.exe**.

   The following message appears.



4. Click **Run**. The Microsoft Windows Driver Kit – Client Setup wizard appears (not shown here).

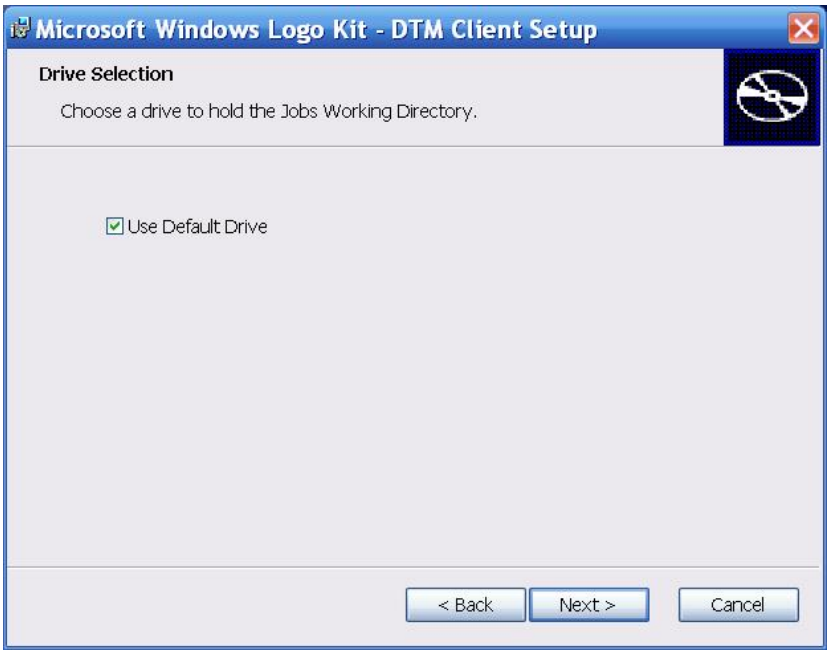
5. On the **Welcome** page (not shown here), click **Next**.
   The **End-User License Agreement** page appears.

6. Read the EULA, click **I accept the terms in the License Agreement**, and then click **Next**.

   The **Internet Connection Firewall Agreement** page appears.

7. Click **Yes I will allow a port to be opened**, and then click **Next**.

8. On the **Custom Setup** page, click **Next** to accept the default installation. The **Drive Selection** page appears.



Note: Do not select **Default Drive** if the client is a dual-boot computer or if you intend to use the same computer to test multiple versions of Windows. In that case, place the Jobs working folder on a separate partition and preserve that folder through the different Windows boots and installations.

9. Make sure that **Use Default Drive** is selected, and click **Next**. The **Ready to Install** page appears (not shown here).

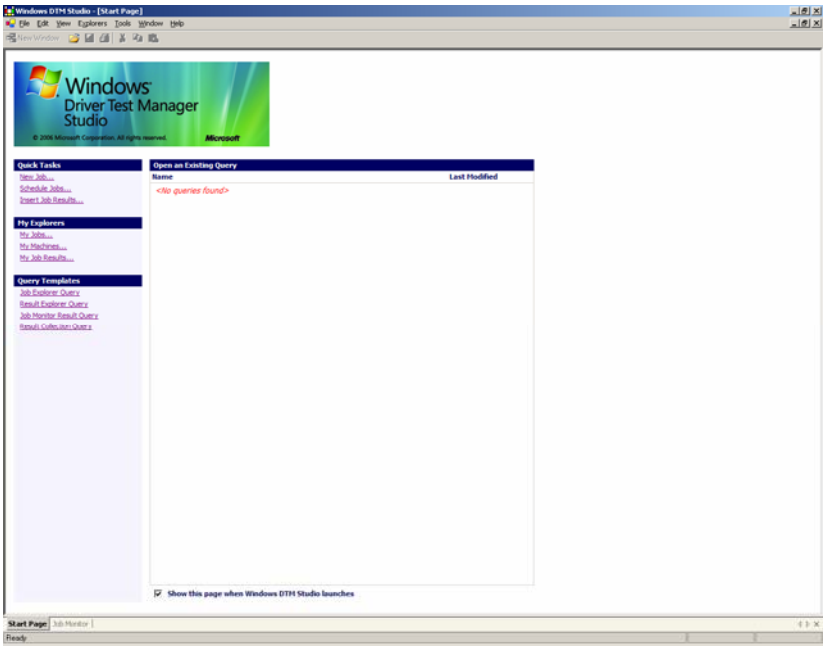
10. To install DTM Client, click **Install**.

11. When the installation is complete, the **Completed** page appears. To complete the installation, click **Finish**.

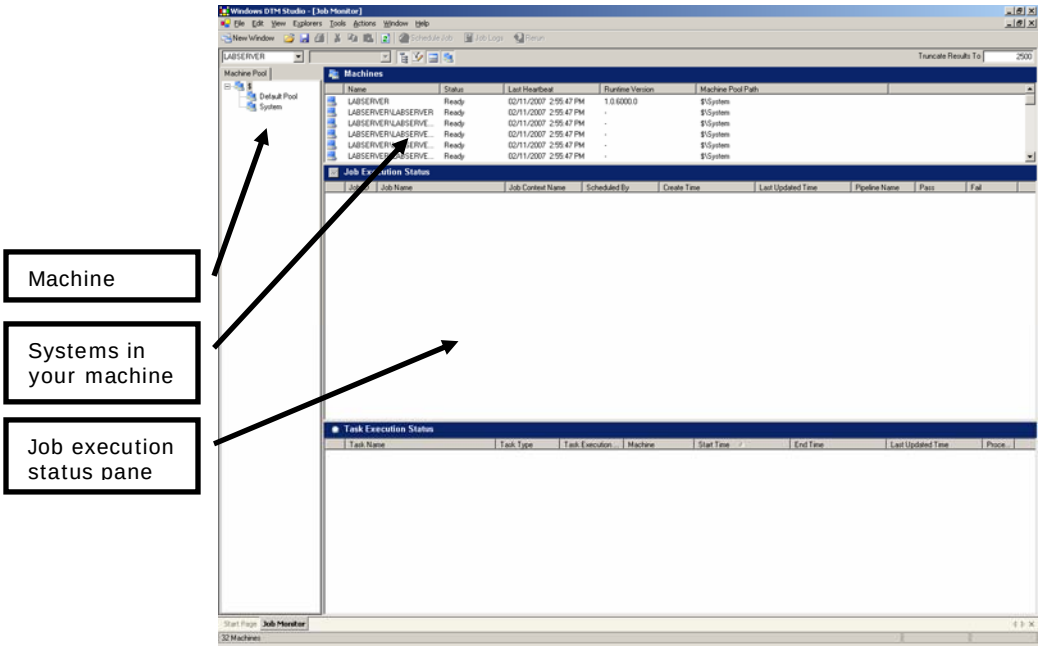
6. Testing Systems

1. On the desktop of the computer on which you installed DTM Studio, double-click the shortcut to DTM Studio.

   The Windows DTM Studio start page appears.



2. On the **Explorer** menu, click **Job Monitor**.



The Job Monitor explorer

3. In the **Machine Pool** tab on the left side, right-click the **$** symbol, and then click **Add Machine Pool**.

> **Note:** We recommend as a best practice that you use the model name of the system that you are testing as the name of the pool that you are adding as part of this step.

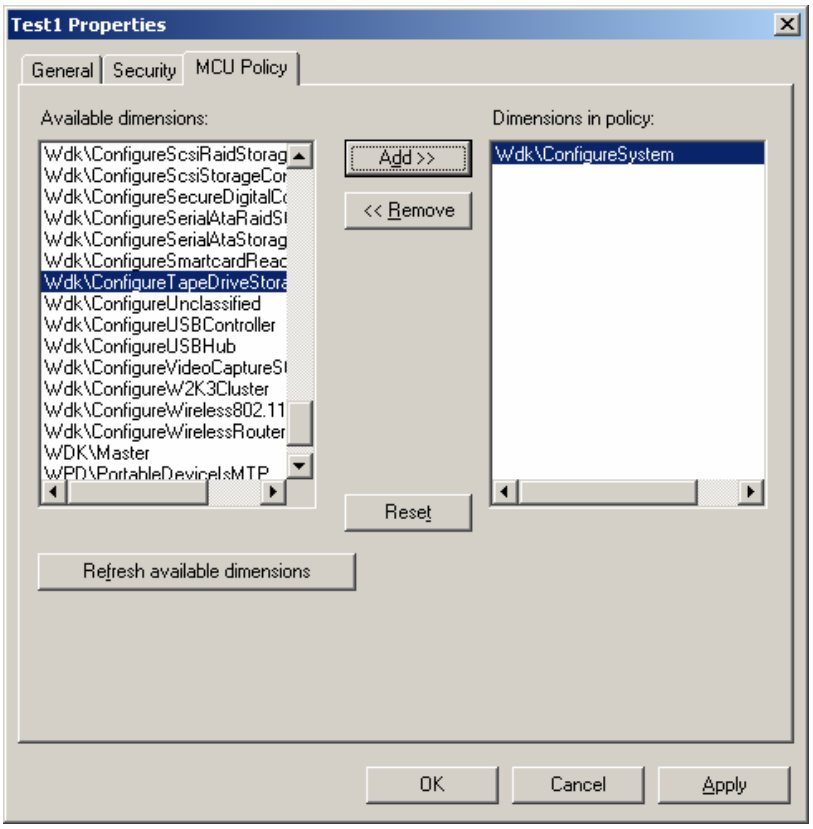
> **Note:** After you have installed DTM Client software on your test clients, the controller automatically detects new test clients and adds them to the *Default Pool*. You cannot test from the *Default Pool*. Instead, you must manually create a test machine pool, as described in this step. After you have created the test machine pool, you can drag and drop the systems in the *Default Pool* to the new test pool that you created. At that point, you can schedule those machines to run tests.

After DTM Client has been installed on a test machine, it can take 5 to 20 minutes for DTM Controller to automatically detect its presence. You can manually refresh the list of machines in the **Job Monitor** by clicking **View** and then **Refresh**, or by pressing F5.

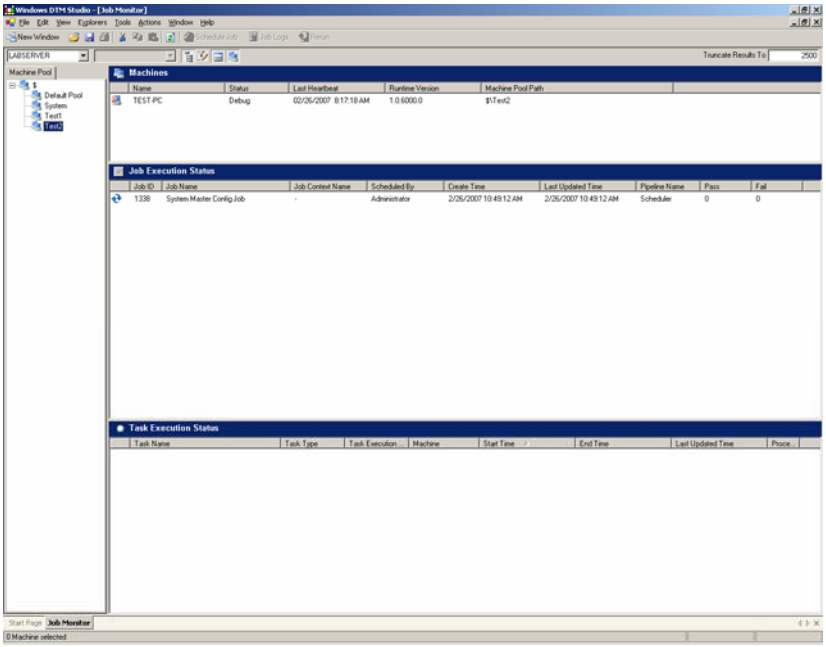
4. Type a name for the machine pool, select a **Job Delivery Agent**, and then click **OK**. Your machine pool is now listed in the **Machine Pool** pane on the left, under the **$** symbol.

5. Right-click the machine pool that you just created, and then click **Properties**.

6. On the **MCU Policy** tab, under **Available dimensions**, scroll down and click **WDK\ConfigureSystem**, click **Add**. Then click WDK\ConfigureAudioDevice, click Add and then click **OK**.



7. You will now return to the **Job Monitor** explorer. You must drag and drop the machine that you want to test from the *Default Pool* into the new test machine pool that you just created. The status of the machine will be set to *Manual*.

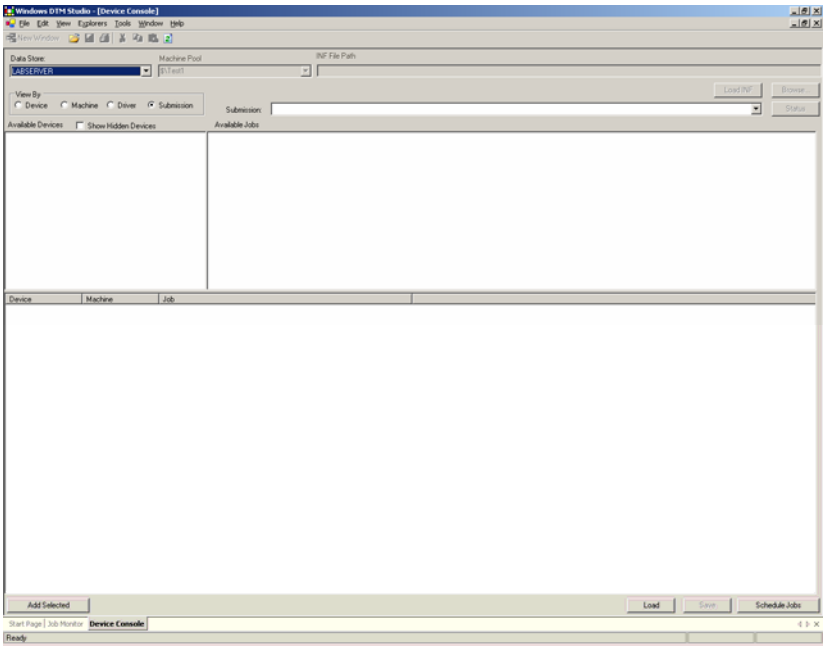


8. Right-click the test machine, point to **Change Status,** and then click **Reset**. The status of the machine under test changes to *Ready*. When the test machine is ready, the MCU policy that you applied from the **Available dimensions** dialog box (in step 6) begins to initialize the machine with the MCU.

9. Wait for the initialization to complete before you proceed. If you are prompted by the test machine for credentials for the DTMLLUAdminUser account, type **Testpassword,1**.
   Now you can log on to the Winqual Web site and download the latest filter updates. However, the best time to download filter updates is after all the tests have been completed and you are ready to check the results.

Note: You must be a registered user of the Winqual Web site to download filter updates.

10. On the **Explorer** menu, click **Device Console**.

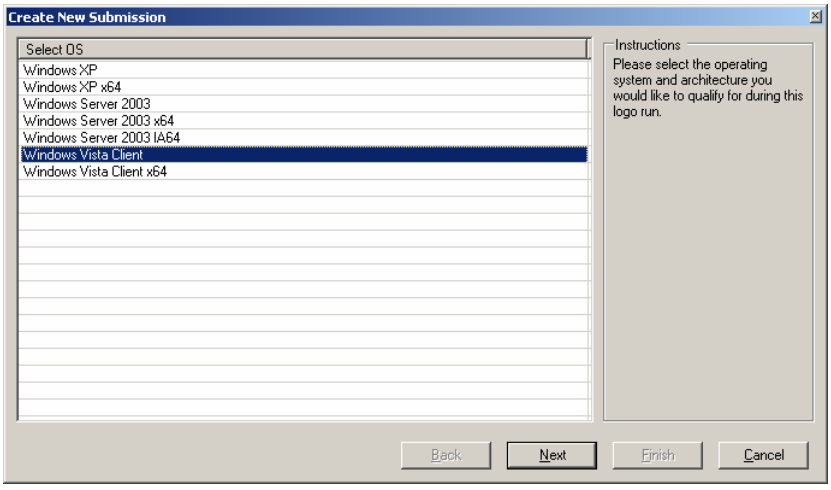


The Device Console explorer

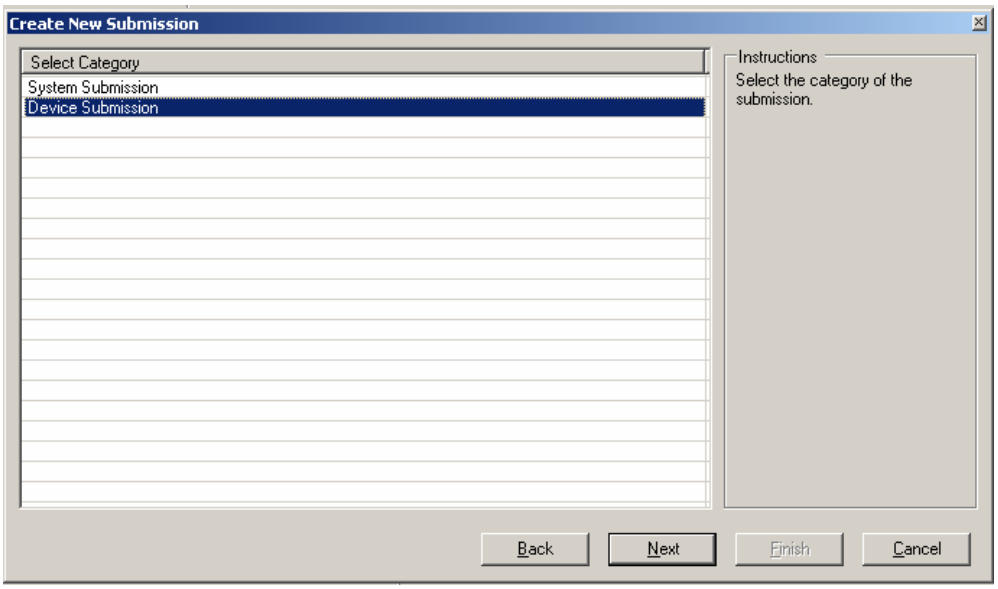
11. In the upper-right corner of the screen, click the **Submission** arrow, and then click **New Submission**.

> **Important:** Do not click any of the option buttons (for example, **Device, Machine,** or **Driver**) in the **View By** area. Although they are functional, they do not apply to the logo program.

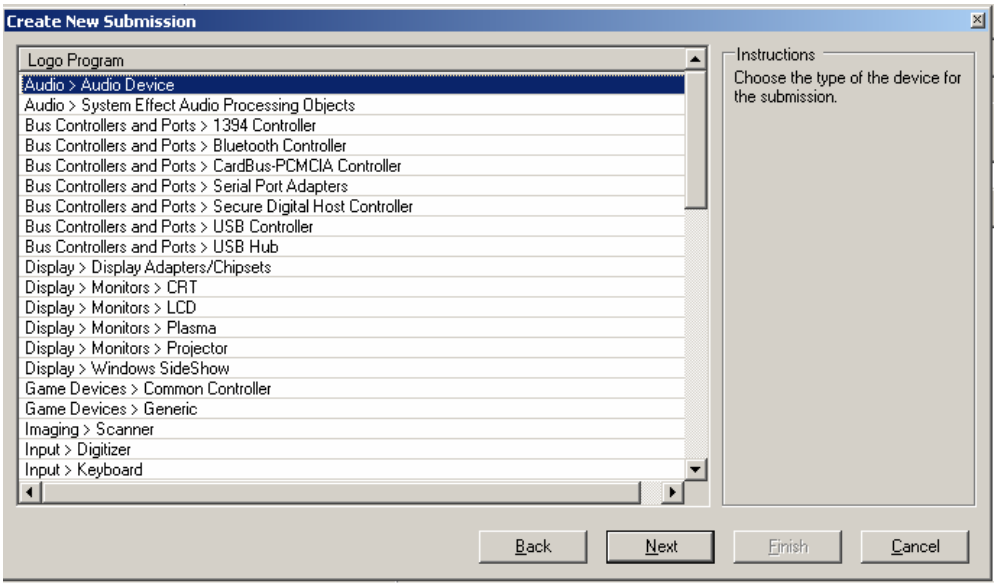
The following dialog box appears.



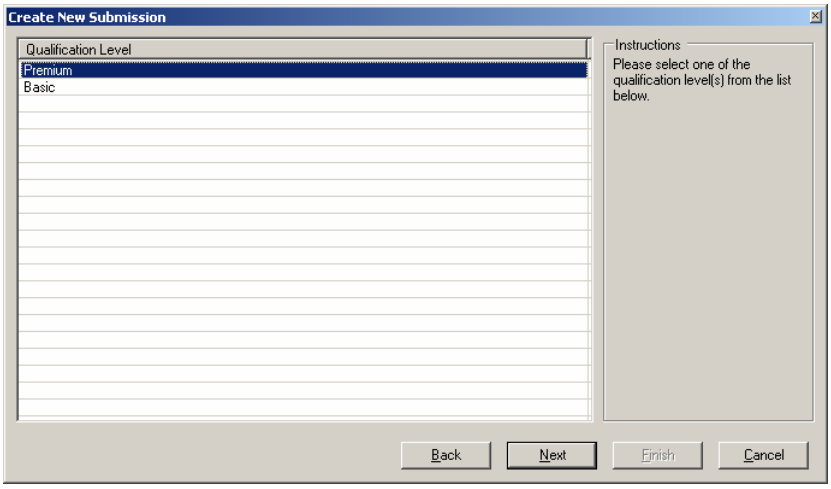
12. Click the operating system that is installed on the client system for which you want to obtain a logo, and then click **Next**. The **Create New Submission** wizard appears.



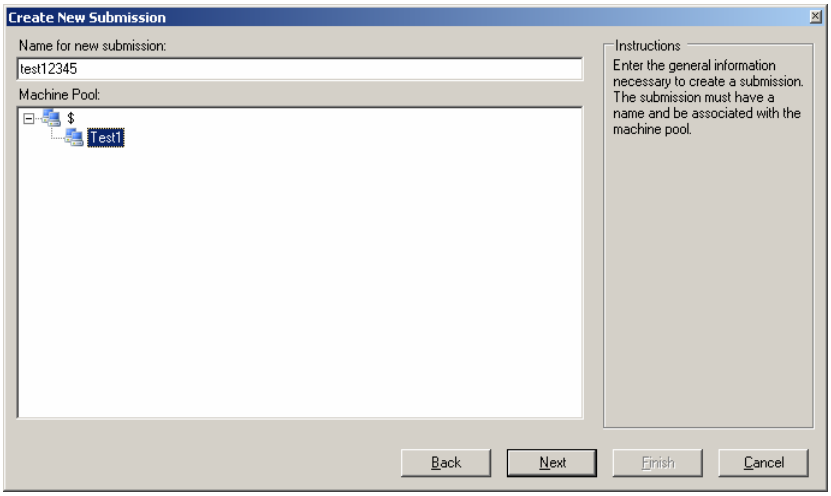
13. Click **Device Submission**, and then click **Next**.



14. Click the audio device, and then click **Next**.



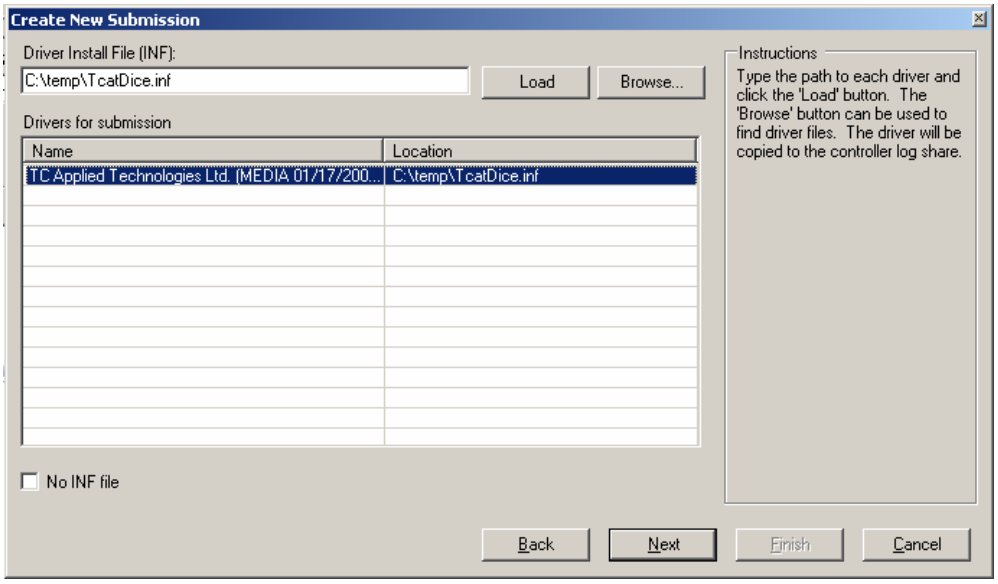
15. Click the **Qualification Level** that you are testing for, select **b Basic** and then click **Next**.



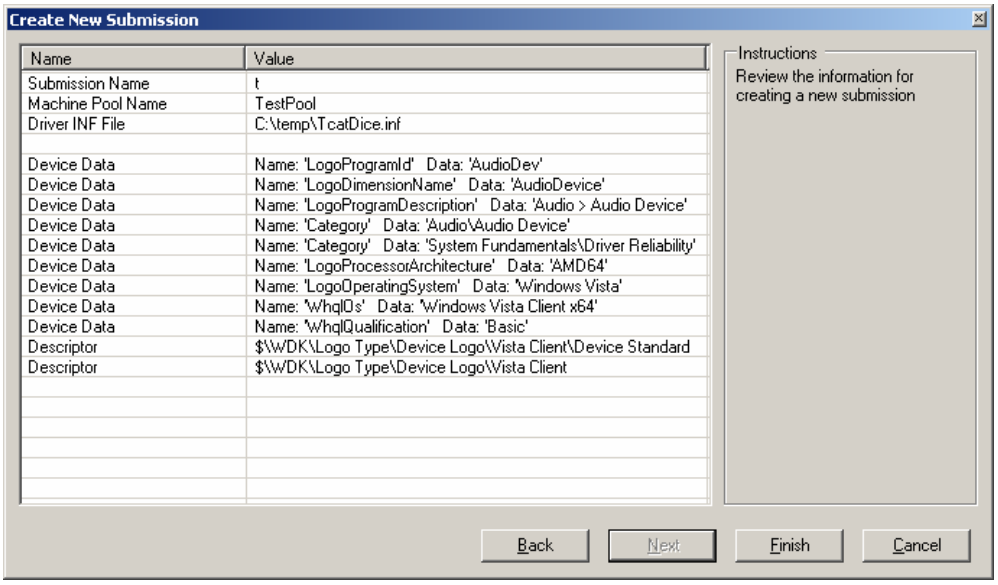
16. In **Name for new submission**, type a name, click the machine pool that your machine is in, and then click **Next**.

> **Note:** If you are running multiple versions of the same test, you can name them accordingly to provide version control with the test.

The following page appears.



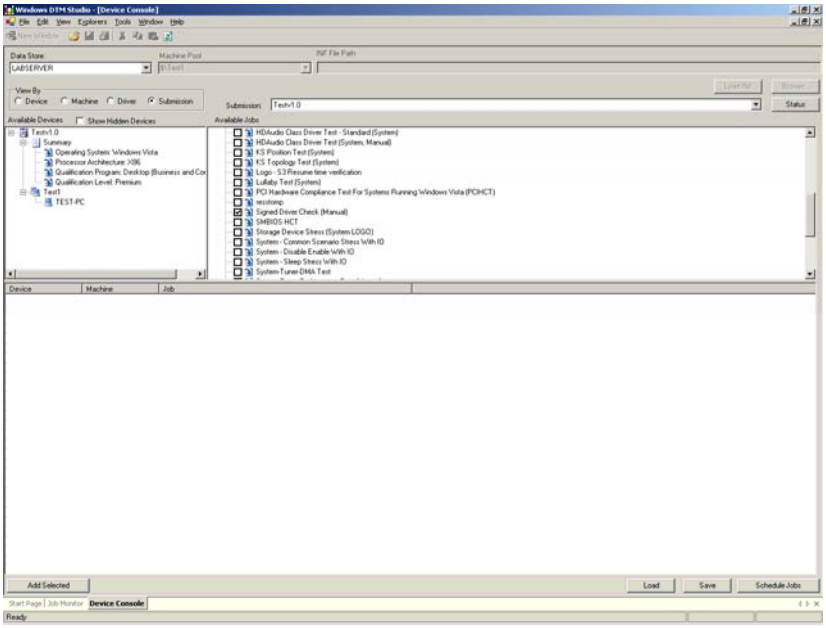
17. Select the INF for the driver to be tested, click load and click Next.



18. This will show details on the submission created. Now click **Finish.** Tests are ready to run.

19. In the **Device Console** explorer, select the check boxes of the jobs that you want to run, and click the **Add Selected** button in the lower-left corner. The logo program requires all the listed tests.

> **Important:** Although you can schedule jobs in other ways, you should schedule them only from **Device Console**. Doing otherwise invalidates the logo submission.



20. If errors appear in the bottom window, you should ignore them and click the **Schedule Jobs** button in the lower-right corner. In particular, it is normal for the Device column to display No Devices Selected and for the Machine column to display No Machines Specified.

21. Schedule the jobs.

> **Note**: While running Audio tests for Vista please make sure that all other audio devices are disabled.

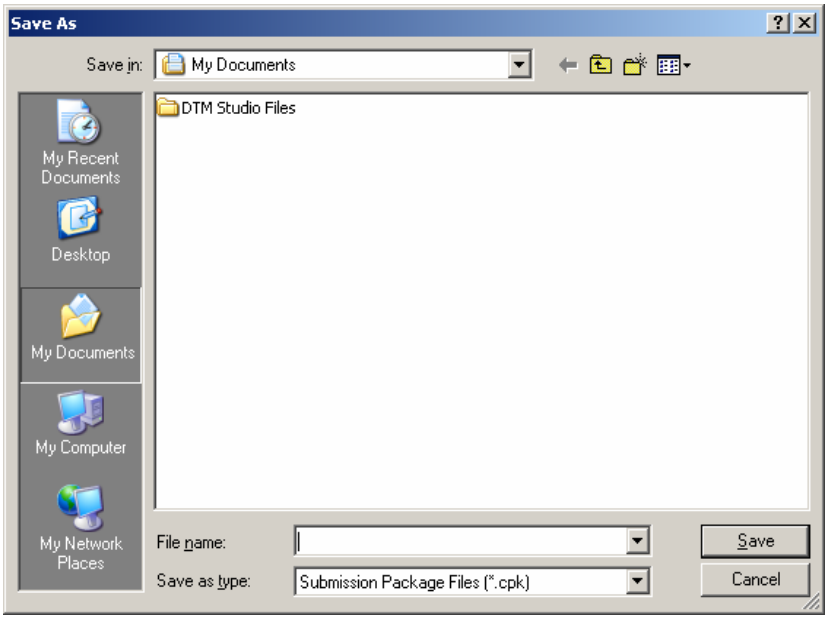
After the tests have completed, you can create a compressed package (CPK) to send to Microsoft with your submission.

To create a CPK

1. Download and apply the latest filters. This ensures that the CPK Log Viewer shows the test results with the latest filters applied.

2. In **Device Console**, click the **Status** button.

3. In **Device Console,** right-click the name of your machine under test, and then click **Create Submission Package**.



4. When you are prompted to save the package, type a name for it, and then click **Save**. Depending on the volume of tests that were executed, it might take a few minutes to compile the CPK.

To review a CPK

Download and install the DTM Log Viewer for WHQL.

To submit your passing test sequence to Microsoft

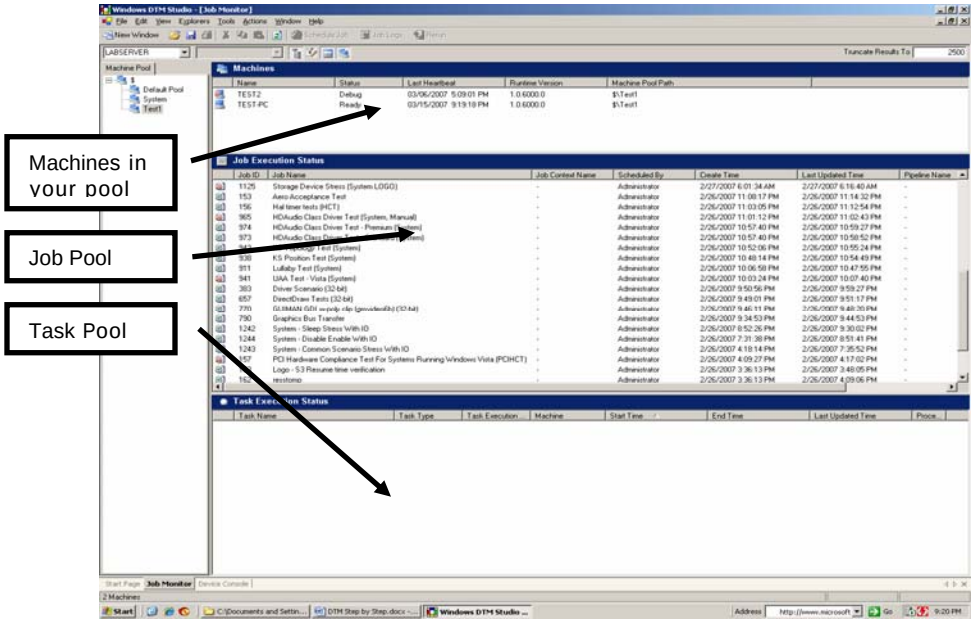
Go to the Winqual Web site and then scroll to **Windows Logo Programs**, select hardware, and then create logo submission. You will need a CPK as mentioned in the previous section.

7. Understanding the Test Logs

Due to the sheer number of tests that are performed and the number of possibilities of the root causes of failures, it is almost impossible to create a knowledge base of resolutions that is easily accessible. This section can help you find the exact failure notification so that you can investigate it further.

If a test fails, you will see a red *X* in the **Job Monitor** that indicates failure.

Note: It is important to understand that the top section in **Job Monitor** shows the machines under test, the middle section shows the jobs, and the bottom section shows the tasks. You do not need to be concerned if a job passes but shows that a task within it has failed. The DTM is concerned only with jobs.

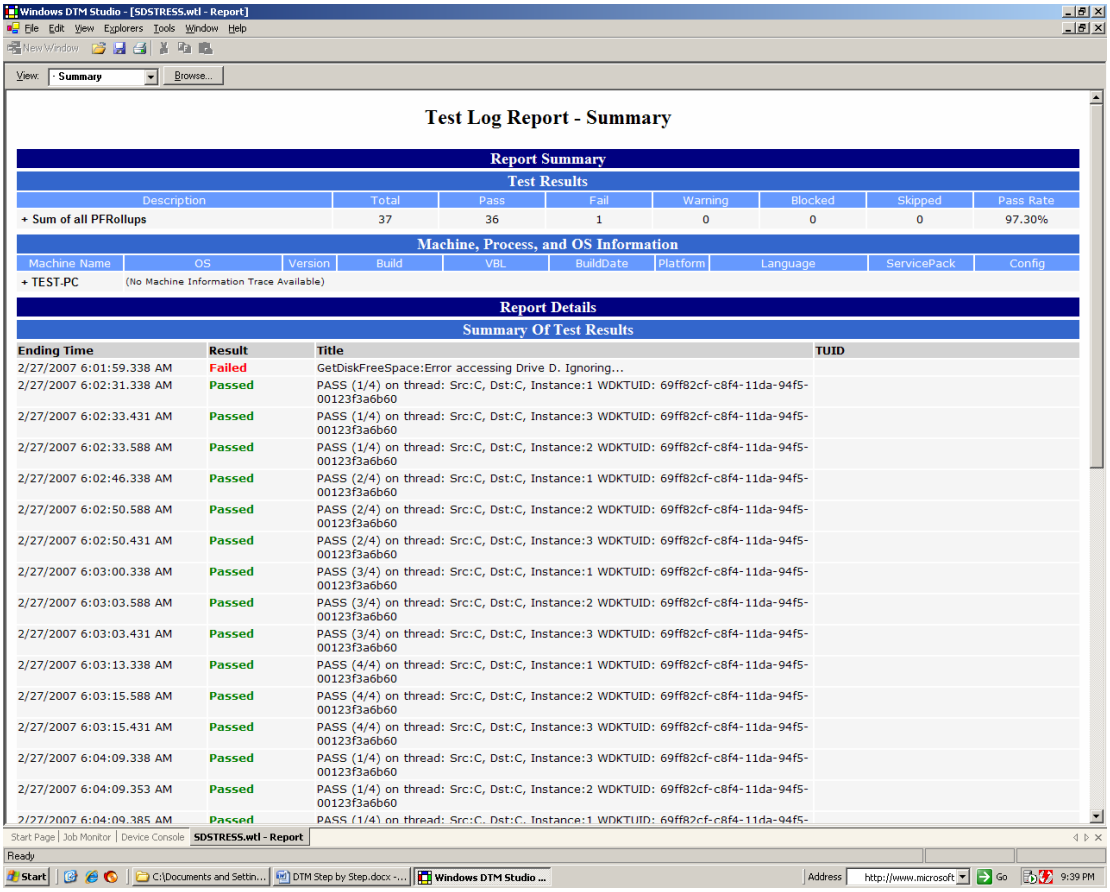


To view job errors

1. Click the machine that you were testing in the *Machine Pool*, and then click a job that shows a failure notification in the *Job Pool*. You will then see a list of the job's tasks in the *Task Pool*.

2. Right-click a failed task, and then click **View Task Log** if available. If the log is not available, right-click **Child Job Results,** find the failing task, and then click **View Task Log**.

The **Test Log Report - Summary** window appears.



3. In the upper-left corner, on the **View** menu, click **Failure**. The entire log is filtered to display only failed job results.

Note: To view the detail of the task, click the plus sign (+) next to **Test Cases**. All failures in this view will be listed in red text, as seen in the following storage stress test failure.

Error	2/27/2007 6:01:59.338 AM	E74.BB4 : +VAR+SEV3 0 : GetDiskFreeSpace:Error accessing Drive D. Ignoring...
File:		e:\vrtmtest\testsrc\driverstest\storage\wdk\sdstress\console.c Line: 94
Error Type:		
Error Code:		0x0
Error Text:		Error 0x00000000
End Test	2/27/2007 6:01:59.338 AM	GetDiskFreeSpace:Error accessing Drive D. Ignoring...
Result:		**Fail**
Repro:		**C:\WTT\JobsWorkingDir\Tasks\WTTJobRunE5777568-F7E2-455B-BF52-6F482F656401\SDStress.exe (null)**

Note: You can use the logs to help you to identify areas that need some attention, or you can send the logs to your original design manufacturer (ODM) to help you to identify issues.

8. Submitting Error Logs

If you submit error logs to either your systems engineer, ODM, or Microsoft Technical Account Manager (TAM) to interpret the log results, we recommend that you create a compressed package (CPK) of your logs before you submit them as described in the **To create a CPK** procedure earlier in this document.