



## NVIDIA GRID™ TEST DRIVE MANUAL

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V1.0

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# NVIDIA GRID Test Drive

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## *PUT YOURSELF IN THE DRIVER'S SEAT!*

NVIDIA is excited to give everyone the opportunity to see how NVIDIA GRID elevates the end user experience for remote desktops and drives performance for today's GPU intensive applications. With NVIDIA GRID, users can experience industry leading technology running graphics-rich applications within a virtualized environment. The NVIDIA GRID Test Drive is a unique way for anyone to experience firsthand the power of NVIDIA's GRID solutions. In just a few minutes you can be up and running with your own personal virtual desktop with all the power of a high end graphics workstation, and all you need is an internet connection.

A virtualized desktop can be a great desktop, and now anyone can see for themselves with the NVIDIA GRID Test Drive. As more and more companies migrate their user desktops to VDI solutions many face the challenge of knowledge workers complaining about not getting the fluid desktop experience they want. Or, graphics hungry groups, such as designers, architects and engineers not getting the performance they need for high -end graphical applications. NVIDIA's GRID is the solution to these issues, and now end users can experience this power and performance for themselves.

The NVIDIA GRID test drive is not a commercially available product. It is a technology demonstration developed by NVIDIA to showcase the benefits of adding GRID based graphics acceleration to power an interactive experience in a virtual environment.

Commercially available virtualization and remoting products that leverage NVIDIA GRID GPUs today are:

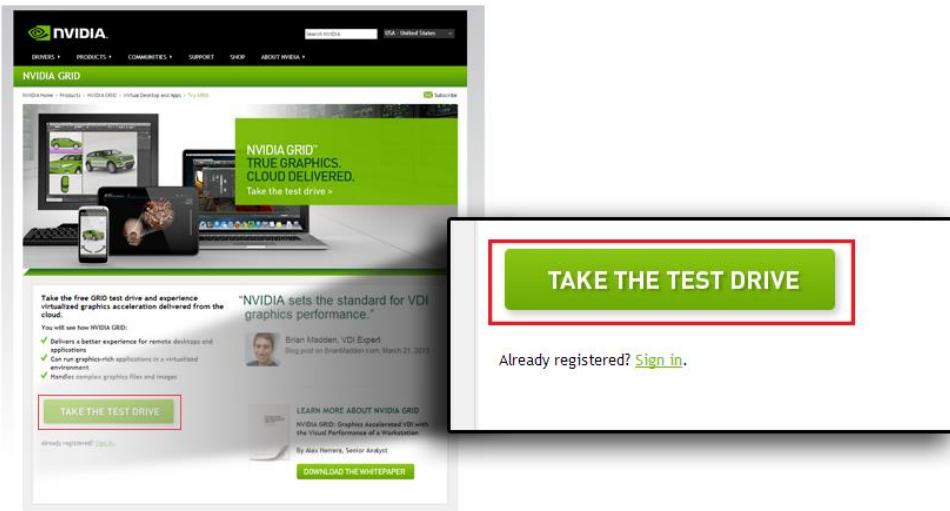
- Application virtualization: Citrix XenApp
- GPU sharing or software virtualization: Microsoft RemoteFX; VMware Horizon View
- GPU pass-through: Citrix XenServer and XenDesktop; VMware vSphere
- GRID vGPU or hardware virtualization: Citrix XenServer and XenDesktop

Take 24 hours to test drive a high performance virtual desktop experience. You will have access to a VM featuring: 8CPU processing cores, 15GB of RAM and a dedicated NVIDIA GRID GPU. You will see how NVIDIA GRID delivers GPU acceleration to power remote desktops and applications. It can run graphics-rich applications in a virtualized environment, and can handle complex graphics files, ultra high resolution images and fluid HD video. You'll find NVIDIA GRID can power everything from web-based apps such as HTML5 to high-end CAD applications. Since many mobile products are not designed for or don't support flash, developers are trending towards building graphics-accelerated HTML5 pages to improve functionality and performance.



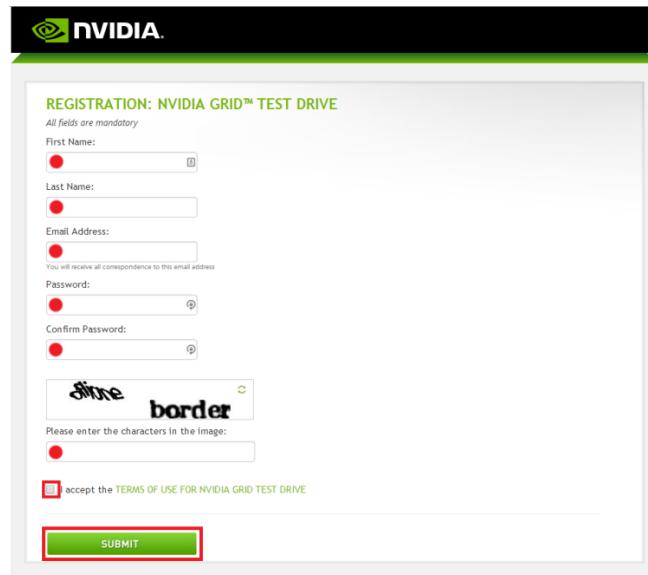
## Getting Started With the NVIDIA GRID TEST DRIVE

The first step in getting started with your Test Drive is to visit the NVIDIA website to register for free online account. Navigate your web browser to: [www.nvidia.com/trygrid.html](http://www.nvidia.com/trygrid.html)



If you haven't signed up for a GRID Test Drive account yet, click the "Take the Test Drive" button. If you have already registered, but haven't downloaded the GRID Workspace software yet, click the "Sign In" link.

Complete the requested registration information and click the submit button.



The image shows the 'REGISTRATION: NVIDIA GRID™ TEST DRIVE' form. It includes fields for First Name, Last Name, Email Address, Password, and Confirm Password. A CAPTCHA challenge 'shine border' is present with a text input field. A checkbox for accepting the 'TERMS OF USE FOR NVIDIA GRID TEST DRIVE' is shown, and a 'SUBMIT' button is at the bottom.

REGISTRATION: NVIDIA GRID™ TEST DRIVE  
All fields are mandatory

First Name:

Last Name:

Email Address:

You will receive all correspondence to this email address

Password:

Confirm Password:

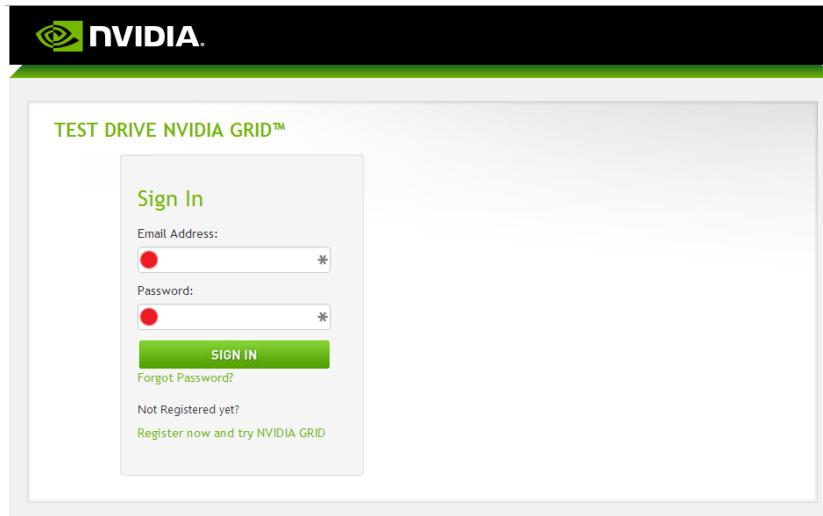
shine border

Please enter the characters in the image:

accept the [TERMS OF USE FOR NVIDIA GRID TEST DRIVE](#)

**SUBMIT**

If you are returning after having previously registered, you'll be taken to the Test Drive sign in page. Enter the email and password information you used when registering your account.



The image shows the 'TEST DRIVE NVIDIA GRID™' sign in form. It features fields for Email Address and Password, a 'SIGN IN' button, and links for 'Forgot Password?' and 'Not Registered yet?'. A 'Register now and try NVIDIA GRID' link is also present.

TEST DRIVE NVIDIA GRID™

Sign In

Email Address:  \*

Password:  \*

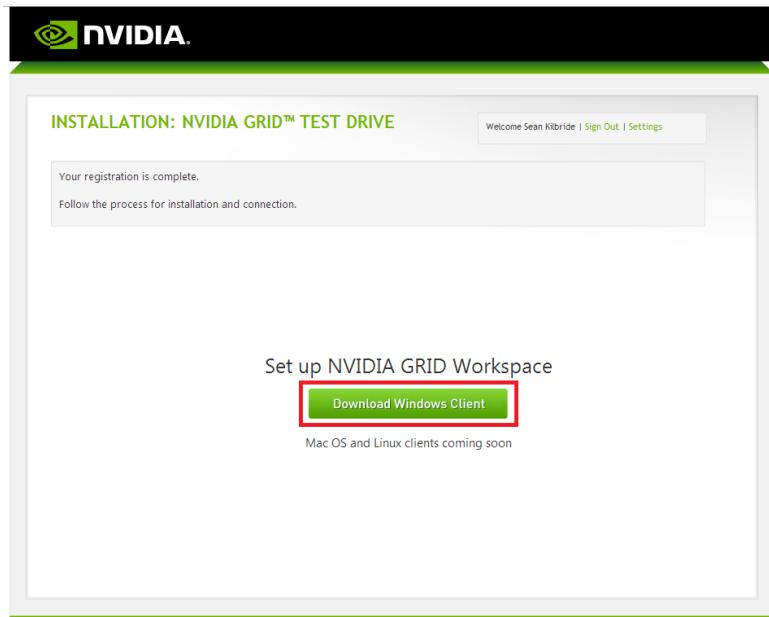
**SIGN IN**

[Forgot Password?](#)

[Not Registered yet?](#)

[Register now and try NVIDIA GRID](#)

Once you have completed registration, or signed into your account, you'll be able to download the NVIDIA GRID Workspace client for Windows (OS X and Linux clients will be available soon).



Click the Download button to download the GRID Workspace client. The download will save the installation file to your local computer. Run the installer to install the software on your system.



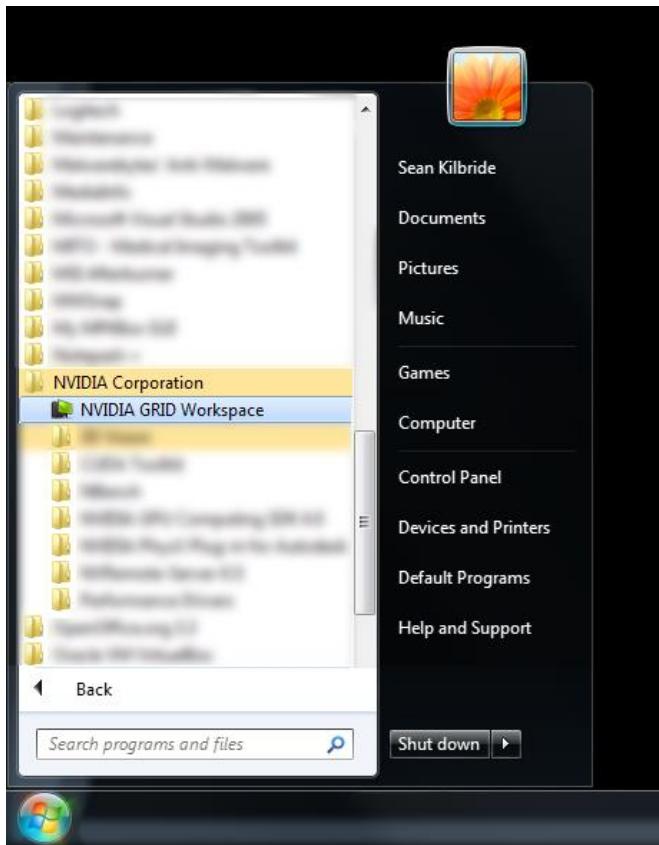
On the next screen you'll have the option to change the install location, in most cases the default install location is the best choice. If you're happy with the install location, click next to start the installation.



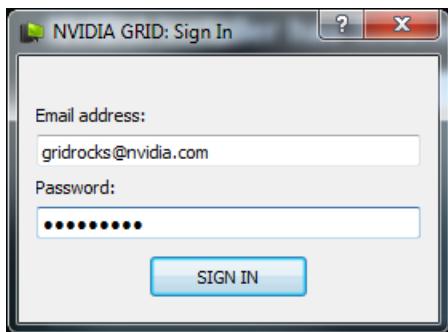
Once the installation completes you can close the installer, by clicking the “Close” button, by default the Launch NVIDIA GRID Workspace checkbox is checked which will automatically launch the GRID Workspace.



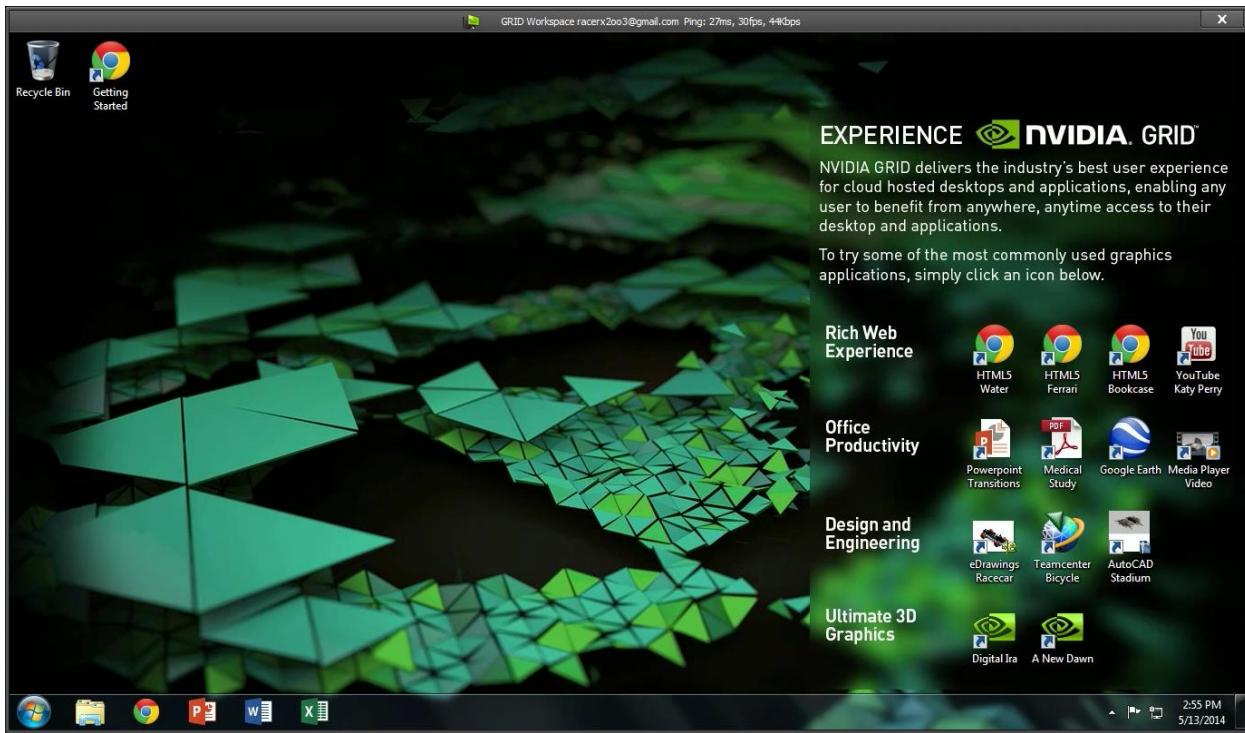
You can also launch the NVIDIA GRID Workspace from the Windows start button as seen below (Windows 7 shown).



This will bring up the NVIDIA GRID: Sign In dialog. Enter the email address and password you used when registering your account.



Make sure you have access to the Internet and then click on the Sign In button to create a connection to the NVIDIA GRID Test Drive.



The NVIDIA GRID Test Drive client will connect to the remote server and create a unique GRID GPU enabled virtual machine session tied to your login information.

## About the NVIDIA GRID Test Drive

You'll notice at the top of the GRID workspace window a statistics display which appears like this:



You'll see continuous information about your GRID instance, including Ping time to the GRID server, the current Frames Per Second (FPS) rate at which the GRID client is receiving streams from the server, and the current bandwidth usage of the network stream.

By default the GRID Test Drive client runs windowed, however you can double-click on the top statistics bar of the client window to maximize the client to run full screen.

For the purposes of the demo the screen resolution of the GRID desktop has been fixed to 1366x768, and behaves as if only a single monitor were attached to the system. In an actual GRID deployment screen resolutions of up to 2560x1600 are supported and each VM can have up to 4 monitors connected.

## Testing the NVIDIA GRID



Your personal GRID VM has been preconfigured with a number of applications and demos which showcase the benefits of a GPU accelerated virtual machine. These applications are categorized by type and found on the right hand side of the GRID desktop.

To run any of these demo applications, simple double click on the desktop icon.

The applications are divided into the following categories:

**Rich Web Experience** - GPU enabled VM's are able to utilize the full potential of rich web based content, whether that content is fluid High Definition video playback, or 3D web content delivered via WebGL.

**Office Productivity** - Office productivity tools are now

leveraging GPU acceleration in new and exciting ways, including 3D effects in slideshow presentations, 3D enabled PDF files, 3D mapping and local media playback.

**Design and Engineering** – Design and engineering workflows are a key area that benefit from the power of GPU acceleration. The applications included here represent some of the most popular 3D CAD applications in the world: Solidworks eDrawings model viewer, Siemens PLM JT2Go, and Autodesk AutoCAD.

**Ultimate 3D Graphics** – NVIDIA technology demos, FaceWorks Digital Ira and A New Dawn demos represent the state of cutting edge graphics realism when utilizing the performance of a modern high end GPU.

## Running the Demos

This section describes how to test the various pre-installed demos in the GRID Test Drive.

### HTML5 Water

This demo uses WebGL to demonstrate a water simulation.

To interact with the demo, you can use the mouse to “draw” on the water to

**WebGL Water**

Made by Evan Wallace

This demo requires a decent graphics card and up-to-date drivers. If you can't run the demo, you can still see it on [YouTube](#).

**Interactions:**

- Draw on the water to make ripples
- Drag the background to rotate the camera
- Press SPACEBAR to pause and unpause
- Drag the sphere to move it around
- Press the L key to set the light direction
- Press the G key to toggle gravity

**Features:**

- Raytraced reflections and refractions
- Analytic ambient occlusion
- Heightfield water simulation \*
- Soft shadows
- Caustics \*\*

\* requires the OES\_texture\_float extension  
\*\* requires the OES\_standard\_derivatives extension

Tile texture from [zobobon on Flickr](#)

create water ripples. Click the mouse on the sphere to drag the sphere through the water. Moving the sphere out of and back into the water creates realistic interactions with the water surface. Clicking on the black background allows you to rotate the entire scene.

## HTML5 Ferrari

The HelloRacer demo uses WebGL to show a 3D racecar in a basic driving simulation.

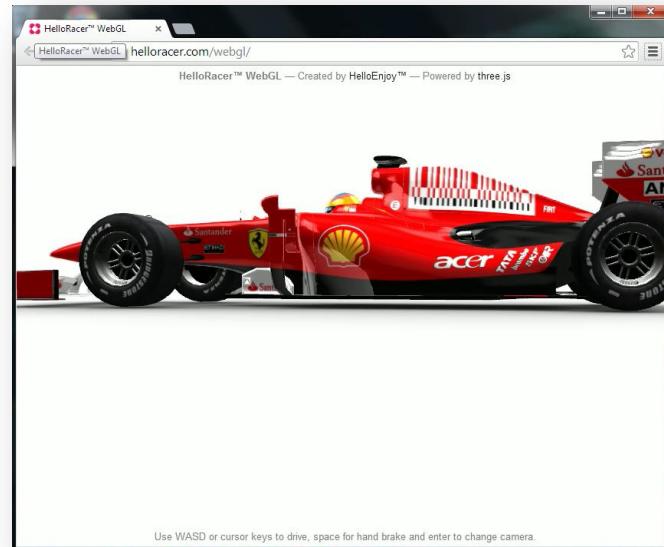
You can drive the racecar using the W A S and D keys on your keyboard:

W = Forward

A = Left

D = Right

S = Back

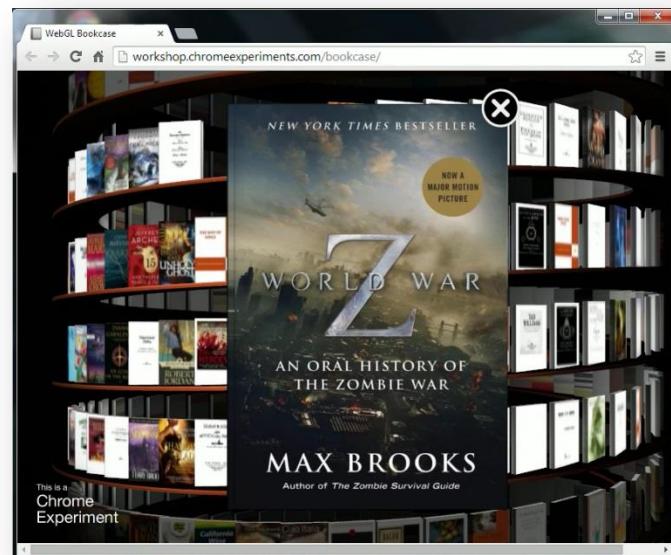


## HTML5 Bookcase

The HTML5 Bookcase demo is a Google Experiment that uses WebGL combined with the Google Books API to showcase how web data can be presented in a dynamic and visually compelling manner. It highlights the how 3D can be used to enhance many common actions.

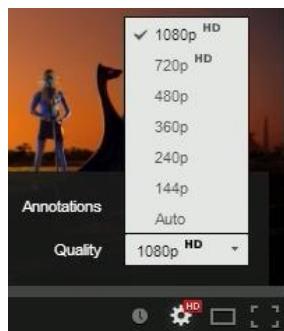
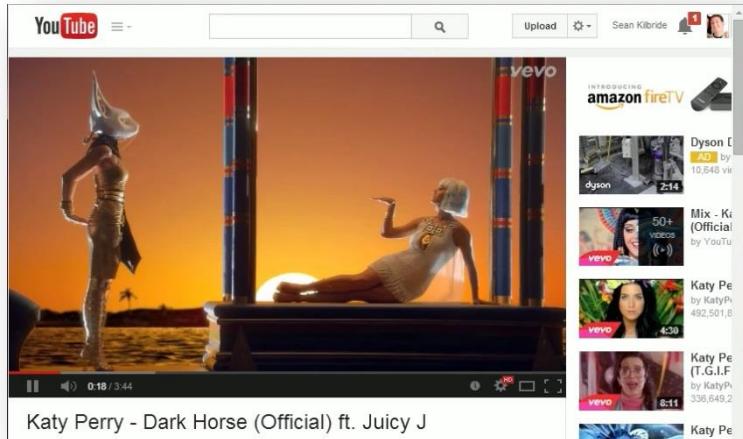
You can navigate the bookshelf by dragging the bookshelf within the viewport.

Additionally you can click the Browse Subjects box to quickly navigate to a sorted section of the bookshelf. Clicking on a particular book brings up a larger version of the book; clicking on the cover opens the book, showing a sample page and the ability to purchase the item from Google Books.



## Google YouTube

YouTube is the most popular video streaming website, with 100 hours of video being uploaded every minute. As more and more content is delivered via online streaming video, being able to smoothly watch streamed online video is an important part of the end user experience. To test YouTube performance, click the YouTube icon on the desktop. Click on the settings icon in the right hand corner of the video window (the gear icon). Change the quality to 1080p to view the video at full HD resolution. Playing back the video is smooth and flawless.



## Microsoft PowerPoint

One of the most widely used office productivity applications today; Microsoft PowerPoint utilizes advanced transition effects to add impact to presentations.

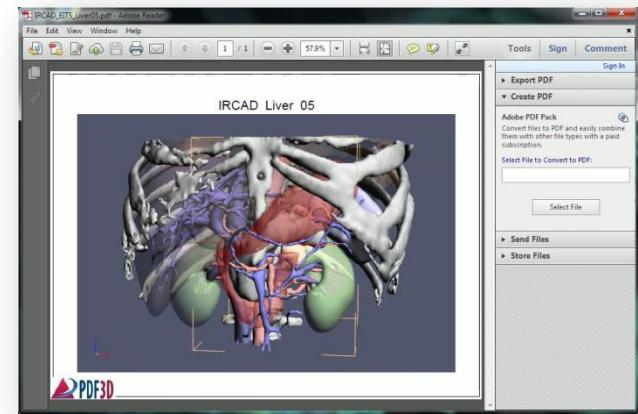
Click on the icon labeled ***PowerPoint Transitions***. This will launch PowerPoint and load the presentation. Press F5 on your keyboard to start the presentation. You'll notice that the GPU accelerated GRID VM is able to



fluidly handle all of the advanced transitions within the slideshow.

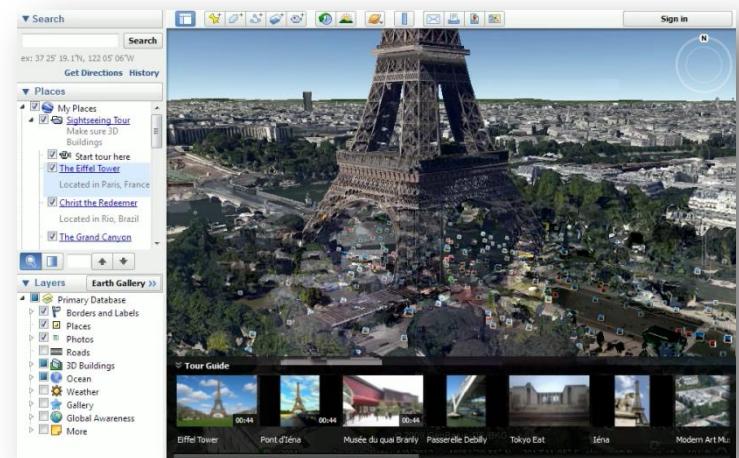
## Adobe Reader PDF3D

PDF3D allows users to embed 3D models within a PDF document. The model is contained within its own viewing environment, allowing the recipient to fully manipulate the 3D object. The example used in the GRID Test Drive shows embedded medical data, allowing medical offices to transfer detailed 3D medical data simply and easily. Clicking within the model viewport allows you to fluidly spin and manipulate the 3D model. Other advanced 3D features that can be shown include the ability to change the model shading method, adjust lighting style, and create a 3D slice plane to cut into the 3D model.



## Google Earth

Clicking the Google Earth Icon launches Google Earth. To demonstrate the high performance you can expect using a GRID accelerated VM we'll take a look at a well-known landmark. Locate the "Places" section in the left hand panel. Click on the item which says "Eiffel Tower". You can see the responsiveness as Google Earth quickly delivers us a bird's eye view of this famous tower complete with 3D trees, and buildings. We can navigate within the viewport by clicking and dragging, we can also use the Navigation controls on the right hand side of the viewport to Look Around, Rotate, Move and Zoom the viewport window.

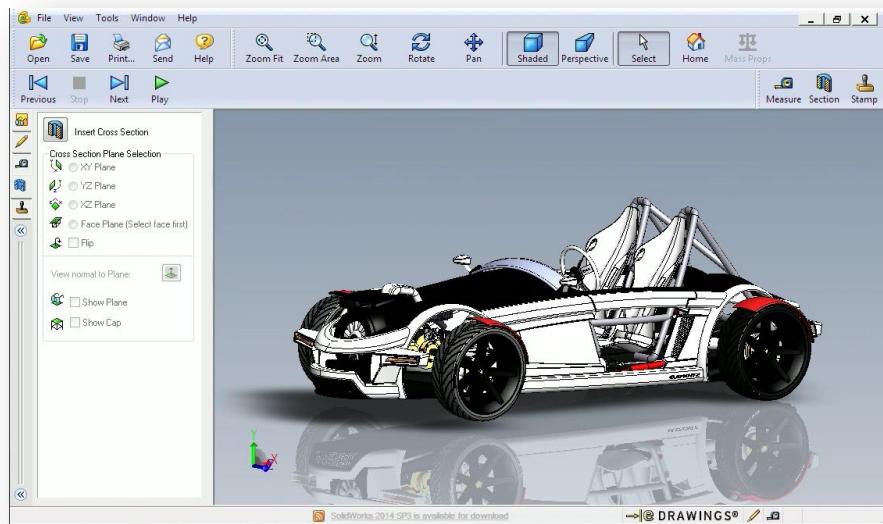


## Dassault SolidWorks

### eDrawings

Dassault's eDrawings is a model viewer for the popular Solidworks CAD application. Clicking on the eDrawings icon on the desktop will launch the viewer and display the Solidworks model of a high tech concept car. Within the viewer you can click the **Play** button to view the animation recorded with this model. The animation moves smoothly from one camera angle to the next. Press the **Stop** button

and select the **Rotate** button from the top row of icons. Clicking and dragging within the viewport will now allow you to rotate the model within the viewport. When rotating the model's shadow and reflection is visible on the floor beneath the car.



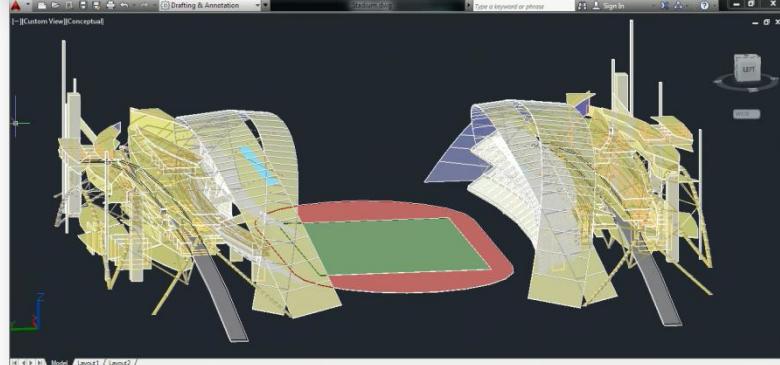
## Siemens PLM JT2Go

JT2Go is a viewer for Siemens PLM application Teamcenter. Clicking on the Teamcenter Bicycle icon on the desktop will launch the JT2Go viewer and load a Siemens PM model of a bicycle. This model can be manipulated in the viewport. The left mouse button rotates the model, the middle mouse button pans the object and the mouse wheel can be used to zoom in or out of the model.



## Autodesk AutoCAD

AutoCAD is the world's leading CAD software. Used to create everything from skyscrapers to ballpoint pens,



it's a mainstay application of designers and engineers the world over. Click the AutoCAD Stadium icon to launch AutoCAD and load the soccer stadium model. The model is displayed using the Conceptual view style, this viewstyle allows for advance visual features such as object transparency as shown on the Stadium model. To rotate a model in the viewport, hold down the shift key on your keyboard while pressing the middle mouse button. To pan hold just the middle mouse button down, and use the mouse wheel to zoom in and out.

## NVIDIA FaceWorks Digital Ira

Digital Ira is an NVIDIA demo application developed using the FaceWorks library. Designed to create the most realistic real-time facial animation, FaceWorks supports advanced GPU accelerated features like High Quality Skin Shaders, including skin subsurface scattering, and deep scattering (light transmission through thin membranes). As Digital Ira is a complex demo, it is normal for it to take a while to completely load. Ira's head can be rotated by clicking and moving the mouse within the viewport. Additionally many options can be changed by clicking on the ">" icon in the upper left hand corner of the viewport.



## NVIDIA A New Dawn

In 2002, NVIDIA released a demo called Dawn to demonstrate the power and programmability of GeForce FX. Ten years later, and NVIDIA has brought back Dawn once again. A New Dawn is designed to showcase the graphical possibilities on the latest generation of Kepler based GPUs. Dawn is now seen in her home among the trees, and over 4 million polygons are used



to model her environment. Her head features 40,000 individually tessellated strands of hair. You can move within the viewport by clicking and dragging to rotate or use the middle mouse button to pan. Clicking on the “>” icon in the upper left hand corner of the viewport exposes the many options which can be changed.

## Testing Additional Applications/Demos

The applications and demos pre-loaded on the GRID Test Drive give only a small sample of what is possible with a GRID enabled VM. It's possible to test a wide variety of additional applications, by simply installing them on your GRID Test Drive VM. Any applications you install will be available to you on future logins into the GRID Test Drive.



Applications such as Adobe's Creative Cloud suite can be loaded on the GRID Test Drive VM, either an active Creative Cloud subscription can be used to test Adobe Creative Cloud, or a 30 day free trial can be installed to test the GPU accelerated features of Adobe

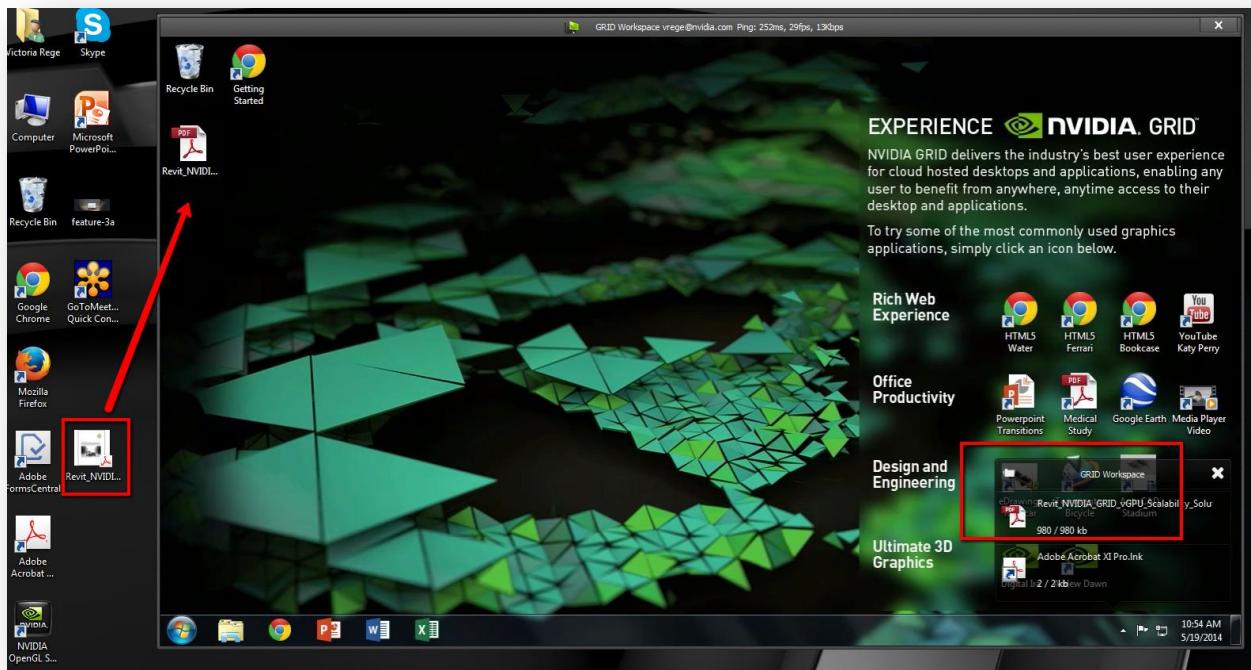
Photoshop, Premiere Pro, and After Effects.

## Adobe® Creative Cloud™

Installing your own applications on the VM can be as simple as dragging and dropping the application install files from your local machine into the VM window. You can then run the install files within the VM to permanently install the application in your VM instance. Alternatively, you can download applications and application trial versions from the internet within the virtual environment at install them just like you would on a local machine.

One of the benefits of installing applications from the internet is the blazing fast internet connection available on your VM, because the VM has a fast connection to the internet that isn't based on your local connection, file downloads occur in the blink of an eye. You can use a speed test/performance site such as [www.speaskeeasy.net/speedtest](http://www.speaskeasy.net/speedtest) to do a network test. In the example shown, the network provided more than 800Mbps upload and download. This shows one of the benefits of virtualization which provides you with the ultimate internet connection.

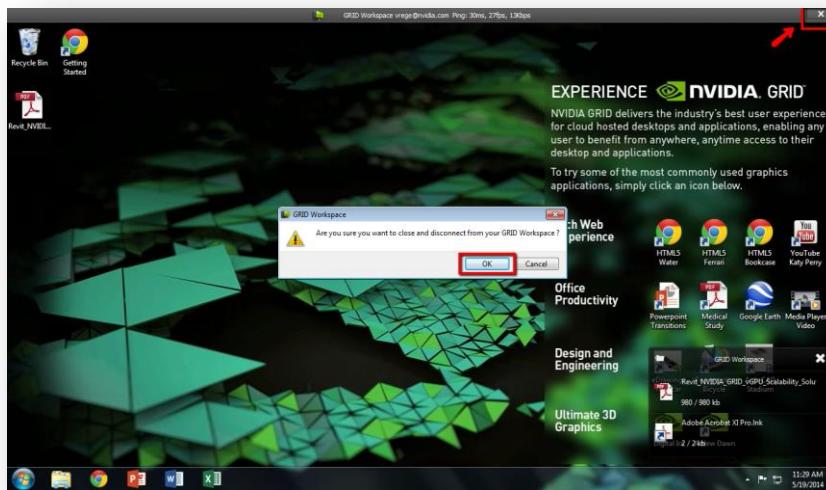


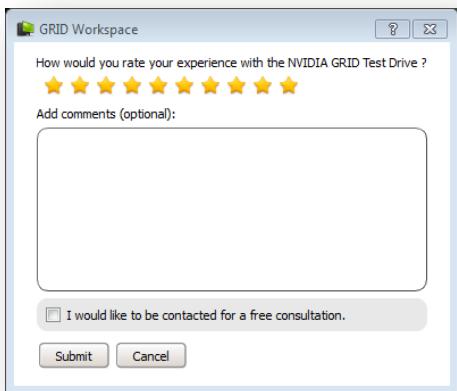


Additionally, you can install your own applications via Google Drive, Dropbox or any other corporate file sharing service onto the virtual machine.

## Disconnecting from the GRID Test Drive

In order to disconnect from the GRID test drive just click the “X” in the top right hand corner then confirm by clicking “OK”. Once you click okay you will be asked to rate your experience with the GRID test drive.





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## NVIDIA GRID Resources

### GRID Test Drive FAQs

Website – [www.nvidia.com/vdi](http://www.nvidia.com/vdi)

NVIDIA GRID Forums – <https://gridforums.nvidia.com>

Certified Platform List – [www.nvidia.com/wheretobuy](http://www.nvidia.com/wheretobuy)

GRID Certified Application List – [www.nvidia.com/gridcertifications](http://www.nvidia.com/gridcertifications)

GRID YouTube Playlist – [www.tinyurl.com/gridvideos](http://www.tinyurl.com/gridvideos)