



Network Rendering in Vegas 5.0 Software

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Network Rendering

Bigger, better, faster, *more*. If that's your mantra, you probably have a number of computers on your own network. Surely if one computer is good, more must be better. With network rendering, that's never been more true.

Network rendering allows you to designate a specific computer to render the entire output file, (nondistributed rendering) or you can distribute a single rendering job among several computers.

Both distributed and nondistributed rendering jobs can be queued to be performed as computing resources become available so you can render multiple projects or render the same project in multiple formats.

Rendering using a computer other than your main editing computer allows you to continue working without waiting for the render job to complete.

Is network rendering for you?

Maybe. There are many variables involved with network rendering: your computer speed, network speed and project complexity all have an impact on network rendering performance.

If you have fast computers on a fast network, you may see improved rendering performance. If you have slow computers on a slow network, you may see no benefit.

Setting up Your Computers

The computer that initiates and manages a network render is considered the owner of the job. Each networked computer that you use for rendering is called a *renderer*. The computer that reassembles rendered segments in a distributed rendering job is called the *stitch host*. The computer that is designated to perform a nondistributed network render job is called the *render host*.

To use network rendering effectively, we recommend the following:

- 256 MB RAM in each renderer.
- 100 Mbps switched Ethernet network for basic projects (DV output with minimal compositing).
- Gigabit Ethernet network for more complex projects (uncompressed output and/or significant compositing).
- Your media files and output file must be in shared folders, preferably on a dedicated file server. All renderers must have permission to read, write, create, and delete files in the shared folders.

Before network rendering begins, a copy of your project will be saved in the shared output folder for use by the renderers. This version will have all media paths remapped based on the Network Render Service file mappings (see "Set file mappings" on page 7 for more information).

Setting up a renderer

1. Install Vegas software on the computer you want to use as render client.

You can install Vegas software on up to three computers (your main editing computer and up to two renderers). You must use the same information (serial number and registration information) on all computers.

If you need to purchase additional licenses, please contact our [Customer Service](#) department.

Trial installations of Vegas software cannot be used for network rendering.

Certain file formats, such as MPEG-2, AC-3, and MP3, are licensed per computer and cannot be used on render-only clients. Additionally, MPEG-2 can be used for the final output format, but not for rendered segments in distributed rendering.

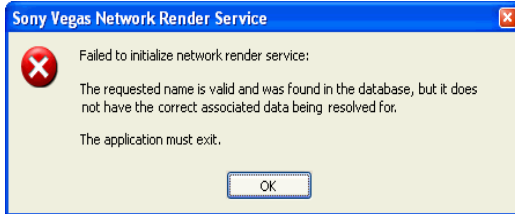


If you want to use network rendering with these formats and have a multiprocessor computer or a computer with a processor that supports Hyper-Threading technology, you can run multiple instances of the render service on that computer.

2. Start the Vegas Network Render Service application (VegSrv50.exe). The service must be running and you must be logged into the computer before you can use it for rendering.
3. If necessary, you can change the TCP port the render service uses to communicate with other renderers. In most cases, the following steps are not required:
 - a. Exit the Vegas Network Render Service application if it is running.
 - b. Open the NetRenderService.config file in a text editor. This file is located in the Vegas 5.0 installation folder.
 - c. Edit the `<channel ref="tcp" port="53704" />` tag in the file to reflect the port you want to use.
 - d. Save the file.
 - e. Restart the Vegas Network Render Service application.

Troubleshooting initialization problems

If you receive an error message that indicates the Network Render Service cannot start when you start the application, you may need to resolve DNS suffixes on your computer.



1. Open a DOS window:
 - a. From the Start menu, choose **Run** to display the Run dialog.
 - b. In the **Open** box, type **CMD**.
 - c. Click **OK**. A DOS window is displayed.
2. Type **ipconfig** at the command prompt.

Your Windows IP Configuration information is displayed. Note the **Connection-specific DNS suffix** setting.

3. Update your computer's DNS suffix:
 - a. Right-click **My Computer** on your desktop and choose **Properties** from the shortcut menu (or press the Windows key + Pause) to open the System Properties dialog.
 - b. Select the Computer Name tab.
 - c. Click the **Change** button to display the Computer Name Changes dialog.
 - d. Click the **More** button to display the DNS Suffix and NetBIOS Computer Name dialog.
 - e. In the Primary DNS suffix of this computer box, type the DNS suffix you recorded in step 2.
4. Click **OK** to close all dialogs and restart your computer.


Adding or removing renderers for your editing computer

The list of computers on the Renderers tab of the Vegas Network Render Service application determines which renderers you'll be able to use from the editing computer.

You add renderers to the Vegas Network Render Service application on the editing computer only. No changes need to be made on the renderer.

Adding a renderer

1. Start the Vegas Network Render Service application (VegSrv50.exe) on the computer you will use to initiate network rendering.

If you do not start the service before starting a rendering job, it will start automatically, but it will not be visible. Right-click the  icon in the system tray and choose **Show** from the menu to display the window.

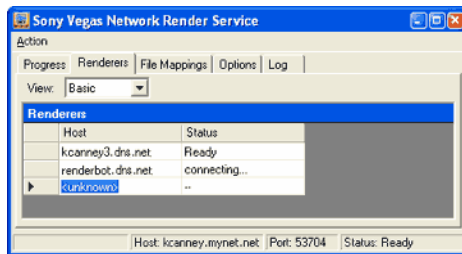
2. Select the Renderers tab. This tab allows you to edit the list of computers running the render service.



A computer will be available only if you have logged on to Windows and the Vegas Network Render Service is running. If the computer is not in an area you can monitor easily, you can use Ctrl+Alt+Delete to lock the computer after logging on and starting the service.

3. Click the **Host** box of a blank row in the table, and then type the IP address or name of the computer you want to use as a renderer.

To find your computer name, right-click **My Computer** and choose **Properties** from the shortcut menu to display the System Properties dialog. Click the Computer Name tab, and your computer name is displayed in the **Full computer name** entry.




The Status box does not update automatically. If you want to refresh the display, right-click a renderer and choose **Refresh Status** from the shortcut menu to update the status of a specific renderer or all renderers.

4. Press Enter to connect to the renderer. If the connection is made, the Status column will display **Ready**.

Removing a renderer

Removing a renderer from the Renderers list removes it from your editing computer. When you remove a renderer, the service continues to run on the renderer, and any pending rendering jobs owned by the editing machine are canceled.

1. Start the Vegas Network Render Service application (VegSrv50.exe) on the computer you will use to initiate network rendering.

If you do not start the service before starting a rendering job, it will start automatically, but it will not be visible. Right-click the  icon in the system tray and choose **Show** from the menu to display the window.

2. Select the Renderers tab. This tab allows you to edit the list of computers running the render service.
3. Select a renderer by clicking the leftmost column in the list.
4. Right-click the selected renderer and choose **Delete Renderer** from the shortcut menu.


Setting file mappings

Use the File Mappings tab to map local folders on your host machine to universal paths.

File mappings tell remote renderers where to find the media used in your project and where to render output files.

When you import media from a local disk, the file paths saved in your project are often valid only on the local machine. This can be the case even if the media resides in a shared folder.

Adding a file mapping


1. Right-click the  icon in your system tray and choose **Show** from the menu to display the Sony Vegas Network Render Service window.
2. Select the File Mappings tab. The tab displays a list of local folders and their universal paths.
3. Click a blank row in the table.
4. In the **Local** box, type the path to the local folder (**c:\media**, for example).
5. In the **Universal** box, type the UNC path or mapped drive letter to the folder (**\\kcanney\media**, for example).



Before you start rendering, verify that the remote renderer has access to the folder and is logged in.

On the renderer, choose **Run** from the Start menu to display the Run dialog. In the **Open** box, type the UNC path to the folder (**\\kcanney\media** in our previous example). If you're prompted to log on, type your username and password.

Creating file mappings automatically


1. Right-click the  icon in your system tray and choose **Show** from the menu to display the Sony Vegas Network Render Service window.
2. Select the File Mappings tab. The tab displays a list of local folders and their universal paths.
3. Right-click the tab and choose **Auto-Fill File Mappings** from the shortcut menu. Shared folders on the local machine are added to the list as universal paths.



No mappings will be added in the following circumstances:

- If all shared folders are already listed in the table.
- If the computer does not have any shared folders.
- If your user account does not allow you to create or modify folder sharing.

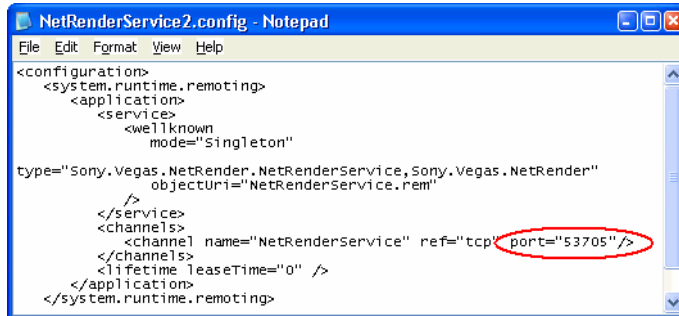
Removing file mappings

1. Right-click the  icon in your system tray and choose **Show** from the menu to display the Sony Vegas Network Render Service window.
2. Select the File Mappings tab. The tab displays a list of local folders and their universal paths.
3. Right-click a mapping and choose **Delete File Mapping** from the shortcut menu to delete it, or click a blank row in the table and choose **Delete All File Mappings** to delete all file mappings.

Running Multiple Instances of the Render Service

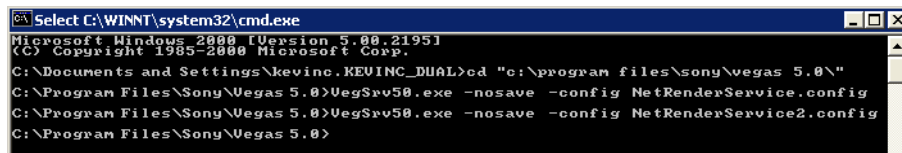
If you have a multiprocessor computer or a computer with a processor that supports Hyper-Threading technology, you can run multiple instances of the render service on a computer.

1. In the Vegas installation folder (typically C:\Program Files\Sony\Vegas5.0\), create a copy of the NetRenderService.config file.
2. Rename the copy NetRenderServiceX.config. In this example, we'll name the file NetRenderService2.config.
3. Open the new .config file in a text editor such as Notepad.
4. Edit the port setting in the config file to use a new value. Each instance of the service must run on a different port. In the following example, we changed the default setting of 53704 to 53705.




```
<configuration>
  <system.runtime.remoting>
    <application>
      <service>
        <wellknown
          mode="Singleton"
          type="Sony.Vegas.NetRender.NetRenderService, Sony.Vegas.NetRender"
          objectUri="NetRenderService.rem"
        />
      </service>
      <channels>
        <channel name="NetRenderService" ref="tcp" port="53705" />
      </channels>
      <lifetime leaseTime="0" />
    </application>
  </system.runtime.remoting>
```

5. Save and close the .config file.
6. From the Start menu, choose **Run**. Type CMD in the **Open** box and click OK. A DOS window is displayed.
7. At the command prompt, type **cd "c:\program files\Sony\Vegas 5.0\"** (you may have to modify this path if you installed Vegas to a different folder).
8. At the command prompt, type **VegSrv50.exe -nosave -config [name of config file]** to start the service using the configuration file you created in steps 1 through 5.
9. Repeat step 8 for each instance of the render service. In the following example, we type **VegSrv50.exe -nosave -config NetRenderService.config** and **VegSrv50.exe -nosave -config NetRenderService2.config** to start two instances of the service.




```
Select C:\WINNT\system32\cmd.exe
Microsoft Windows [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.
C:\Documents and Settings\kevinc.REVINC_DUAL>cd "c:\program files\sony\vegas 5.0\"
C:\Program Files\Sony\Vegas 5.0>VegSrv50.exe -nosave -config NetRenderService.config
C:\Program Files\Sony\Vegas 5.0>VegSrv50.exe -nosave -config NetRenderService2.config
C:\Program Files\Sony\Vegas 5.0>
```

10. Add both instances to the host computer:
 - a. Start the Vegas Network Render Service application (VegSrv50.exe) on the computer you will use to initiate network rendering.

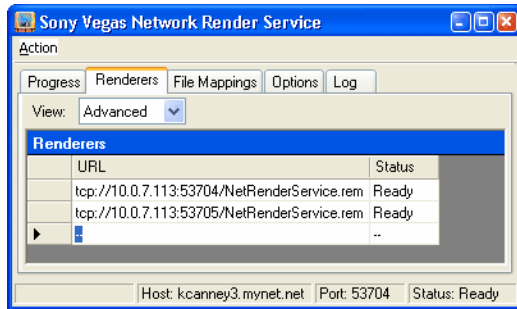
If you do not start the service before starting a rendering job, it will start automatically, but it will not be visible. Right-click the  icon in the system tray and choose **Show** from the menu to display the window.

- b. Select the Renderers tab. This tab allows you to edit the list of computers running the render service.

 A computer will be displayed on the Renderers tab only if you have logged on to Windows and the Vegas Network Render Service is running. If the computer is not in an area you can monitor easily, you can use Ctrl+Alt+Delete to lock the computer after logging on and starting the service.

- c. From the **View** drop-down list, choose **Advanced**.
- d. Click the **Host** box of a blank row in the table, and then type the IP address or name of the computer you want to use as a renderer and the port the service is running.

In the following example, the service is running on ports 53704 and 53705 on a computer with IP address 10.0.7.113.



To find your computer name, right-click **My Computer** and choose **Properties** from the shortcut menu to display the System Properties dialog. Click the Computer Name tab, and your computer name is displayed in the **Full computer name** entry.

- d. Press Enter to connect to the renderer. If the connection is made, the Status column will display **Ready**.
10. You're now ready to use both instances of the service for distributed rendering.

Nondistributed Network Rendering

Nondistributed network rendering behaves very much like standard rendering, but you can choose which computer you want to render the project. In this mode, each computer renders a complete file from a Vegas project or the loop region.

If you want to encode the same project to multiple streaming formats and bit rates, it is best to queue multiple nondistributed jobs because streaming formats use temporal compression and you can assign different renderers to different output formats.

When you use nondistributed network rendering to batch process a project to several different formats, intermediate tasks such as compositing only need to be performed once.

If you have a project or output format with audio only, choose nondistributed rendering because only video is rendered in the first phase of a distributed job.



Before rendering, ensure all codecs, third-party video effects, and fonts used for generated media in your project are installed on all computers.

1. If you want to render only a portion of your project, create a time selection that includes the portion you want to render.
2. From the File menu, choose **Render As**.
3. Use the Render As dialog to choose the file format and location where you want to save your file. The location of the output file must be in a shared folder.
4. Select the **Render loop region only** check box in the Render As dialog if you want to render the selected portion of your project.
5. Select the **Render using networked computers** check box in the Render As dialog, and then click the **Save** button. The Network Render dialog is displayed.
6. From the **Render Host** drop-down list, choose URL of the renderer you want to use to render your project.
7. The **Temporary Files Location** box displays the path to the folder where the temporary .veg project will be saved. If you want to use a folder other than the output folder you chose in step 3, you can choose a folder from the drop-down list or click the **Browse** button to choose a folder.

This folder must be in a shared location.

8. Click **OK** to start rendering.

Before network rendering begins, a copy of your project will be saved in the shared output folder (see Step 3) for use by the renderers. This version will have all media paths remapped based on the Network Render Service file mappings (see "Set file mappings" on page 7 for more information).

9. To add a project to the queue, open the project and repeat steps 1 through 8.

You can choose a different renderer for each project or time selection if you want to render the files concurrently on separate computers. If you choose the same renderer, the rendering jobs will be queued to run sequentially on that computer.

Distributed Network Rendering

Distributed network rendering splits the video into segments that are rendered by multiple computers. In this mode, each computer renders a portion of the project, and the rendered sections are then reassembled into a single file by the one computer (called the *stitch host*).

Distributed rendering is a good way to reduce the time it takes to render a project containing a significant amount of processed video (video effects, transitions, panning/cropping, track motion, and compositing). However, distributed rendering requires increased disk space and network traffic because each segment must be saved before the final output file can be generated.

Nontemporal video output formats, such as DV or uncompressed AVI, are also well suited for distributed network rendering because segments can be reassembled without re-encoding. When using temporal compression, segments are rendered in an uncompressed or nontemporal format, and temporal compression is applied during the stitching stage.



Before rendering, ensure all codecs, third-party video effects, and fonts used for generated media in your project are installed on all computers.

1. From the File menu, choose **Render As**.
2. Use the Render As dialog to choose the file format and location where you want to save your file. The location of the output file must be in a shared folder.
3. Select the **Render using networked computers** check box in the Render As dialog, and then click the **Save** button. The Network Render dialog is displayed.
4. Select the **Distribute Rendering** check box in the Network Render dialog.
5. From the **Stitch Host** drop-down list, choose the computer you want to use to assemble the rendered segments.
6. Select the **Use Final Render Template** check box if you want to render segments using the format you chose for your final output in the Render As dialog.

Use this option when you're working with uncompressed or DV files. In this case, using the final rendering template for rendered segments makes the final stitching process fast because the segments can be copied and assembled without being re-encoded. You'll also conserve disk space and reduce network traffic.



Note that using lossy compression for your rendered segments will produce lower-quality video than using an uncompressed or YUV template because the stitching process will need to re-encode the final stream from the compressed segments.

You can render segments as MPEG-2 only in the following cases:

- If you're running multiple instances of the render service on your editing computer and no other instances of the render service are running with the same serial number.
 - Vegas software is installed with a unique serial number on each computer (editing computer and renderers).
 - Vegas software is installed with a site license serial number on each computer.
7. Clear the **Use Final Render Template** check box and choose settings from the **Save as Type** and **Template** drop-down lists if you want to render segments using a format other than your final output format. Use the Render As dialog if you need to create custom templates.

Use this option when you're rendering to a format that uses temporal compression, such as MPEG, QuickTime, RealMedia, or Windows Media. Rendering segments as uncompressed or DV AVI files allows transitions and composited tracks to be rendered in a high-quality format. When the segments are stitched, the project is re-encoded using the format you chose for your final output in the Render As dialog.



If you create custom rendering templates for rendering segments, clearing the **Include Audio** check box for the template will help conserve disk space.

- The **Temporary Files Location** box displays the path to the folder where the temporary .veg project and rendered segments will be saved. If you want to use a folder other than the output folder you chose in step 2, you can choose a folder from the drop-down list or click the **Browse** button to choose a folder.

This folder must be in a shared location.




Choosing a folder other than the final output folder can help improve performance during the stitching phase when you render a project with uncompressed segments.

- Click **OK** to start rendering.

Before network rendering begins, a copy of your project will be saved in the shared output folder (see Step 2) for use by the renderers. This version will have all media paths remapped based on the Network Render Service file mappings (see “*Set file mappings*” on page 7 for more information).

Monitoring Rendering Progress

Use the Progress tab in the Sony Vegas Network Render Service window to monitor the status of your rendering jobs.

- Right-click the  icon in your system tray and choose **Show** from the menu to display the Sony Vegas Network Render Service window.
- Select the Progress tab. The Progress tab displays a list of the segments that are queued to render, the assigned renderer, and the status.
- Choose **Details** or **Summary** from the **View** drop-down list in the Progress tab to see more or less information.


In **Details** view, you can click the + button to expand a list of links to more detailed information about your rendering jobs. Click a link to display information about job status, rendered segment status, job summary information, or error messages.

Render Job Details					
	Owner	Port	z	Job #	Project File Output File
▶	canneyvad.sp	53704		2	H:\Canney H:\Canney\NetRender
	JobStats JobSegments JobSummary JobErrors				

Right-click a job and choose **Cancel Job** from the shortcut menu to stop rendering.

Network Rendering Options

Use the Options tab in the Sony Vegas Network Render Service window to set user options for the service.

1. Right-click the  icon in your system tray and choose **Show** from the menu to display the Sony Vegas Network Render Service window.
2. Select the Options tab.

Item	Description
Enable rendering	Select this check box if you want the local computer to be available as a renderer.
Automatically run after login	Select this check box if you want to start the service automatically after logging in to the Windows operating system.
Hide window when minimized	Select this check box if you want to hide the Sony Vegas Network Render Service window when minimized. You can right-click the icon in the system tray and choose Show to make the window visible again. When the check box is cleared, the Sony Vegas Network Render Service window minimizes like a normal window, and you can switch to it by pressing Alt+Tab or by clicking its icon in the status bar.
Exit service when window is closed	Select this check box if you want to keep the service running after closing the window. If the check box is cleared, the service is minimized to the system tray when you close the window.
Exit Vegas when idle	Select this check box if you want to close the instance of Vegas software that is launched by the network render service when no jobs are in the queue. If the check box is cleared, the application continues running until you close it or exit the service.
Remove completed jobs from progress display after	Choose a setting to indicate how long jobs should be maintained on the Progress tab of the Sony Vegas Network Render Service window.
Default segment length	Choose a setting to indicate the number of frames per segment when using distributed rendering. Adjusting this value can increase performance slightly depending on the complexity of the project and the speed of your rendering computers. If the setting yields more than 90 segments for a rendering job, the segment length for that job is automatically increased to limit the number of segments. If this setting yields only one segment for a rendering job, the job will be executed as a nondistributed job on the stitch host. For example, if you render a one-second project with the Default Segment Length set to 30 frames, only one segment can be created. Decrease the segment length if you want to use distributed rendering with short projects.