



# Net Painter

## Understanding Net Painter

The Net Painter feature supports real-time collaboration across a network as well as sharing of documents with other Painter users on a TCP/IP network. As you paint and make changes, your strokes and effects appear in the image window on the screen of other collaborators.

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Net Painter is a powerful tool in the development of design between artist and client.

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Net Painter works by utilizing scripting and sending instructions across the network. For more information about scripting, refer to [Scripts in the Painter 6 User Guide](#).

When you're done painting, you can turn over the controls so other collaborators can pick up where you left off. Other collaborators' work appears in the image window on your desktop. Take turns working until the project is finished.



Net Painter allows two or more users to collaborate on a single piece of artwork over the Internet.

You may use Net Painter across a local area network or across the Internet to connect with anyone running Painter 4.0 or later. It doesn't matter if the collaborators are across the hall or across the country.

You may even have several collaborators in a session. One collaborator paints while the others watch. A famous artist might demonstrate his technique while a dozen students watch. Anyone connected can communicate with other collaborator by typing in the chat window.

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Painter 6 is compatible with Painter 4 and 5 for Net Painter sessions. However, Painter 6 has a number of features that are not part of Painter 4, including masking and selections, plug-in brushes and plug-in floaters. Likewise, Painter 4 has a few features not supported by Painter 5 or 6. This discrepancy may cause performance problems between Painter 4 and Painter 6 collaborators. You can avoid

problems by limiting tool and feature choices to those common to both versions, for example the default Brushes library.

Net Painter sends instructions—not pixels—over the network. The one copy of Painter tells the other copies what tools, colors, and effects to choose and how to apply them.

Some operations take advantage of local resources, like custom paper textures, patterns, brush variants, brush looks, nozzles, plug-in filters, or objects, like floaters and paths. Such resources must be shared before you can use them effectively on the network project.

Window operations are not conveyed across the network. This means that zooming and panning are not duplicated on the system of other collaborators.

## Technical Requirements

Net Painter uses the TCP/IP communications protocol. All computers connecting for a Net Painter session must be networked using to TCP/IP. If your computer is TCP/IP-capable, you're ready for Net Painter.

If you can use Netscape to browse the World Wide Web, your computer is TCP/IP-capable.

The methods of TCP/IP setup differ between operating systems. If your computer is not set up with TCP/IP communication, contact your network administrator or Internet Service Provider (ISP) for assistance.

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MetaCreations Technical Support can help you to use the Net Painter features. If you need technical assistance with your TCP/IP communications, please see your network administrator or service provider.

If networking by modem, a 28.8K bps modem (V.34) is recommended for optimum results. A 14.4K bps modem will be adequate if you intend to collaborate using only Painter's default libraries and not transfer any files. 14.4K bps is very slow if you intend to transfer images and library files to other collaborators.

File transfer from within Painter can be slow on a local area network as well. It would be more efficient for local collaborators to manually copy any large files from the network into each of their Network Folders. Once the file is copied the collaboration lead can open the file on their machine and it will appear on the other collaborators machines automatically.

## Crossing a Firewall

Some companies isolate their local area network from the Internet using a firewall. The firewall acts as a filter, allowing some types of information transfer, while preventing others.

Net Painter uses its own protocol based on User Datagram Protocol (UDP). Some firewalls may obstruct the transfer of Net Painter information. If you are working from within such a firewall, you may be unable to use Net Painter beyond the local area network. You should try it and see if the firewall causes any problems.

Contact your network administrator if you think a firewall might be interfering with your Net Painter connection. The firewall software can be reprogrammed to recognize the Net Painter UDP and allow it passage.



## The Net Painter Controls

The controls for setting up and connecting to a Net Painter project are on the menu in the Net Painter section of the Objects palette.



The Net Painter menu holds the controls for setting up and connecting.

The controls for communicating with your collaborators are on the Net Painter section of the Objects palette.

### Traffic Status



### Chat Window

The Net Painter section of the Objects palette holds the controls for communicating and checking status.

The Traffic Status area lists the names of all collaborators and the participation status of each. Each light has a different meaning.

**Green light** indicates the active collaborator. This person is *now painting*.

**Yellow light** indicates collaborators who are *waiting to paint*. Someone who is “waiting to paint” has asked to paint—either by clicking the green light or by choosing Start Painting from the menu in the Net Painter section.

People who are waiting to paint are queued. They will receive permission in round-robin order as shown in the Net Painter section.

**Red light** indicates a user who is *just watching*.

The Chat window allows you to talk to other collaborators. You don't have to be the active collaborator to chat to others.

### To display the Net Painter controls:

- Click the triangle next to the Net Painter section on the Objects palette.

## Setting Up Net Painter

Before you can begin your Net Painter session, you must setup your network.

### To set up Net Painter:

- 1 Click the menu icon in the Net Painter section and choose Setup.

The Network Setup dialog appears.



Use the Network Setup dialog to set your Net Painter options.

- 2 Set your options as needed for your system:

**Host IP Address** displays your computer's IP address. Painter gets this address from your TCP/IP configuration settings.

An IP address is a numerical address to a computer on the network, such as "256.204.145.34"

**Host Name** displays your computer's domain name, if available. A domain name is not necessary.

A domain name is an alphanumeric address to a computer on the network, such as "somebody.somewhere.com."

**User Name** controls the name that appears in the Network palette. For example, "Salvador Dali."

**Chat ID** determines your net "handle." Enter a short version (up to four alphanumeric characters) of your name. The Chat ID nickname identifies who spoke a line of chat. For example:

```
MCE> Send me your custom brush so  
I can see what you're doing!
```

```
Dali> I just sent it, it's in your  
folder.
```

**Port for Painter** directs transferred information to the right application. Everyone in a Net Painter session must use the same port number. You and other collaborators must arrange which port number to use in advance. You may use any port number between 1024 and 65535.

To prevent others from connecting to your session, you can choose a private port number.

**Disable Network Painter** prevents Painter from dialing your service provider if you have a modem-based connection. If you are using a network, deselect this option.

**Debugging Options** contains debug and statistics display options which are technical services provided for those who may want them.

- 3 Click OK.

## Using Net Painter

When you use Net Painter, you will coordinate with others to connect to the session, exchange files, take turns and communicate using the Chat Window.

### Joining a Painter Collaboration

Make sure of the following:

- Both you and all other collaborators are on the network.
- All collaborators are running Painter 4.0 or later.
- All collaborators have set up Net Painter to use the same port number.
- All collaborators are idle until everyone is connected. This means no files can be open, no one can be painting. If you have a file open and you try to join a collaboration you will get an error message explaining you

can't join because you have an open file.



An error message appears if you try and join a collaboration when you have a file open.

#### To join a collaboration:

- 1 Click the triangle in the Net Painter section of the Objects palette.
- 2 Click the menu icon in the Net Painter section and choose Connect.

The Network Channel dialog appears.



Enter the IP or Internet address into the Network Connect dialog.

- 3 You may enter either the IP address or the domain name of your collaborator's machine. Painter displays the last IP address you connected to.
- 4 Click OK.

If Painter connects successfully, your name and your partner's name appear in the top panel of the Network palette.

If Painter fails to connect, an error message appears.



This error message appears when the address you entered could not be connected to.

Multiple users may join the project by connecting to any collaborator's machine. The procedure for additional collaborators connecting is identical. All collaborators must connect from the outside. Someone who is outside the group can join to anyone within the group.

Someone who is in the group cannot connect to another machine. A Net Painter group may not join another group.

When all collaborators are joined to the group and the first person begins painting, the group becomes locked. No one can join once the collaboration commences. If you try and join into a group once the painting starts you will get an error message explaining that you can't join because the group is currently collaborating.



This error message appears when you try and join a group that has already started painting.

## Sending Files

If you are going to be using custom resources (custom paper textures, patterns, brush variants, Brush Looks, Nozzles, plug-in filters and paths) that you know other collaborator do not have, you may

want to send them in advance. Custom resources may be unique to a machine and using them will disrupt the project.

For example, if you paint with a customized variant, the chances are other collaborators won't have that tool available. Painter will display a message informing those connected that a tool is not available. Each user's Painter will choose a different variant and proceed with the project.

So, before starting a project, you should share resources you anticipate using. The best way to do this is to create special libraries of custom resources, then send the library files.

You can send the files to other collaborators before you begin a session, or the active collaborator (green light) can send files to other collaborators once a session has begun.

## Sharing Project Files

When the collaboration is going to begin with an existing file, every member in the group must have a copy of that file in their Network Folder. The Network Folder is the directory where Painter puts and looks for project resources.

### To share the project files:

- 1 Remain idle until all members have joined.
- 2 Initiate painting either by clicking on the green light or using the pull down menu.
- 3 If you are the first person to “go green” then you can send the file. The file will be sent to all members of the collaboration. When you open the file on your own machine, Painter automatically looks into the Network Folder and opens the file on the other members' machines.

### To send a file:

- 1 You must be the active collaborator (green light) to send a file.

- 2 Click the menu icon in the Net Painter section and choose Send File on Net. The standard Open dialog appears.
- 3 Locate the image or library file you want to send.
- 4 Click Open. Painter sends the file to everyone connected.

## Receiving Files

Files sent using the **Net Painter menu > Send File on Net** command are automatically saved to the Network Folder. If you are expecting a file, look for it here.

Keep only files used in collaboration in your Network Folder. If someone sends you a file by the same name as an existing file in your Network Folder, the existing file will be deleted without warning.

You want to leave library files you receive in the Network Folder. When the active collaborator uses a resource not available in your current library, Painter will search

the library files in the Network Folder. When Painter finds the resource, it proceeds with the project.

## Taking Turns in a Net Painter Session

Only one person may paint at a time. The controls for negotiating permission are located in the Traffic Status area of the Net Painter section.

### To start painting:

- 1 If you want to paint, click the green light.

You can also click the menu icon and choose Start Painting. You must then wait for other

collaborators to finish before you can start painting.



Clicking the green light initiates painting.

If someone else is painting, your traffic light turns yellow, indicating you are ready to paint. When the artist finishes, their light turns red, and yours turns green. You can begin painting.



- 2 When you are finished painting, click the red light.



People wanting to paint have a yellow light while people who only want to watch have a red light.

You can also click the menu icon and choose Stop Painting. This turns over permission to the next user in line.

The traffic status of each user connected appears in the top panel of the Net Painter section.

## Using the Chat Window

The chat feature lets you type messages to other users in the session. For example, you might suggest an effect, ask for an opportunity to paint, or say “That looks fantastic!”

Chat is always active—even when you don’t have the green light. You can type messages, and you’ll see the messages from others regardless of your traffic status.

Chat messages appear in the lower panel. Messages you enter appear in black. Messages from other artists appear in color. Chat messages do not update while the computer is computing.

### Example of typical chat:

Dali> Let Andy add some trees

Andy> I’m going to use the Oil Paint brush

Dali> Make them darker

MCE> You can use the Relief brush to add texture

Andy> What a great idea!

Dali> That looks fantastic!

At which point, MCE clicks the red light to stop painting. Andy’s traffic light turns from yellow to green, and he goes on to create the trees.

### To send a chat message:

- 1 Click in the chat line at the bottom of the chat panel. When the insertion point appears, begin typing your message.
- 2 Press Return/Enter to send the text.
- 3 Press Return/Enter on an empty line (without typing anything) to close the text entry. After closing the text entry, you’ll need to click the chat line again to send messages.

## Leaving a Net Painter Project

### To leave a project:

- When you’re done in a Net Painter group, click the menu icon in the Net Painter section and choose Close Connection.

