



LogMeIn Hamachi² User Guide

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LogMeIn Hamachi² Fundamentals

What Is LogMeIn Hamachi²?

LogMeIn Hamachi² is a virtual networking service that can be set up in minutes and enables secure remote access to your business network anywhere there is an Internet connection.

Unlike traditional hardware and software based VPN systems, Hamachi² is an on-demand virtual networking service that allows you to focus your time and energy on providing the remote connections your users and systems need, and not the technology or infrastructure you are using to support them.

Who Should Use LogMeIn Hamachi²?

Here are a few examples of how you can take advantage of Hamachi².

IT Support: Building a Mobile Office LAN

Many mobile workers use their laptops in the office while connected to their company's shared resources (file servers, network printers, mail servers, etc.). But if a user moves away from the local network, he will no longer be able to access these resources. Software that is configured to work *inside* the office becomes useless *outside* the office.

Using Hamachi², mobile workers become members of a Hamachi² network wherein all shared resources are also network members. As a result, network configurations can remain unchanged. Hamachi² sets up exactly the same networking environment for the mobile user no matter where he is.



Tip: **Hub-and-spoke** and **gateway** are the best networking modes for this scenario.

IT Support: Setting Up Network Access for Home Workers

Home workers can be more productive when they have secure access to shared IT resources. Using the Hamachi² client, home workers gain a secure tunnel directly into their company's network. They can work from home and still access the resources they need.



Tip: **Hub-and-spoke** and **gateway** are the best networking modes for this scenario.

Outsourced IT: Managing Multiple Networks

A service provider with a number of administrators on his team wants to set up and maintain multiple Hamachi² networks for multiple customers. He uses **LogMeIn Central** to create Hamachi² networks, deploy Hamachi² clients, and apply default and custom settings for each customer. He can also manage other administrators in his organization, generate client activity reports, and manage network activity.

Small to Medium Sized Organizations: Virtual LAN

Organizations without a physical LAN can use the mesh network type to set up a virtual corporate LAN.

The LogMeIn Hamachi² Client

The term Hamachi² client refers to both the Hamachi² software itself and any computer with Hamachi² client software installed. With proper permission from network owners, Hamachi² clients can become members of any Hamachi² network.

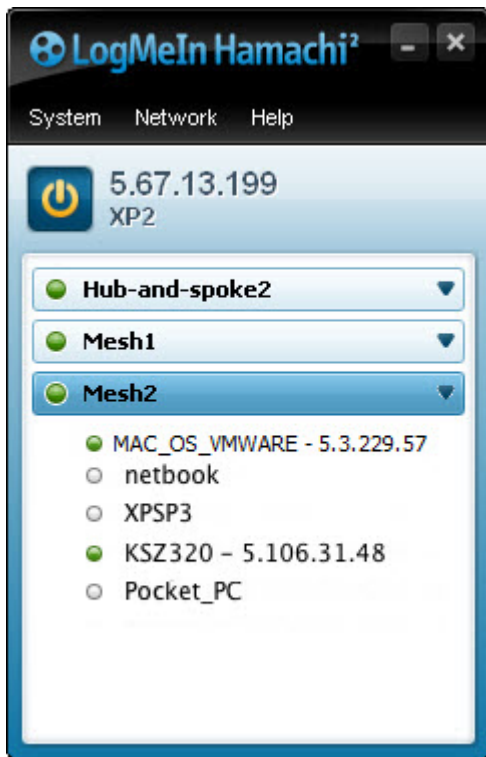


Figure 1: The LogMeIn Hamachi² client for Windows

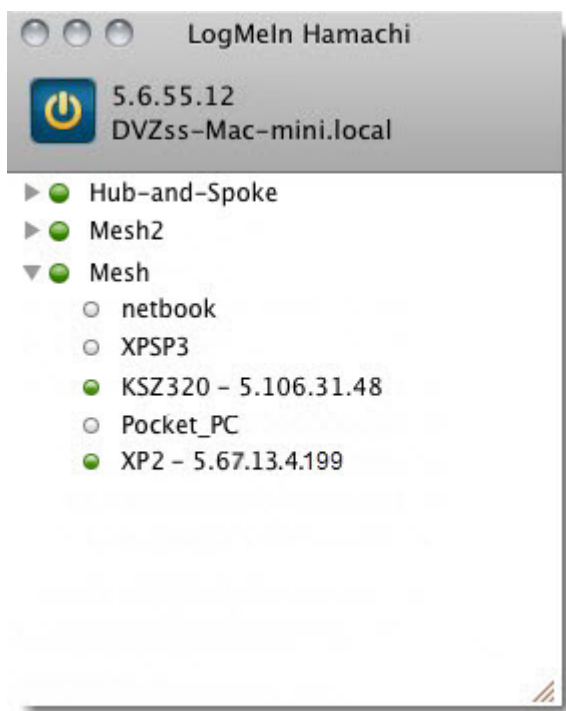


Figure 2: The LogMeIn Hamachi² client for Mac

About the Relationship Between the Client and Your LogMeIn Account

The Hamachi² client can be used in Client-only (unattached) mode as a stand-alone service with no relation to a LogMeIn account, or in web management mode as an attached member of a LogMeIn account.

Client-only mode: Unattached

The term Unattached client refers to any Hamachi² client that has not been added to a LogMeIn account and is being used in Client-only mode. Unattached clients cannot be managed on the web using the My Networks page or LogMeIn Central. It can still join existing networks and create mesh networks.

Web management mode: Attached

The term Attached client refers to any Hamachi² client that has been added to a LogMeIn account. Any LogMeIn account holder can manage attached clients on the web using the My Networks page, while LogMeIn Central subscribers can use LogMeIn Central.

About the Hamachi² Virtual IP Address

Every Hamachi² client has one virtual IP address in the 5.x.x.x range. The virtual IP address is globally unique and is used to access the client from any other Hamachi² network with at least one common mesh or hub-and-spoke network.

The virtual IP address does not conflict with any other IP ranges and therefore has no impact on standard network communications.

LogMeIn Hamachi² Network Types

LogMeIn Hamachi² provides three network types for flexibility in meeting diverse use case scenarios. They differ mainly in network topology.

Hamachi² clients can be members of any network; however, there is a limit of 16 members per network for a non-commercial license, or 256 per network owned by a commercial license holder or LogMeIn Central subscriber.

About Mesh Networks

In a mesh network, every member is connected to every other member.

Organizations without a physical LAN can use the mesh network type to set up a virtual corporate LAN.

Mesh is also the typical choice for gamers, because network games constantly have to broadcast their current status to all other participants in the game.



Figure 3: Mesh network



Note: Mesh is the only network type that can be created directly from the Hamachi² client interface.

About Hub-and-Spoke Networks

In a hub-and-spoke network, one or more computers act as hubs, while other clients connect as spokes. Spokes connect to hubs, but never to each other.

Hub-and-spoke is typically used when a workstation (spoke) needs to connect only to servers (hubs). For example, in a library, the catalog is a hub while workstations accessing the catalog are spokes. Hub-and-spoke is ideal if you want strict control over connections between network members.



Figure 4: Hub-and-spoke network



Important: If you set every member of a hub-and-spoke network to be a hub, you essentially turn the network into a mesh network. Similarly, if you set only spokes, your members will be unable to make a connection.

About Gateway Networks

Use the gateway network type to provide transparent access to your entire network from a centralized Hamachi² gateway. Members of a gateway network, such as mobile workers, will see one computer acting as a gateway towards an entire LAN, thus making all network resources accessible.



Figure 5: Gateway network



Tip: Theoretically, a hub-and-spoke network would also be a good choice for enabling mobile LAN access; however, all shared resources would also need to be running the Hamachi² client and be set up as hubs. This is fine insofar as these shared resources are servers with a Hamachi² compatible operating system; however, the gateway network remains the best option since Hamachi² currently cannot be installed on network devices such as printers, routers, access points, etc.



Important: Mac hosts cannot act as gateway nodes.

Characteristics

The gateway network type is a hybrid of the meshed and hub-and-spoke network types:

- As in a hub-and-spoke network, one computer acts as a hub (the gateway), while members act as spokes
- There can only be one gateway, which is typically a permanently online server connected to the LAN
- The number of members is virtually unlimited since even network devices that are not running the Hamachi² client can be considered members
- Each member (Hamachi² client) will see the gateway and the other members of the gateway's LAN
- Hamachi² clients will not see each other in a gateway network

Restrictions

For technical and security reasons there are strict rules for both the gateway and members:

- The gateway cannot be a member of any other network
- Members can join more than one gateway network, but can only be online in one network at a time. Gateway members can also be members of multiple non-gateway networks
- The gateway cannot be a workstation that is the member of a domain

Role of the Hamachi² Client in a Gateway Network

- Gateway network members and the gateway device itself must be running the Hamachi² client
- Network devices that are physically connected to the LAN do not need to run the Hamachi² client to be made accessible to gateway network members

Addressing

Gateway networks integrate smoothly into the LAN in terms of addressing. 5.x.x.x addresses are not available for a gateway network. Instead, the local address space is used.

Managing LogMeIn Hamachi² Clients and Networks

Hamachi² Web Management Features

Any Hamachi² user with a LogMeIn account can manage attached clients and networks using the LogMeIn web site (My Networks page).

- Create mesh, hub-and-spoke, and gateway networks
- Manage the default settings to be applied to a new client
- Remotely manage client settings
- Manage the default settings to be applied to a new network
- Edit or delete existing networks
- Install the Hamachi² client to the local computer
- Deploy the Hamachi² client to a remote computer
- Manage requests to join Hamachi² networks

Hamachi² Client Management Features

Hamachi² clients provide access to the following features:

- Create mesh networks
- Manage the default settings to be applied to a new network
- Edit or delete existing networks created on the client
- Install the Hamachi² client to the local computer
- Deploy the Hamachi² client to a remote computer
- Manage requests to join Hamachi² networks

Commercial versus Non-Commercial Use

Hamachi² is free for non-commercial use and allows up to 16 computers per network.

The commercial version offers fast relays, allows up to 256 computers per network, and is subject to an annual subscription fee.

LogMeIn Hamachi² Security

All LogMeIn Hamachi² communications are encrypted and authenticated with industry-standard algorithms and protocols. Nobody will be able to see the data transmitted between two Hamachi² peers. For detailed information, see the [LogMeIn Hamachi² Security Whitepaper](#).

LogMeIn Hamachi² and Firewalls

If running a firewall application, you may need to ensure that Hamachi² is able to access the Internet.

Please refer to the [LogMeIn Hamachi² Knowledge Base](#) for up-to-date information for working with various popular security suites.

Installing LogMeIn Hamachi²

System Requirements

Hamachi² client

- Windows Operating System: Windows XP, Windows 2000, Windows 2003, Windows Vista, Windows 2008, or Windows 7
- Mac Operating System: Mac OS 10.4 (Tiger), v10.5 (Leopard), or v10.6 (Snow Leopard) on Intel-based Macs
- Internet connection
- There are no special hardware requirements

How to Install the Client to a Local Computer

Follow this procedure to download and install the Hamachi² client to a local computer. The client will be attached to your LogMeIn account.



Important: You must be logged in to the LogMeIn account to which you want to attach the new Hamachi² client.

1. On the LogMeIn web site, switch to Network mode and click **Add Client**.
The **Add Client** page is displayed.
2. Select **Install LogMeIn Hamachi² on this computer** and click **Continue**.
3. Click **Install LogMeIn Hamachi²**.
The Hamachi² installer is launched.
4. Follow the on-screen instructions.

The client is installed on the local computer as an attached member of the active LogMeIn account. You will be able to manage this client using the LogMeIn website.

How to Deploy the Client to a Remote Computer

Follow this procedure to send an installation link that the recipient can use to download and install the Hamachi² client. The client will be attached to your LogMeIn account.



Important: You must be logged in to the LogMeIn account to which you want to attach the new Hamachi² client.

All defaults set under **Configuration > Client Defaults** will be applied to the new client(s).

1. On the LogMeIn web site, switch to Network mode and click the **Deployment** link.
2. Click **Add New Link**.

The **Deploy LogMeIn Hamachi² to remote computer(s) (Step 1 of 2)** page is displayed.

3. Type a **Description** that you can use to recognize your installation link.
4. In the **Maximum number of remote installations** box type the maximum number of computers that will be able to use the link to install the Hamachi² client.
For example, you may want to send the link to all users in an entire department.
5. In the **Expiration** field you may choose when you want the validity of the link to expire.
6. Select the **Network(s)** that you want the client to be able to access.
7. Click **Continue**.
The **Add Client - Send LogMeIn Hamachi² Installation Links - Step 2 of 2** page is displayed.
8. Send the link to the recipient(s):
 - Click **Copy** to place the link onto your clipboard for you to paste into an email or instant messaging service message to send to the user(s)
 - Click **Send** to open your default email client with the link in the body of the message for you to send to the user(s)
 - Click **Test** to view the message that will be displayed when the recipient clicks the link

The link is sent to the recipient.

The recipient must click on the installation link to actually install the client on the chosen computer. Once installation is complete, the client can be used to create and connect to Hamachi² networks.

How to Install a Windows Client in Client-Only mode

Follow this procedure to download and install the Hamachi² client without associating it with a LogMeIn account.



Important: Do not log in to your LogMeIn account.

1. Go to the LogMeIn Hamachi² product page.
2. Click the **Get Started** link.
3. Do not create a LogMeIn account.
4. Click the **Download Now** link at the bottom of the page.
The Hamachi² installer is launched.
5. Follow all on-screen instructions.

How to Install the Hamachi² for Mac Client in Client-Only mode

The Hamachi² for Mac client comes as a single executable package. This package includes the setup utility.

To install LogMeIn Hamachi² for Mac, do the following:

1. Double-click on the DMG package that you have downloaded from the LogMeIn website to extract it.
2. Double-click on the extracted PKG file to start the installation.
3. On the **Introduction** page, click **Continue**.
4. On the **License** page, click **Continue** and accept the license agreement.
5. On the **Destination Select** page, select the hard drive where you want to install Hamachi² for Mac, then click **Continue**.

6. On the **Installation Type** page, click **Install**.
7. Enter your username and password then click **OK** to start the installation process.
8. Click **Close** to exit the installer.

How to Update the Hamachi² Client

The Hamachi² client software can be updated from the client itself.

By default, the Hamachi² client downloads updates automatically when you restart your client. You should download updates manually if your client is always running or if you turn off automatic updates.

This procedure must be executed on the client.

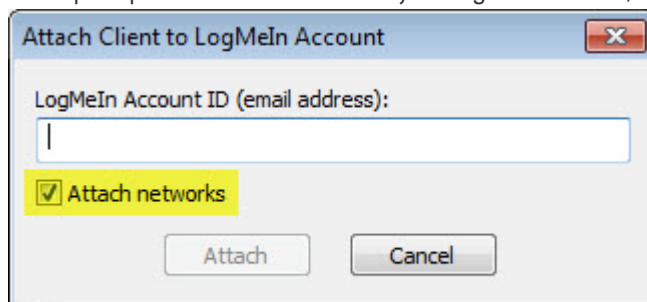
- To check whether you receive automatic updates, go to **System > Preferences > Settings** and verify that the **Enable automatic update** option is selected.
- To manually download client updates, click **Help > Check for Updates**.

Making the Transition to Hamachi² on a Windows Client

Making the transition from Hamachi to Hamachi² is a simple process.

This assumes that you were a Hamachi user without a LogMeIn account.

1. Create a LogMeIn account.
 - a) Go to www.LogMeIn.com and click **Create an account**.
 - b) Select the **LogMeIn Access, Management and Networking** product group.
 - c) Click **Continue** and follow all on-screen instructions.
2. While logged in to your account, install Hamachi² on the computer running "old" Hamachi. See [How to Install the Client to a Local Computer](#) on page 10.
3. When prompted to attach the client to your LogMeIn Account, be sure to select **Attach networks** and click **Attach**.



You will now be able to manage your Hamachi² clients and networks on the web.

Managing LogMeIn Hamachi² Clients

How to Set Default Settings for Deployed Clients

You can enforce the graphic user interface and functionality applied to new clients deployed from LogMeIn Central.

1. On the LogMeIn web site, switch to Network mode and select the **Configuration** link on the left menu.
2. Under **Configuration**, select the **Client Defaults** tab.
3. Select an **Interface Mode**.

Option	Description
Full	The client will offer full functionality to end users.
Restricted	The client will offer a full graphic user interface, but client settings (including the right to change certain settings locally) can be defined on the web only.
Minimal	The client will offer no graphic user interface to the end user. Only the Hamachi ² system tray icon will be visible. Client settings can be defined on the web only.

4. For Restricted or Minimal mode, select the client settings to apply.

Option	Description
Encryption	Choose this option to provide extra protection against sniffing. For business use, we highly suggest using encryption. Use of this option may cause <i>minimal</i> extra CPU load for both sender and receiver.
Compression	Choose this option to speed up large data transfers. Compression is particularly useful on low bandwidth connections. Use of this option may cause <i>minimal</i> extra CPU load for both sender and receiver.
Can create new network	Allow the client to be used to create new mesh networks.
Can join networks	Allow the client to be used to join networks other than those assigned on the web.
Can chat	Allow the client to be used for chat between Hamachi ² peers.
Keep chat logs	Allow the client to store chat logs.
Maintain log	Allow the client to store a Hamachi ² event log.

5. Click **Save**.
Settings will be applied to all new clients attached to this account.

How to Attach an Unattached Client to a LogMeIn Account

An existing Hamachi² client running in Client-only mode can be attached to a LogMeIn account at any time.

This procedure must be executed on the client.

1. On a Windows client, under the **System** menu, select **Attach to LogMeIn account**. On a Mac client, under the **LogMeIn Hamachi** menu, select **Attach to LogMeIn account**.
2. Enter the **LogMeIn Account ID (email address)** of the LogMeIn account to which you want to attach the client.
3. Select **Attach networks** to attach your existing networks to the selected LogMeIn Account.
4. Click **Attach**.
Your relationship with the selected LogMeIn account will show as Pending.

The Account Holder or administrator will see the attachment request on the **Join Requests** page for the specified LogMeIn account. The Account Holder or administrator must approve or deny the request.

Once approved, the client can be managed using the LogMeIn website. All networks that were created on the unattached client are also manageable from your LogMeIn account if they are attached to the account.



Tip: Another option is to send an installation link to a user with an unattached client. The user will click the link to reinstall the Hamachi² client as an attached member of your account.



Important: You cannot attach a network to a web account that was created on an attached client. You must delete the client from the web account first and then reattach it to add all networks that were created on the client.

How to Rename a Client

1. On the LogMeIn web site, switch to Network mode and click **All Clients**.
The **All Clients** page is displayed.
2. On the **All Clients** page, click **Edit** next to the client you want to work with.
The **Edit Client** page is displayed.
3. Select the **Name** tab and type a new **Client name**.
4. Click **Save**.
If the client is online, changes are applied immediately. If offline, changes are applied when the client comes online.

To rename the client from the client itself, see [How to Rename a Client from the Client](#) on page 26.

How to Add/Remove a Client to/from a Network

1. On the LogMeIn web site, switch to Network mode and click **All Clients**.
The **All Clients** page is displayed.
2. On the **All Clients** page, click **Edit** next to the client you want to work with.
The **Edit Client** page is displayed.
3. Select the **Networks** tab.
A list of available networks is displayed.
4. Select the networks you want the client to be able to access. Clear the networks that you do not want to client to be able to access.



Remember: A client assigned as the gateway in a gateway network cannot be a member of any other network.

5. Click **Save**.
If the client is online, changes are applied immediately. If offline, changes are applied when the client comes online.



Tip: You can also add and remove clients by selecting **My Networks > Edit (for a network) > Add/Remove members**.

How to Change the Client Interface

1. On the LogMeIn web site, switch to Network mode and click **All Clients**.
The **All Clients** page is displayed.
2. On the **All Clients** page, click **Edit** next to the client you want to work with.
The **Edit Client** page is displayed.
3. Select the **Settings** tab.
4. Select an **Interface Mode**.

Option	Description
Full	The client will offer full functionality to end users.
Restricted	The client will offer a full graphic user interface, but client settings (including the right to change certain settings locally) can be defined on the web only.
Minimal	The client will offer no graphic user interface to the end user. Only the Hamachi ² system tray icon will be visible. Client settings can be defined on the web only.

5. For Restricted or Minimal mode, select the client settings to apply.

Option	Description
Encryption	Choose this option to provide extra protection against sniffing. For business use, we highly suggest using encryption. Use of this option may cause <i>minimal</i> extra CPU load for both sender and receiver.
Compression	Choose this option to speed up large data transfers. Compression is particularly useful on low bandwidth connections. Use of this option may cause <i>minimal</i> extra CPU load for both sender and receiver.
Can create new network	Allow the client to be used to create new mesh networks.
Can join networks	Allow the client to be used to join networks other than those assigned on the web.
Can chat	Allow the client to be used for chat between Hamachi ² peers.
Keep chat logs	Allow the client to store chat logs.
Maintain log	Allow the client to store a Hamachi ² event log.

6. Click **Save**.
If the client is online, changes are applied immediately. If offline, changes are applied when the client comes online.

How to Detach (Delete) a Client from Your Account

You can detach a client from your LogMeIn account and remove it from all networks in your account. The Hamachi² client software will remain installed on the local computer.

1. On the LogMeIn web site, switch to Network mode and click **All Clients**.
The **All Clients** page is displayed.
2. On the **All Clients** page, click **Edit** next to the client you want to work with.
The **Edit Client** page is displayed.
3. Select the **Delete** tab.
4. Click **Remove Client**.
The client is detached from your account.

Using Tags to Help Manage Clients in Your Account

Add tags to Hamachi² clients to help manage a complex account.

A tag is a label associated with a client. Tags help you identify and search for clients, but are not used in reporting or otherwise.



Tip: Once you have tagged your clients, use the **Search Clients** box to locate them.

Tagging Example

Assume you are a service provider managing multiple Hamachi² clients for a large company. You want to categorize deployed clients according to department, so you add a tag to each client depending on the department to which the end user belongs.

- Tag each client used by a member of Marketing as "Marketing"
- Tag each client used by a member of Sales as "Sales"
- Tag each client being used by a member of Operations as "Ops"

When you need to locate a computer, type a tag name in the **Search Clients** box to find all clients appropriately tagged clients.

How to Create and Manage Tags

1. On the LogMeIn web site, switch to Network mode and select the **Configuration** link on the left menu.
2. Select the **Tags** tab.
3. Click **Add New Tag**.
The **Add New Tag** dialog box is displayed.
4. Type a **Tag name** and click **OK** or **Save**.
The new tag is saved.



Tip: You can also work with tags by selecting **All Clients** > **Edit Client** > **Edit Tags**.

How to Assign Tags to a Client

You can assign multiple tags to a single Hamachi² client.

1. On the LogMeIn web site, switch to Network mode and click **All Clients**.
The **All Clients** page is displayed.
2. On the **All Clients** page, click **Edit** next to the client you want to work with.
The **Edit Client** page is displayed.
3. Select tags from the list and click **Save**.

Using the LogMeIn Hamachi² Client

The term Hamachi² client refers to both the Hamachi² software itself and any computer with Hamachi² client software installed. With proper permission from network owners, Hamachi² clients can become members of any Hamachi² network.

How to Join an Existing Network

This procedure must be executed on the client.

1. Select **Network > Join an existing network**.
2. Type the network ID and password of the network.
3. Click **Join**.
Depending on the settings of the individual Hamachi² networks, the owner of the network may have to approve your request before you can join.

How to Chat in a Network

This procedure must be executed on the client.

1. On the client, right-click on the network member that you want to chat with. You can also right-click on the name of the network to initiate a group chat with all members of the network.
2. Click **Chat** for peer to peer chat or **Open chat window** for group chat.
The **Chat** window appears. The header of the window displays the name of the member or group with whom you chat.
3. Use the lower pane of the window to write messages and press **Enter** to send them.
The other parties of the chat session either receive a notification on their system tray, next to the clock, or the Chat window opens automatically depending on the chat settings. See [How to Change the Chat Settings](#) on page 25.

What else can I do during chat?

During a chat session, right-click on the chat window to access the following options:

Menu item	Description
Upper pane	
Copy	Copies a selected text from the Chat window to the clipboard.
Clear chat history	Clears the upper pane of the Chat window.
Load chat history	Loads a previous chat session with the selected member of group. To enable chat history, see How to Change the Advanced Interface Settings on page 23.
Lower pane	
Paste	Inserts text from the clipboard to the lower pane of the Chat window.

Menu item	Description
Paste and send (Windows only)	Inserts text from the clipboard and sends that text to the other parties of the chat session.
Clear (Windows only)	Clears the lower pane of the Chat window.
Cut (Mac only)	Copies text to the clipboard and removes it from the Chat .
Copy (Mac only)	Copies a selected text from the Chat window to the clipboard.

How to Send an Instant Message on a Windows Client

An Instant Message (IM) sends the content of your clipboard to the selected peer, similarly to the **Paste and send** option in the **Chat** window.

Ensure that your clipboard contains text that you want to send to another peer.

This procedure must be executed on the client.

1. On the client, right-click on the network member that you want to send an IM.
2. Click **Send Quick IM**.

Sending an IM does not open the chat window, it only sends a notification to the peer.

How to Appear Online or Offline to Other Network Members

This procedure must be executed on the client.

1. On the client, right-click on the network in which you want to change your status.
2. Click **Go offline** or **Go online** depending on your original status.

You go online/offline in the chosen network. Other network connections are not impacted.



Note: An offline client can read chat sessions, but cannot communicate with network members.



Note: To display the status of the client, see [How to Change the Advanced Interface Settings](#) on page 23.

What do the Different Color Indicators Mean in LogMeln Hamachi?

A circle in front of each peer on your Hamachi² list is a status indicator.

The color of this indicator reflects the status of the connection between you and a peer.

Color	Description
grey	The peer is offline.
blinking green	The client is trying to establish connection to the peer.
solid green	There is a direct link between the client and the peer.

Color	Description
blue	There is a relay tunnel between the client and the peer. You may have to set a static TCP or UDP port for Hamachi ² to use. This is generally necessary when you have a computer behind a router or NAT that does not support NAT, or its support of NAT is poor. In this case, you should set up a static port forward on the router/NAT, and then fix a static port in Hamachi ² . For information about setting up a port forward rule, see www.PortForward.com .
red	Traffic is blocked between the client and the peer. Right-click on the peer to find out why communication is blocked.

Securing Your Hamachi² Network Connections

Security in Hamachi² defines how other peers can connect to your client through authorization and authentication settings.

To establish a secure connection with another peer, it is essential to authenticate that peer. Hamachi² provides two means of authentication: password protection and using RSA keys.

How to Password Protect Your Network

Password protection implies that peers must share the network password through a different medium to be able to establish a connection. For information on how to enable password protection on the LogMeIn website, see [How to Change Network Password Settings](#) on page 35.

How to Protect Your Network with RSA Keys

A peer can authenticate itself towards a network with its RSA key, which can be managed from the client interface. The authentication status of peers is **trusted (auto)** by default. This means that peers can interact with each other since the client automatically authenticates and trusts the connecting peer.

You can manually authenticate peers by blocking new network members from establishing connection to your client.

1. Go to the **System > Preferences > Security** tab.
2. Choose the **Block new network members by default** option.
The status of a blocked network member becomes **unverified**.
3. Authenticate the peer, for example by asking him to send you his public RSA key.
Chatting with untrusted peers is possible in Hamachi², but you cannot establish a network connection to them.
4. Right-click on the name of the peer and select **Trust > Trusted**.

How to Establish a Connection to All Unverified Peers



Important: We do not recommend that you establish a VPN connection to unverified peers.

Even if a peer is unverified, you can manually override the security settings and establish a connection. You can authorize the connection globally or only to a single unverified peer.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings. If this link is not available, you already view the advanced settings.
3. In the **Peer Connection** section, change the **Traffic filtering** option to **block unsecured** or **allow all**.



Important: We do not recommend that you allow connection to all peers.

4. Click **OK** or **Apply** to save your settings.

Once you change the traffic filtering settings, you must restart your client.

How to Establish a Connection to a Single Unverified Peer

1. Right-click on the peer whose connection you want to allow and click **Details**.
2. On a Windows client, on the **Settings** tab, click the **change** link next to the **Traffic** setting.
3. Choose the **Block unsecured** or the **Allow all** option.



Important: We do not recommend that you allow connection to all peers.



Important: The traffic filtering setting of a peer overrides the global traffic filtering settings. To change the global traffic filtering settings, see [How to Change the Peer Connection Settings](#) on page 24.

How to Check the Network Connection of Another Online Client

Check the network connection of a peer if you experience time lag.

This procedure must be executed on the client.

1. On the client, right-click on the peer whose network connection you want to check.
2. Click **Ping**.
A command prompt opens.
3. Once you have checked the network connection, press **Ctrl+C** to quit the command prompt.

How to Manage the Preferences of Clients

By managing the preferences of a client, you can change the appearance of the graphic user interface and enable functionality that you cannot manage from your LogMeIn account.

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. Select the tab page that you want to view.
 - The **Status** tab displays basic information on the client, such as name, ID, and version information. You can change the name of the client by clicking **change** next to the name of the client.

- The **Security** tab displays the peers that have established a connection to the client at any point in time. To change the status of the peers, right-click on the name of the peer and select the appropriate status from the **Trust** menu. You can also block new members from joining a network that was created on the client. This tab page is only available for clients running in full mode. For more information, see [Securing Your Hamachi² Network Connections](#) on page 20.
 - The **Settings** tab manages the appearance and functionality of the client.
3. Click **OK** or **Apply** to save your settings.

How to Change the Basic Settings



Note: By default you have the basic settings shown on the Settings tab with an "Advanced Settings" link at the bottom. The "Basic Settings" is visible only if one has already switched to advanced.

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Basic settings** link at the bottom of the page. If this link is not available, then you are already viewing the basic settings. Select the following options.

Option	Description
Show splash screen on startup (Windows only)	Choose this option to display the Hamachi ² logo when Hamachi ² is started.
Hide offline network members	An offline network member is listed on the client with its name grayed out. Choose this option to hide offline peers.
Enable online presence (Mac only)	Choose this option to display and be able to modify the online presence of your client. You can change your presence in the Status menu on the Hamachi ² client.
Enable chat	Choose this option to enable peer and group chat.
Encryption	Choose this option to provide extra protection against sniffing. For business use, we highly suggest using encryption. Use of this option may cause <i>minimal</i> extra CPU load for both sender and receiver. This option is only available for clients running in full mode.
Compression	Choose this option to speed up large data transfers. Compression is particularly useful on low bandwidth connections. This option is only available for clients running in full mode.
Enable automatic update	Choose this option to automatically download the latest version of the Hamachi ² client. This option is only available for clients running in full mode.
Disable UPnP	Choose this option to disable automatic port detection for establishing peer-to-peer connection with other Hamachi ² clients. When this option is disabled, Hamachi ² tries to use a relay tunnel with other peers if it cannot establish peer-to-peer connection.

3. Click **OK** or **Apply** to save your settings.

How to Change the Advanced Interface Settings

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find these options in the **Interface Settings** section.

Option	Description
Show splash window when started (Windows only)	Choose this option to display the Hamachi ² logo when Hamachi ² is started.
Show main window in the taskbar (Windows only)	Choose this option to display the main Hamachi ² window on the taskbar.
Show peer windows in the taskbar (Windows only)	Choose this option to display the Peer Properties window on the taskbar once you right-click on a peer and click Details .
Show chat windows in the taskbar (Windows only)	Choose this option to display the chat windows on the taskbar.
Confirm evicting a network member	Choose this option to ask for confirmation if you evict a peer from an unattached network. This option is only available for clients running in full mode.
Hide offline network members	Choose this option to hide network members if they go offline.
Peer label format	Select the format of peers' names as they appear on the client. If you select custom , you must define it in the Custom format field. This option is only available for clients running in full mode.
Peer double-click action	Select the action that is performed if you double-click on a peer's name. This option is only available for clients running in full mode.
Show Quick IM in peer's menu (Windows only)	Choose this option to display the Send Quick IM option if you right-click on a peer.
Show custom command in peer's menu	Choose this option to add a custom command to a peer's menu. The command is displayed as defined in the Label field and issues the command that the Command field contains. For example, you can define remote desktop as a custom command by entering <code>mstsc /v:\$VIP</code> in the Command field and name it in the Label field as Remote Desktop. Once you right-click in a peer, you can choose the Remote Desktop option to establish a remote session with the selected peer. This option is only available for clients running in full mode.

3. Click **OK** or **Apply** to save your settings.

How to Change the Server Connection Settings

Server connections allows you to set up the Hamachi² server that your client connects to. Server connection parameters can only be modified for clients running in full mode.

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.

2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find these options in the **Server Connection** section.

Option	Description
Server address	Specify the IP address of the server that you want to access.
Local address	Specify an IP address and a port for accessing the Hamachi ² server. Choose this option if your firewall restricts outgoing traffic to a selected number of ports.
Use proxy	Choose this option to use a proxy server for establishing a network connection. If you set this option to Yes , you must define the IP address, username, and password for the proxy server. To remember the password for the proxy server, choose the Remember password option.
Automatically detect settings (Windows only)	Choose this option to detect the proxy settings automatically.

3. Click **OK** or **Apply** to save your settings.

How to Change the Peer Connection Settings

Use the Peer connections settings to set up how network members connect to your client. These connection parameters can only be modified for clients running in full mode.

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find these options in the **Peer Connections** section.

Option	Description
Authentication	Select the authentication method of peers.
Encryption	Choose this option to provide extra protection against sniffing. For business use, we highly suggest using encryption. Use of this option may cause <i>minimal</i> extra CPU load for both sender and receiver. This option is only available for clients running in full mode.
Compression	Choose this option to speed up large data transfers. Compression is particularly useful on low bandwidth connections. This option is only available for clients running in full mode.
Traffic filtering	Choose this option to block incoming traffic from peers. You can block untrusted, not secured, all, and no traffic.
Local UDP address	Define an optional UDP address that you want to use for connection to other peers.
Local TCP address	Define an optional TCP address that you want to use for connection to other peers.

3. Click **OK** or **Apply** to save your settings.

How to Change Your Online Presence

Online presence displays whether the online user is available in the network.

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find these options in the **Online Presence** section.

Option	Description
Enable	Choose this option to display and be able to modify the online presence of your client. You can change your presence in the Status menu on the Hamachi ² client.
Show peer status in the main list	Choose this option to display the online presence of other network members.
Switch to Away mode (Windows only)	Choose this option if you want to change your status automatically to Away after a defined period of time. You can set this time in the after being idle for field.

3. Click **OK** or **Apply** to save your settings.

You can define a custom online presence in the **Status > Custom** menu.

How to Change the Chat Settings

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find these options in the **Chat Settings** section.

Option	Description
Enable chat	Choose this option to enable peer and group chat.
When new message arrives	Select whether Hamachi ² should open the chat window or display a system message on the system tray when you receive a new message.
Play a sound when new IM arrives (Windows only)	Choose this option to play a sound when you receive an instant message.
Send 'Typing...' notifications	Choose this option to display a notification in the Chat window when the other party is writing a message.
Keep chat messages	Choose this option to keep the history of chat messages. Loading the chat history in the Chat window will fail unless this option is enabled.

3. Click **OK** or **Apply** to save your settings.

How to Change Colors in the Chat Window

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find this option in the **Chat Colors** section.

Option	Description
Panes and messages	Define a color for each pane and message type.

3. Click **OK** or **Apply** to save your settings.

How to Rename a Client from the Client

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Status** tab, click **Change** next to the client name.
3. Enter the new client name.
4. Click **Change** to save your settings.

How to Update the Client Automatically

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find this option in the **Software updates** section.

Option	Description
Enable automatic update	Choose this option to automatically download the latest version of the Hamachi ² client.

3. Click **OK** or **Apply** to save your settings.

How to Find Configuration and Installation Directories

You can view and edit the Hamachi² client settings in the Hamachi² configuration files as well. Only those clients can view these directories that are running in full mode.

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find these options in the **Disk Locations** section.

Option	Description
Installation folder	Displays the path of your Hamachi ² installation.
Service configuration	Defines the path of the Hamachi ² network configuration file, <code>h2-engine.cfg</code> .
UI configuration	Defines the path of the user interface configuration file, <code>h2-ui.cfg</code> .

Option	Description
Chat messages	Defines the path of your saved chat messages. Messages are only saved in this folder if the Keep chat messages option is enabled in the Chat Settings section.

3. Click **OK** or **Apply** to save your settings.

How to Collect Information for Troubleshooting

Logs help LogMeIn support technicians to find a solution for problems with Hamachi² clients.

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. On the **Settings** tab, click the **Advanced settings** link at the bottom of the page to view the advanced settings and select from the following options. You can find these options in the **Troubleshooting** section.

Option	Description
Enable diagnostic log	Choose this option to log the activity of the Hamachi ² client. You can only turn off logging on clients running in full mode.
Log file	Define the path of the log file.

3. Click **OK** or **Apply** to save your settings.

How to Disable Port Detection for Peer-to-Peer Connection

This procedure must be executed on the client.

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. Click the **Settings** tab. You can find this option in the **Troubleshooting** section.

Option	Description
Disable UPnP	Choose this option to disable automatic port detection for establishing peer-to-peer connection with other Hamachi ² clients. When this option is disabled, Hamachi ² tries to use a relay tunnel with other peers if it cannot establish peer-to-peer connection.

3. Click **OK** or **Apply** to save your settings.

How to Backup and Restore Hamachi² Client Configuration

You can backup your configuration files to recover from a system failure, or to have the ability to move a client and all its network configuration to a new computer.

This procedure must be executed on the client.

How to Backup Configuration Files

1. On Windows, click **System > Preferences**. On a Mac, click **LogMeIn Hamachi > Preferences**.
2. Select **Service configuration** in the **Disk Locations** section.
3. Click **Open**.

4. Copy all files to a safe location.

How to Restore Configuration Files

Do not go Online when you install Hamachi² on the new or reformatted computer.

1. Open the service configuration directory as described in [How to Backup Configuration Files](#) on page 27.
2. Open the **Run** window:
 - On Windows XP, go to **Start > Run**
 - On Windows 7 and Vista, go to **Start** and type **run** in the **Search** field
3. In the **Run** window, type `services.msc`.
4. Right-click on **LogMeIn Hamachi 2.0 Tunneling Engine** and select **Stop**.
5. Go back to the service configuration directory and copy the backed up files to the service configuration directory.
6. In the Services window, right-click on **LogMeIn Hamachi 2.0 Tunneling Engine** and select **Start**.
7. When the client goes online, it will retain its original identity.

Managing Unattached Networks from the Client

Most features of unattached networks are identical to that of attached networks. However, there are a number of features of Hamachi² that are only available for networks that were created by unattached clients:

- Set network access
- Delete a network
- Evict a member from a network

How to Set Access for an Unattached Network

Setting access rights is only possible if the client is the owner of the network. This means that the network was created from the client.

This procedure must be executed on the client.

1. On the client, right-click the network you want to work with.
2. Click **Set Access**.
The **Network Access** window appears.
3. Set the necessary access rights as follows:

Option	Description
Do not accept new network members	Select this option if you do not want to extend your network with new members.
Require a password to join the network	Joining members must enter the correct password to be able to request permission to join the network. By default, this option is enabled. To set a password, click Set Password and follow the on-screen instructions.
Approve all new members manually	The user must approve the membership of all new members.

4. Click **OK** or **Apply** to save your settings.

How to Delete an Unattached Network

This procedure must be executed on the client.

1. On the client, right-click on the network that you want to delete.
2. Click **Delete network**.
3. Confirm that you want to delete the selected network.



Note: Members are not notified about the removal of the network, but the network disappears from their clients.

How to Evict a Member of an Unattached Network

This procedure must be executed on the client.

1. On the client, right-click on the network member that you want to remove from the network.
2. Click **Evict**.
3. Confirm that you want to remove the selected network member.

Managing LogMeIn Hamachi² Networks

How to Set the Default Response to Network Join/Exit Requests

Network defaults are automatically applied to all new networks in your account. Default settings are not applied to networks that join your account.

1. On the LogMeIn web site, switch to Network mode and select the **Configuration** link on the left menu.
2. Under **Configuration**, select the **Network Defaults** tab.
3. Select a **Network type**.
4. Select the default response to join requests.

Option	Description
Accept automatically	All requests to join the network will be accepted automatically. We recommend that you require a network password when using this option.
Must be approved	All requests to join the network must be approved on the web.
Members can be added on the web only	Clients will not be able to join the network from the client. Clients can be added to the network on the web only.

5. Under **Network Member Permissions**, select **Can leave network at will** to allow members to leave the network at any time. By disabling this option, you can prevent clients from leaving a network accidentally or upon connection failure.
6. Click **Save**.

How to Add a Hamachi² Network

1. On the LogMeIn web site, switch to Network mode and click **My Networks**.
The My Networks page is displayed.
2. On the **My Networks** page, click **Add Network**.
The **Add Network (Step 1)** page is displayed.
3. Name the network in the **Network name** field.
Use the network name to help identify the network.
4. Select a **Network type**.
See [LogMeIn Hamachi² Network Types](#) on page 7.



Important: Once a network is created, its network type cannot be changed.

5. Enter a **Network description** (optional).
6. Click **Continue**.

The **Add Network (Step 2)** page is displayed.

7. Select the default response to join requests.

Option	Description
Accept automatically	All requests to join the network will be accepted automatically. We recommend that you require a network password when using this option.
Must be approved	All requests to join the network must be approved on the web.
Members can be added on the web only	Clients will not be able to join the network from the client. Clients can be added to the network on the web only.

8. Under **Network password**, select **A password is required to join this network** to protect your network.



Tip: If you do not set a password, we recommend setting the Join Request behavior to **Must be approved** or **Members can be added on the web only**.

9. Click **Continue**.
The **Add Network (Step 3)** page is displayed.
10. Follow the on-screen instructions.
11. Click **Finish**.
Your network is created with a system-generated Network ID.



Note: When you assign a gateway, you will lose your network connection for a few seconds while the Hamachi² virtual network adapter bridges to the physical network adapter.

How to Configure a Hamachi² Gateway on Windows to Recognize Multiple Subnets

Provide access to a network with multiple subnets via a Hamachi² gateway.

By default, the client set as the gateway in a Hamachi² gateway network will provide access to its own subnet (the one on which it is installed).

Follow this procedure to set an existing gateway to recognize additional subnets that are accessible from the gateway's subnet:

1. Open the Windows client that is set as the gateway.
2. Right-click the gateway network and select **Gateway settings** from the menu.
The Gateway Settings dialog box is displayed.
3. Select the **Remote Networks** tab.
4. Click **Add** to add new remote networks.
The Network Subnet dialog box is displayed.
5. Enter the **Network address** and **Subnet mask** in dotted decimal format.
6. Click **OK** or **Apply** to save your settings.

Members of the gateway network will be able to access resources on all recognized subnets.

How to Assign an IP Range for Gateway Members on Windows

Gateway members are assigned an IP address by the DHCP server in your gateway's LAN. If no DHCP server is present, the gateway must be configured to behave as a quasi-DHCP server and assign addresses from a defined range.

1. Open the Windows client that is set as the gateway.
2. Right-click the gateway network and select **Gateway settings** from the menu. The Gateway Settings dialog box is displayed.
3. Select the **IP Parameters** tab.
4. Clear the **Obtain IP settings automatically** box.
5. Under **Address range**, enter the appropriate addresses.





Important: You must complete each field under **Address range**.

6. If you have a DNS server(s) in the network, you may enter their IP addresses and define a DNS suffix.
7. Click **OK** or **Apply** to save your settings.

How to Configure Home LAN Behavior for Gateway Network Members

Control how gateway network members should behave when they are physically located in the same network as the gateway (the "Home LAN").

1. On the LogMeIn web site, switch to Network mode and click **My Networks**. The My Networks page is displayed.
2. On the **My Networks** page, click **Edit** next to the network you want to work with. The **Edit Network** page is displayed.
3. Select the **Settings** tab.
4. Under **Home LAN Behavior**, select one of the following options:

Option	Description
Disable members going online in the host network	<p>Authentication errors may occur if a client logs in to a gateway network from a Hamachi network and a physical network IP address. Choose this option to prevent members from going online to the gateway when they are physically located in the same network as the gateway. All network resources remain available through the physical network.</p> <p> Tip: Ensure that ICMP traffic on the gateway is not blocked by a firewall.</p>
Disable network stack components	<p>Choose this option to allow members to go online to the gateway when they are physically located in the same network as the gateway. When this option is selected, the stack components of the Hamachi network adapter are turned off. This resolves potential conflicts by preventing the operating system from attempting to authenticate through the Hamachi adapter toward the domain controller. Members go online in the gateway network. All local network resources remain available through both the physical and the Hamachi network. This option is useful if a user has limited access to the physical network resources but can have unlimited access to the same resources through the Hamachi network.</p> <p> Tip: Ensure that ICMP traffic on the gateway is not blocked by a firewall.</p>
Do not restrict members	<p>Choose this option to allow members to attempt to go online when they are physically located in the same network as the gateway. If you experience authentication problems, choose one of the above options.</p>

-
5. Click **Save**.

How to Add a Hamachi² Network from the Client

This procedure must be executed on the client.

1. Click **Network > Create a new network**.
2. Type the network ID and password of the network.
3. Click **Create**.

How to Rename a Network

Use the network name to help identify the network.



Important: When joining a network from a client, use the system-generated network ID. The network ID cannot be changed.

1. On the LogMeIn web site, switch to Network mode and click **My Networks**.
The My Networks page is displayed.
2. On the **My Networks** page, click **Edit** next to the network you want to work with.
The **Edit Network** page is displayed.
3. On the Members tab, type a new name in the **Name** field.
4. Click **Save**.
If the client is online, changes are applied immediately. If offline, changes are applied when the client comes online.



Important: You cannot rename an unattached network that was created from the client.

How to Approve or Reject Join Requests

If you receive a request from another client to join your network, you can approve or reject that request.

1. On the web interface, you will see the following message when you have requests from clients waiting to join your account or networks:
You have x pending join requests.
2. Click the **pending join request** link.
The Join Requests page is displayed.
3. Choose **Accept** or **Reject**, as appropriate.
4. Click **Save**.

How to Edit Network Settings

1. On the LogMeIn web site, switch to Network mode and click **My Networks**.
The My Networks page is displayed.
2. On the **My Networks** page, click **Edit** next to the network you want to work with.
The **Edit Network** page is displayed.
3. Select the **Settings** tab.
4. Type a **Welcome message** (optional).
This message will be displayed to any client joining the network for the first time.
5. Type an **Announcement message** (optional).
This message will be displayed when an existing member logs in to the network. Members also receive the announcement whenever it is updated.
6. Select the default response to join requests.

Option	Description
Accept automatically	All requests to join the network will be accepted automatically. We recommend that you require a network password when using this option.
Must be approved	All requests to join the network must be approved on the web.
Members can be added on the web only	Clients will not be able to join the network from the client. Clients can be added to the network on the web only.

7. Under **Network Member Permissions**, select **Can leave network at will** to allow members to leave the network at any time. By disabling this option, you can prevent clients from leaving a network accidentally or upon connection failure.
8. Click **Save**.

How to Modify the Client's Role in a Network

1. On the LogMeIn web site, switch to Network mode and click **My Networks**.
The My Networks page is displayed.
2. On the **My Networks** page, click **Edit** next to the network you want to work with.
The **Edit Network** page is displayed.
3. Click **Add/Remove Members**.
4. Change member settings as follows:
 - Hub or spoke for a hub-and-spoke network (multiple hubs are allowed)
 - Gateway or member for a gateway network (one gateway node only)
 - Member for a mesh network



Remember: A client assigned as the gateway in a gateway network cannot be a member of any other network.

-
5. Click **Save**.
If the client is online, changes are applied immediately. If offline, changes are applied when the client comes online.

How to Change Network Password Settings

1. On the LogMeIn web site, switch to Network mode and click **My Networks**.
The My Networks page is displayed.
2. On the **My Networks** page, click **Edit** next to the network you want to work with.
The **Edit Network** page is displayed.
3. Select the **Password** tab.
4. Activate or de-activate the password requirement.



Tip: If you do not set a password, we recommend setting the Join Request behavior to **Must be approved** or **Members can be added on the web only**.

5. To change the password, type a new password and re-enter to confirm.
6. Click **Save**.

How to Delete a Network

1. On the LogMeIn web site, switch to Network mode and click **My Networks**.
The My Networks page is displayed.
2. On the **My Networks** page, click **Edit** next to the network you want to work with.
The **Edit Network** page is displayed.
3. Select the **Delete** tab.
4. Click the **Delete** button.
The network is permanently deleted. All client installations and client-to-account relationships are left intact.

How to Leave a Network

This procedure must be executed on the client.

1. On the client, right-click on the network that you want to leave.
2. Click **Leave network**.



Important: You cannot transfer the ownership of a network; therefore, you cannot leave a network that you created. You can only delete such networks.



Note: A network owner can prohibit members leaving a network. To check if members are allowed to leave a network without the owner's permission, see [How to Edit Network Settings](#) on page 34.

How to Change the Priority of the Virtual Network Adapter

Hamachi² puts its virtual network adapter at the bottom priority in Windows. This is done to ensure there are no conflicts when Hamachi² runs on an Active Directory Domain Controller or DNS server.



Important: If you are on a wireless network, you may run into unpredictable connection issues when making this change.

1. Go to the Advanced Settings of your computer:
 - a) On Windows 2000/XP, go to **Control Panel > Network Connections > Advanced > Advanced Settings**
 - b) On Windows 7/Vista, go to **Start**, type `ncpa.cpl` in the search field, and press **Enter**. Then press **Alt** to show the menu bar, and click **Advanced > Advanced Settings**.
2. Use the Up/Down buttons to reorder the network adapters to your preference.
Hamachi² will perform best at the top, but the difference is very minor in all but very intense usage, and may cause compatibility issues with other Network-centric tasks.

LogMeIn Hamachi² Troubleshooting

Advanced users can follow the guidelines in this section to help resolve common Hamachi² issues. If these guidelines do not solve your issue, contact LogMeIn.



Tip: See the [Knowledge Base](#) for further troubleshooting assistance.

Troubleshooting Failed Hamachi² Client Setup

Symptoms

You see the following error when you start the Hamachi² client:

```
Setup has failed
```

Cause

There are two main causes of receiving this error message:

- There is a corrupt profile from Hamachi¹.
- Third party software is managing some aspect of the network stack. The two most notable are nVidia (via their NIC Drivers) and Norton.

Action/Workaround

- Completely remove any and all files and folders regarding Hamachi, and clean the registry of Hamachi entries. Subsequently, reboot the computer and reinstall the Hamachi² client.
- Configure either third-party software accordingly.

Troubleshooting Hamachi² Rejected Login Request

Symptoms

You see the following error:

```
The Hamachi server has denied your login request.
```

Cause

The IP address of your Hamachi² client was recycled.

Action/Workaround

Uninstall and reinstall the Hamachi² client.

Troubleshooting a Windows Hamachi² Client Failing to Connect to the Hamachi Engine

Symptoms

You see the following error

Failed to connect to engine.

Cause

This indicates the failure of the Hamachi² service.

Action/Workaround

1. Press the **Windows key** and the **R** key on your keyboard to open the **Run** window.
2. Type `services.msc`, and press **Enter**.
3. Right-click on **LogMeln Hamachi 2.0 Tunneling Engine** and select **Restart**.
The status of the service changes to **Started**.

If the **LogMeln Hamachi 2.0 Tunneling Engine** service does not start, you must edit the Windows registry.



Caution: Editing the Windows registry incorrectly may stop other applications from working correctly.

1. Press the **Windows key** and the **R** key on your keyboard to open the **Run** window.
2. Type `regedit`, and press **Enter** to open the Registry Editor.
3. Select the **HKEY_LOCAL_MACHINE\SOFTWARE\LogMeln Hamachi** entry.
4. Right-click on an empty line and select **New > String Value**.
5. Name the new key as **EngineConfigDir**.
6. Double-click on the **EngineConfigDir** key and in the **Value** field, enter a location on your computer to store the necessary configuration files. Hamachi² creates the configuration files automatically.
7. Restart the **LogMeln Hamachi 2.0 Tunneling Engine** as described above.

Troubleshooting a Windows Hamachi² Client Failing to Connect to the Hamachi² Network Adapter

Symptoms

You see the following error

Failed to connect to the adapter.

Cause

This indicates the failure of the Hamachi² network adapter.

Action/Workaround

You can try the following methods to repair the connection to the Hamachi² network adapter.

- Disable your software firewall (unless it is the Windows Firewall) reboot, and try again.
- Open Device Manager and manually enable the driver for 'Hamachi Network Interface'. Then start Hamachi² and see if it can connect. If it can, then something is not working properly in Device Management on your system, which might be caused by a driver (not necessarily a networking one). Troubleshooting this would be done by

booting in safe mode, manually starting the virtual adapter, and then running Hamachi². You can then start turning devices on, one by one, until the conflict is found.

- Check your Network Connections folder and see if Hamachi²'s adapter is called Hamachi, and not something like "Local Area Connection 4". If it is not named Hamachi, then rename it to Hamachi and try running the application again. Make sure that Network Connection Hamachi is activated.
- Type `services.msc`, and press **Enter**. Then ensure the "DHCP Client" and "Network Connections" services are running.
- You can run WinSock to revert certain Windows networking registry values to their defaults, thus resetting the Windows network stack to default operation. You can download WinSock at <http://www.snapfiles.com/get/winsockxpfix.html>.
- If none of the above helps, then there is something on your system that is overriding default access control for system drivers, in which case you need to isolate and disable this component.

In some cases, Windows fails to properly install the network adapter and there is no Hamachi adapter listed in the Network connections folder. In this case, you may have to manually reinstall the network adapter as follows:

1. Go to **Start > Run**, and type `hdwwiz.cpl`. If you receive an error, try again with `hdwwiz` only.
 - a) If it begins searching immediately, let it finish, then choose **Yes, I have already connected the hardware**.
 - b) If it displays the currently installed devices, scroll down to the bottom.
2. Choose **Add a new hardware device**. If it is not there, go to the next step.
3. Choose **Install the hardware that I manually select from a list (Advanced)**.
4. Select **Network adapters**.
5. Click **Have Disk** and then **Browse**.
6. Browse to the installation folder, and select the `Hamachi.inf` file.
7. Finish the installation of the adapter.
8. Check your Network Connections folder and see if Hamachi²'s adapter is called Hamachi, and not something like "Local Area Connection 4". If it is not named Hamachi, then rename it to Hamachi and try running the application again. Make sure that Network Connection Hamachi is activated.

Troubleshooting Network Connections in Windows

Symptoms

After reinstalling Hamachi² manually, your network connections list is still empty and the Hamachi² client fails to connect to the network adapter.

Cause

Your registry may be corrupted.

Action/Workaround



Important: Make a backup of your registry before you proceed.

1. Press the **Windows key** and the **R** key on your keyboard to open the **Run** window.
2. Type `regedit`, and press **Enter**.
3. Navigate to `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Network` and delete the `Config` key.
4. Reinstall Hamachi².
5. Go to **Control Panel > Device Manager** and remove your network adapter.
6. In the Device Manager, select **Action > Scan for hardware changes** to reinstall the network adapter.

Troubleshooting a Hamachi² Client Failing to Go Online

Symptoms

When attempting to ping a client you see the following error:

```
General failure.
```

Cause

This indicates a failure at the Hamachi² adapter level.

Action/Workaround

First, ensure that you can ping your actual IP Address. If you can, then the problem lies in the virtual adapter. Restart the Hamachi² client. If this fails, uninstall and reinstall the client.

Troubleshooting Pinging Hamachi² Hosts

Symptoms

You see the following error:

```
Destination Host Unreachable.
```

Cause

The host you are trying to ping is not present in the network.

Action/Workaround

Generally this indicates that the Hamachi² client is turned off, or is otherwise unable to establish a connection to the other peers in the network.

Troubleshooting a Hamachi² Client in Probing Status

Symptoms

The client cannot go online and remains in **probing** status.

Cause

If a Hamachi² client cannot go online, there is generally a problem with the firewall configuration, which is set to too restrictive.

Action/Workaround

Ensure that the `Hamachi-2.exe` file is allowed through all firewalls.

Troubleshooting Hamachi² Client Request Time Out

Symptoms

You see the following error:

Request timed out

Cause

This is the error you receive when Hamachi² is blocked by a firewall.

Action/Workaround

Ensure that Internet Control Message Protocol (ICMP) requests are allowed, preferably only for the Hamachi² Adapter, within the firewall you use.

Troubleshooting Communication between Hamachi² Clients

Symptoms

You see a yellow triangle with an exclamation mark (a warning icon) next to the name of the peer you want to communicate with and no traffic is going through between the peers.

Cause

You generally see a warning next to a peer if the security settings block traffic between peers.

Action/Workaround

Click on the warning icon and then click on the description of the problem. This opens the **Peer Properties** window. The errors are marked in red.

- If there is a connection error, on the **Settings** tab, click the **change** link next to **Traffic**. Then change the setting to **Block unsecured** or **Allow all**.



Important: We do not recommend that you select **Allow all**.

- If there is an authentication error, the peer is untrusted by your client. Click on the **details** link next to the error and then click on the description of the error. Then click **Trust** to authenticate the peer.

Troubleshooting Hamachi¹ Network Restoration on Windows Clients

Symptoms

You do not see your Hamachi¹ networks after reinstalling Windows and installing the Hamachi² client.

Cause

Hamachi¹ and Hamachi² use different configuration files, therefore a Hamachi² client does not recognize Hamachi¹ networks by default.

Action/Workaround

1. Save your Hamachi¹ configuration file that you can find in the `C:\Documents and Settings\user\Application Data\Hamachi` folder by default.
2. Uninstall the Hamachi² client and remove all user settings.
3. Download the Hamachi¹ client from the Internet and install it.
4. Restore your Hamachi¹ configuration by overwriting it with your old configuration file.
5. Run Hamachi¹.
6. From the **System** menu, select **Update Hamachi** to update your client to Hamachi².

LogMeIn Hamachi² Glossary

Attached client

The term Attached client refers to any Hamachi² client that has been added to a LogMeIn account. Any LogMeIn account holder can manage attached clients on the web using the My Networks page, while LogMeIn Central subscribers can use LogMeIn Central.

Gateway network

Use the gateway network type to provide transparent access to your entire network from a centralized Hamachi² gateway. Members of a gateway network, such as mobile workers, will see one computer acting as a gateway towards an entire LAN, thus making all network resources accessible.

Hamachi² client

The term Hamachi² client refers to both the Hamachi² software itself and any computer with Hamachi² client software installed. With proper permission from network owners, Hamachi² clients can become members of any Hamachi² network.

Hamachi² network

For Hamachi², a network is not a physical network, but rather a group of users who want to use common resources or applications (two or more Hamachi² clients interconnected by tunnels make up a Hamachi² network). Hamachi² offers three network types: meshed, hub-and-spoke, and gateway.

Hub-and-spoke network

In a hub-and-spoke network, one or more computers act as hubs, while other clients connect as spokes. Spokes connect to hubs, but never to each other.

LogMeIn Central

LogMeIn Central is LogMeIn's Essential Remote Services solution for IT professionals and small and medium businesses. Certain premium Hamachi² features are only available to LogMeIn Central subscribers.

Mesh network

In a mesh network, every member is connected to every other member.

NAT

Network Address Translation

Peer

A computer that is a member of a computer network.

Peer Label

The Peer Label is used to define your online presence to other Hamachi² users. This is what other users see as your identification when you are in a Hamachi² network.

Unattached client

The term Unattached client refers to any Hamachi² client that has not been added to a LogMeIn account and is being used in Client-only mode. Unattached clients cannot be managed on the web using the My Networks page or LogMeIn Central. It can still join existing networks and create mesh networks.

Unattached network

The term Unattached network refers to any Hamachi² network that was created on an unattached client. Unattached networks can only be mesh networks and they cannot be managed on the web using the My Networks page or LogMeIn Central.

VPN

Virtual Private Network

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