



PC-Duo Enterprise Host for Mac Usage Guide

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1) Introduction & System Requirements

OS Requirements: macOS 10.13 (High Sierra) and later.

Compatibility: This new Host is shipped with PC-Duo Enterprise Server v13.5 or later but can report to all earlier versions of v13 server. All PC-DUO v13 client software (Master for Windows, Master for Mac, Master for iOS, HTML5 Remote Control) are able to remote control this Mac Host and do clipboard transfers. Applies to PC-Duo Enterprise RAS (Remote Access Server) Edition.

Upgrading: Users running an older Mac Host (v13.4 and earlier) will be prompted to upgrade when they click the **SHARE** button from a v13.5, or later, PC-Duo Web Console landing page. If they choose to apply the upgrade, the older software will be completely removed and the new Host will be installed. Note that the older software was delivered as a DMG and the new software is delivered as a PKG which leverages the system installer application to provide the user experience for installation.

Overview: The PC-Duo Enterprise v13.5 release introduces a brand-new, rearchitected Host for Mac. This new Host can operate in both a persistent mode, analogous to the Windows installed Host, and also in a transient On Demand mode, analogous to a “pinned” Windows Host On Demand. Additionally, both modes can be active at the same time. The old Mac Host operated only as a transient Host, specifically a “session Host on Demand” running as the logged in user.

- **Persistent Mode:** This is the primary mode of operation for the Mac Host. Like the installed Host for Windows, it reports to a PC-Duo Enterprise server in a persistent (non-transient) fashion. This allows for both attended and unattended access, both on and off the LAN, as well as support for remote control during “Fast User Switching”. Settings are editable by the Mac console user and, like the Windows installed Host, there is no “stop sharing” button as it persistently reports to one or more PC-Duo Enterprise servers. This makes it available at the login screen since it starts up at system boot time.
- **On Demand Mode:** When the Host for Mac is operating in this mode, it has a transient connection to a PC-Duo Enterprise server. When that connection is ended, it will no longer be accessible unless/until the Mac user initiates another session. This is analogous to the Windows Host on Demand when “pinned”. In this mode, settings are not editable by the Mac console user and there is a “stop sharing” button in the menu which will make it inaccessible for sharing. Note that unlike the Windows HOD, the Host software is still installed, it just will not be reporting to any Gateways when sharing is stopped.

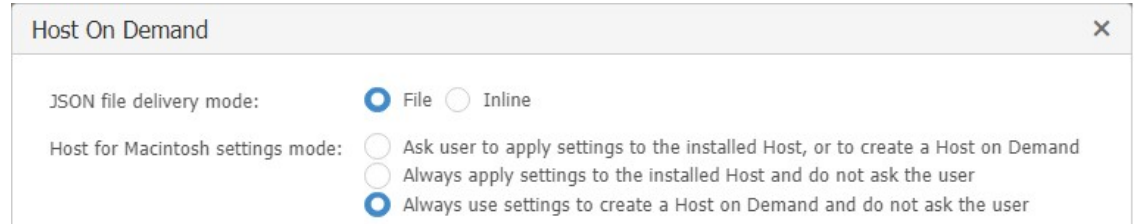
An important difference from the Windows Host model is that in both cases/modes, software is installed on the computer and an administrator must do the installation and complete a one-time step, as required by macOS, to provide access for screen sharing and input control (more on that below). The software, despite its mode, will remain on the system until it is manually uninstalled.

2) PC-Duo Web Console Configuration Options

The PC-Duo Enterprise Host for Mac has three settings modes available to an Administrative user of the PC-Duo Web Console. Below is a listing of each along with a corresponding description. We recommend becoming familiar with each of them because while we chose the safest default, one of the other two choices may make more sense based on how PC-Duo is to be used in your case.

To find the Host for Mac settings mode, visit your PC-Duo Web Console -> Gateway tab -> Host on Demand settings section. (<https://<your address>/Configuration/GatewaySettings> in Host on Demand section)

While the third setting is the default, please make note of the other two options as one may be better than the default setting:



- Ask user to apply settings to the installed Host, or to create a Host on Demand
 - If this option is selected, the user will receive a dialog prompt asking whether the settings from the PC-Duo Web Console should be applied persistently to the installed Host, or if a (new) On Demand instance should be started. The difference is that the Host will become persistently available for connectivity (like the Windows Host) or if the On Demand instance should be started which are transient in nature and are typically closed/exited at session end.
- Always apply settings to the installed Host and do not ask the user
 - If this option is selected, the PC-Duo Web Console settings are applied to the installed Host immediately with no further user interaction required.
- Always use settings to create a Host on Demand and do not ask the user
 - If this option is selected, the PC-Duo Web Console settings are used to create a new On Demand instance. Another Host icon will appear on the Menu bar, and the Mini Host Control Panel and PIN dialog will appear with no further user interaction required.

Depending on your desired behavior, one choice may make more sense than another.

3) Installing, Uninstalling and Configuring the PC-Duo Enterprise Host for Mac

Note, the PC-Duo Enterprise Host for Mac download may feature PROXY Pro Host branding. The PC-Duo Enterprise Host for Mac (PKG) can be downloaded directly by visiting the PC-Duo Web Console landing page (v13.5 or newer) and simply clicking the **SHARE** button. This will bring up a page with a Download button if there is no Host already installed. Click Download, let the software (PKG file) download, then click the downloaded file to open it. This runs the Host installer, which guides the user through installing the software.

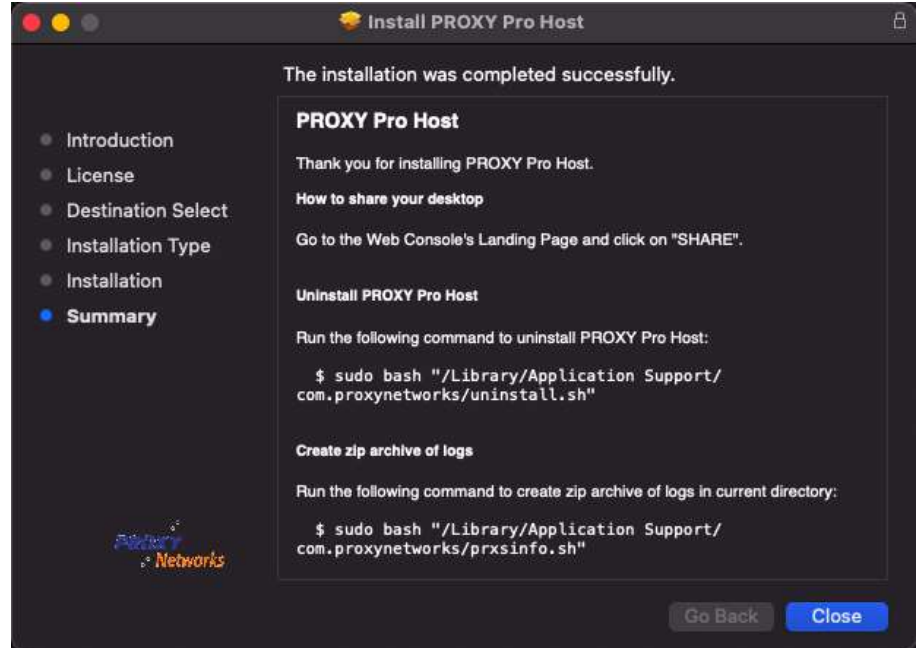
When the installation has completed, the installation dialog will indicate success.

Notice the uninstall command as well:

```
% sudo bash "/Library/Application Support/com.proxynetworks/uninstall.sh"
```

This and other commands are available by clicking the Host Icon -> Help from the menu bar.

At the end of the installation, there's a prompt to discard the installer in the trash (which is recommended, but not required). The Host software starts, but initially has only default settings and no Gateway Configurations.



After installation there are a few paths forward. The easiest way to populate the Gateway information is to:

- Click **SHARE** from the PC-Duo Web Console landing page
- or
- Click the “Click here to launch it now” link if the browser page was left open
- The following manual configuration is available as well. Click the Host icon from the menu bar and click Preferences. On the Gateway tab, one can add the Gateway information.
- Note very well that the customer has control over this experience. The experience you get when you launch it is dependent upon how the PC-Duo Web Console Administrator has the setting in the previous section configured. The end user may get the Gateway information in an On Demand session, a Persistent Session or they can be prompted.

4) Deploying the PC-Duo Enterprise Host for Mac via MDM

If a customer prefers to deploy the PC-Duo Enterprise Host for Mac as a PKG through some other means, like an MDM, that can also be done by making use of a new capability to have the PKG look for an adjacent (same directory) “hostsettings.json” file. If that file is found, case sensitive by the way, the settings are applied to the Host installed/persistent context once installed.

Creating the JSON file manually can be error prone and is not recommended so there are a few ways to have it created for you. Below are three options that we suggest for creating the optional hostsettings.json file:

Note that this is for the Windows Host but the Mac Host will just use the subset of settings that are supported

- Option 1: Copy the HOD settings from your existing PC-Duo Web Console server



- Visit <https://<server>/root/hodsetting> and copy that content
- Option 2: Use the PC-Duo Enterprise Deployment Tool to make a Host Settings template
 - From the Deployment Tool, expand Product Configurations, right-click Host and choose New. Give the template a name and hit OK. The right pane populates with each of the available settings. Configure at least the Gateway by double-clicking the Gateways line, entering the Gateway address, and protocol (usually WSS). Hit OK. Right-click the template name -> All Tasks -> Copy JSON
- Option 3: Configure a Windows Host with the desired settings, and use **PhSetup mode:exportjson**
 - Pick a Host computer with desired settings, open a command prompt, navigate to the Host installation directory (C:\Program Files (x86)\PC-Duo Networks\Host\) and type: `phsetup mode:exportjson`
 - Or, to extract a Host computer's settings through an existing PC-Duo Enterprise server, use the following command from the Host's installation directory: `phsetup mode:exportjson /g<gateway> /sw={guid} /p"TCP|2303"`

The PKG can be obtained from any of the following means and then distributed by the customer as desired:

- Navigate to the PC-Duo Web Console landing page from a Mac and click the **SHARE** button
- The PKG file can be found on you PC-Duo Enterprise Server (C:\Program files (x86)\PC-Duo Networks\Web Console\Web\wcapps)
- It can be downloaded from: : <https://products.proxynetworks.com/wcapps/proxy/v100/PROXYProHost.pkg>

5) Required Administrative Privileges

Note that unlike the Host for Windows, administrative privileges on the Mac are required for initial installation and configuration regardless of the desired mode. These settings can be applied manually by an administrator but the installer will walk through these settings as well. This is a one-time configuration so these will not need to be revisited. A non-administrative user will then be able to initiate an On Demand sharing session. The two necessary permissions are:

Required Permission 1 of 2:

Granting the permission for “control your computer”

Starting with macOS Mojave (10.14), System Preferences > Security & Privacy, Accessibility, a permission to “control your computer” is present.

The PC-Duo Enterprise Host will appear in this list as “PC-Duo Enterprise Host”, and must be granted the right to control your computer to provide input control services.



Required Permission 2 of 2:

Granting the permission for “record the screen”

Starting with macOS Catalina (10.15), System Preferences > Security & Privacy, Screen Recording, a permission to “record the screen” is present.

The PC-Duo Enterprise Host will appear in this list as “PC-Duo Enterprise Host”, and must be granted the right to record the screen to provide remote view/control services.



6) Tour of the PC-Duo Enterprise Host Control Panel for Mac

The PC-Duo Enterprise Host is represented in the macOS menu bar, which runs across the top of the screen, with this icon:



When the software is installed, the Host icon will appear. This represents the persistent mode, even if no Gateways are configured for sharing. If the On Demand mode is used, there will be two Host icons, one for the persistent mode and another for the On Demand mode, in the menu bar that looks like this:



Whenever the On Demand mode is active, there will also be a mini-Host Control Panel which looks like this:



The mini-Host Control Panel buttons are, from left to right, Settings, View Error (if any), Disconnect Users (if any) and Exit.

Allowing the Host to run in both modes simultaneously facilitates the scenario where Hosts are configured to report to a particular Gateway persistently but may want a temporary (On Demand) connection to another Gateway for an ad-hoc remote control session. The On Demand mode can be added by simply clicking the **SHARE** button from a different Gateway. When the On Demand sharing is stopped, there will be just one Host icon showing in the menu bar.

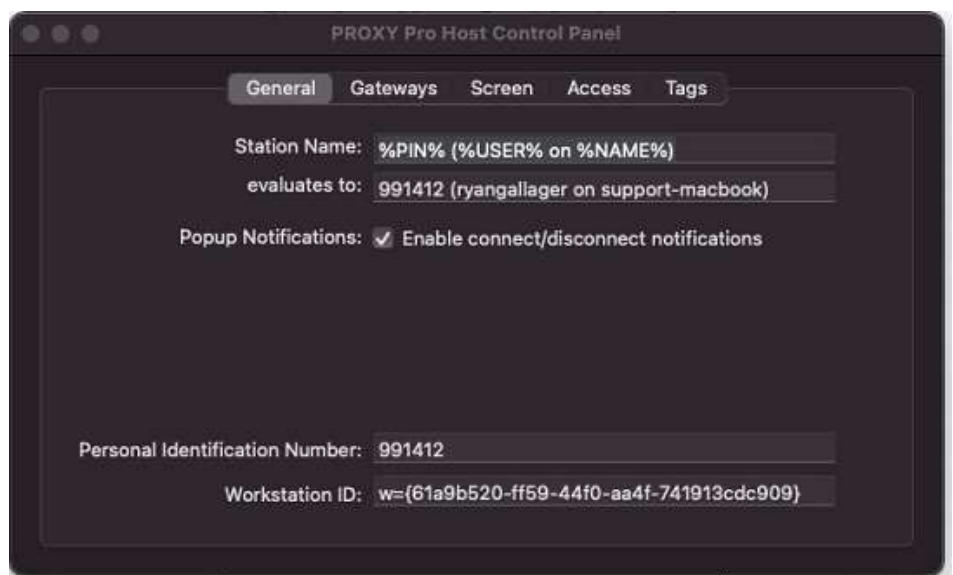
In On Demand mode the Host settings are not meant to be modified, as they are read from the server at launch time. The installed Host settings can be modified by right-clicking the Host menu bar icon and clicking Preferences.

6.1) PC-Duo Enterprise Host Control Panel for Mac: General Tab

The General tab contains the **Station Name** box, which controls how the Mac is listed in the PC-Duo Web Console or Master. The default value is %PIN% (%USER% on %NAME%), which would show a 6-digit number associated with the Mac, along with the identity of the logged in user and the computer name all together. It will be listed in this format in the installed Master or Web Console:

991412 (ryangallager on support-macbook)

This means user ryangallager is logged into support-macbook and its PIN is 991412.



The **Popup Notifications** checkbox, ticked by default, will indicate when a connection is made and closed and by whom.

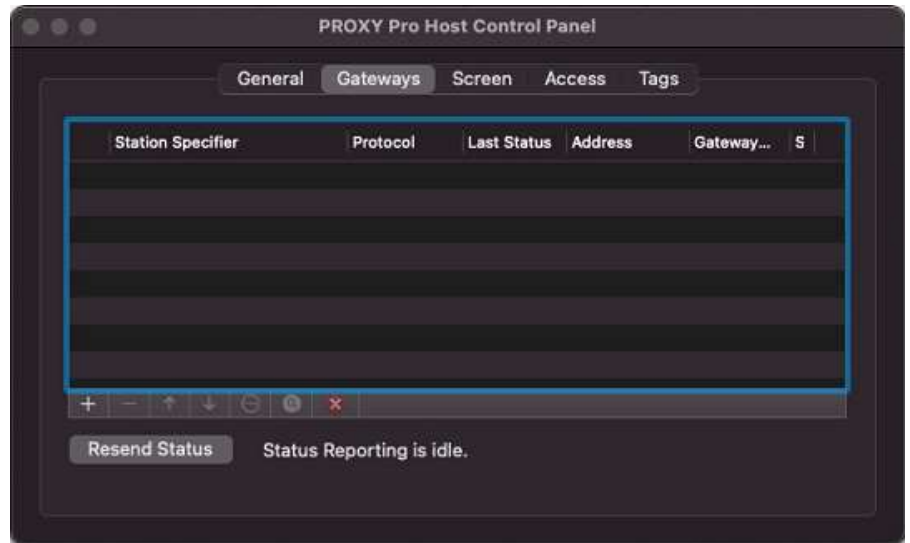
6.2) PC-Duo Enterprise Host Control Panel for Mac: Gateways Tab

The Gateway server information will either be included in the Host deployment or can be populated when the **SHARE** button is clicked on again after the initial installation.

The Gateways tab shows which Gateway(s) the Host is presently configured to report to. The small row of buttons at the bottom are, in order, **Add Gateway**, **Remove Gateway**, **Move Up**, **Move Down**, **Edit**, **View Details** and **Delete**.

Click **Add Gateway** to add a new Gateway, such as PC-Duo.mydomain.com (no https://).

Select the **WSS** protocol and hit OK – the Host will now report to the server.



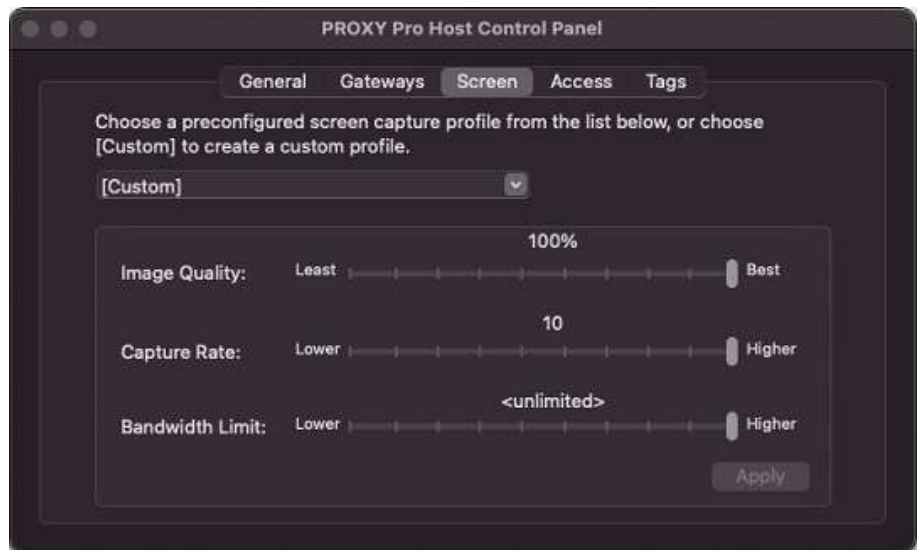
6.3) PC-Duo Enterprise Host Control Panel for Mac: Screen Tab

The out-of-the-box screen capture preferences are usually just great, so we rarely advise modifying the screen capture preferences. We actually recommend keeping the defaults.

In certain scenarios, there may be machines that inhabit environments with limited or constrained bandwidth that can possibly deliver performance that is under an acceptable threshold. We provide tools on this tab to improve the performance if necessary.

The **Profile drop-down** offers a few built-in settings like Low, Medium and High. When set to Custom, it allows for adjustments of the settings beneath it. Setting the **Image Quality** less than 100% (perhaps 70%) will reduce the amount of screen data PC-Duo is trying to capture and transmit and the overall performance will increase at the expense of a slight degradation in the overall clarity of the Host's screen.

Last, the **Bandwidth Limit** can be used to impose a maximum throughput limit (in KB/sec), not typically recommended.



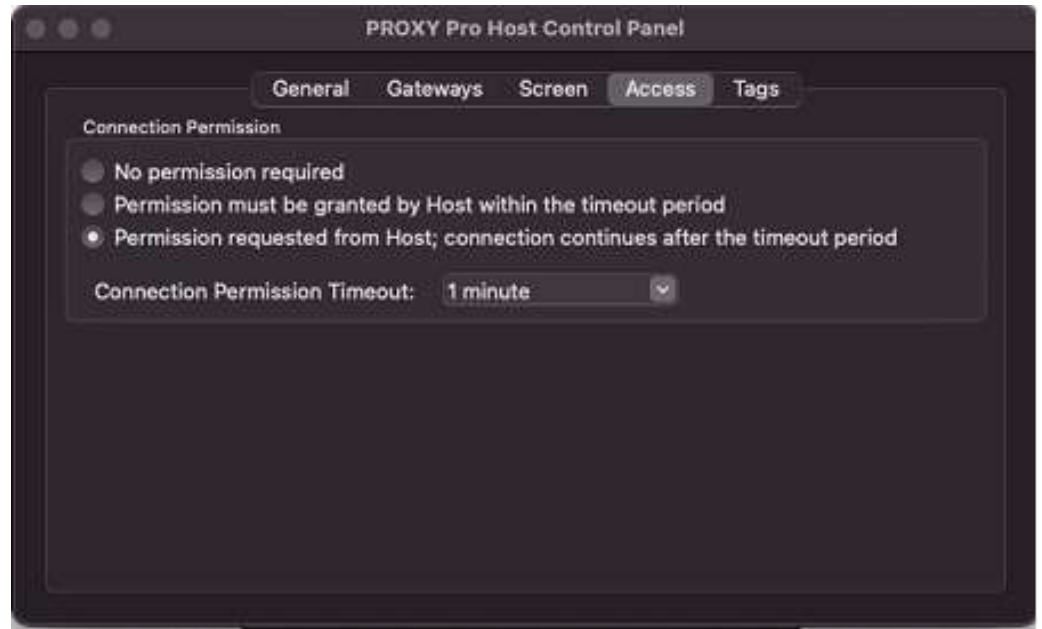
The **Capture Rate** bar controls how frequently PC-Duo performs screen grabs. At 10, the maximum, PC-Duo is pulling 24 frames per second. At 9, it's pulling 22 and 20 at 8 and so on.

6.4) PC-Duo Enterprise Host Control Panel for Mac: Access Tab

The PC-Duo Host Control Panel's Access tab is where we would configure whether you click and connect immediately without prompting the end user, or if we want the user to explicitly accept the connection.

Many customers require that end users explicitly approve the incoming connection and there are two options for this.

One will likely be more applicable than another and below is a description of each option.



- **No permission required** implies that the Host will not prompt the user and will be able to immediately take remote control of the Host computer's keyboard and mouse, ideal for unattended scenarios.
- **Permission must be granted by the Host within the timeout period** will only allow connections to the Host if the user explicitly permits them. This setting is intended for attended scenarios only, where an end user would be present to allow the technician to connect.
- **Permission requested from Host; connection continues after the timeout period** gives the console user an opportunity to accept or reject a connection. The difference is that this mode will let you connect to the Host not explicitly rejected or allowed. The analogy is "knocking before entering" and is commonly used when the Host computer may need maintenance from an IT team, while the user has stepped away to lunch.

Note that any and all connections made to Hosts are centrally logged in the PC-Duo Web Console's Analytics tab -> Services Audit sub-tab so there will be accountability as to who connected to the Host no matter what setting is ultimately chosen.

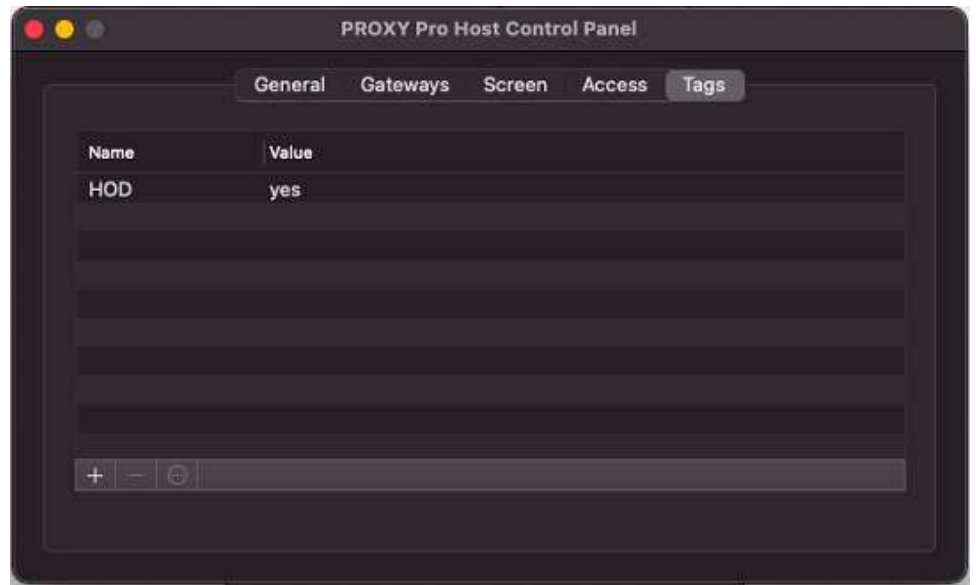
The **Connection Permission Timeout** refers to how long the user has before the connection is auto-rejected in the case of Grant, and auto-accepted with no explicit denial with Request. The choices include 10 seconds, 30 seconds, 1 minute, 2 minutes, 5 minutes and 15 minutes and Unlimited.

6.5) PC-Duo Enterprise Host Control Panel for Mac: Tags Tab

For complete documentation on creating grouping rules against Host Tags, please see the PC-Duo Web Console Operations Guide found on our documentation page.

The PC-Duo Enterprise RAS has an Automatic Host Grouping capability that can send Host computers based on an Extension Tag that they present themselves to a server with. Automatic grouping is typically used by customers who would like Host computers to land in their correct Managed Host group.

The Host for Mac can be given extension tags just like any Windows Host and can be added with the **Add Tag** button, represented by a +. Enter a **tag name** and **tag value**, then make the appropriate corresponding rule on the PC-Duo Web Console.



While complete coverage on this is found on our documentation page, we will provide enough context to hopefully get you started.

From the PC-Duo Web Console's Gateway tab, while logged in as an administrative user, scroll to the Host Grouping section and hit the Edit button. Click the Add Tag Rule button and you'll be prompted to input a tag name and a tag value, and then a target Host group in which Hosts with matching values shall go. Save the change and any Host with matching values will be sent into this group automatically. Repeat this for each group and Hosts will be sent to the group that the rule that has been set.

Questions? Please email support@vector-networks.com