# About Wake on Demand and Bonjour Sleep Proxy

When a Mac computer is in sleep mode, it can continue sharing services, such as iTunes and iPhoto library sharing, printer sharing, file sharing, and screen sharing.

#### How does it work?

By using Wake on Demand (on your Mac) and Bonjour Sleep Proxy (provided by an AirPort device or Apple TV), you can save energy and reduce costs while still ensuring full access to all your shared services. You can also remotely access shared services across the Internet via Back to My Mac.

Wake on Demand works by partnering with a Bonjour Sleep Proxy running on your AirPort Base Station, Time Capsule or Apple TV (when no AirPort Base Station or Time Capsule is present on the network). **Note:** Apple TV will act as a Bonjour Sleep Proxy even if it is in sleep mode.

Any Mac on your network that has Wake on Demand enabled in Energy Saver preferences will automatically register itself and its shared services with a Bonjour Sleep Proxy. When the Mac is in sleep mode and a request is made to access a shared service on the Mac, a Bonjour Sleep Proxy asks that Mac to wake and handle the request. Once that request is complete, the Mac will again register with the Bonjour Sleep Proxy and go back to sleep at its defined sleep interval in the Energy Saver preferences. **Note:** For ideal performance, you should have twenty or less Macs using Wake on Demand per Bonjour Sleep Proxy on your network.

#### **Notes**

- With Wake on Demand enabled (see below) and your Mac in sleep mode, your Mac will occasionally wake
  for a brief time, without lighting the screen, in order to maintain active shared service registrations with the
  Bonjour Sleep Proxy. On some Macs, sounds from the optical drive, hard drive, or fans may be heard during
  these brief periods. Note: Removing a sleeping Mac from the network will automatically remove its
  registered shared services from the Bonjour Sleep Proxy.
- Bonjour Sleep Proxy runs on an AirPort Base Station, Time Capsule, or Apple TV (second generation or later)—
  when no AirPort base station or Time Capsule is present on the network—with the latest software updates
  installed.
- Portable Macs with Wake on Demand enabled will only perform Wake on Demand functions when they are connected to a power adaptor and either the built-in display is open or an external display is attached.

## Examples of how Wake on Demand works

iTunes and iPhoto Sharing

Applications such as iTunes and iPhoto allow you to share your music, movies, and pictures with friends and family on your local network. Wake on Demand allows your Macs to go to sleep, but wake up automatically to let others view your shared stuff.

**Printer Sharing** 

In OS X, you can connect a printer to a Mac and share it with other computers on the network. Wake on Demand allows the Mac to go to sleep while idle, but wake up automatically when it is needed to handle a print job.

Back to My Mac

With Wake on Demand, you can remotely access your Mac via the Internet and Back to My Mac, even if your Mac is in sleep mode.

Local File Sharing, Screen Sharing, other sharing services

In addition to helping your home Mac wake when you remotely access it using Back to My Mac, Wake on Demand also provides the same capability when you access your Mac locally from within your own home network, whether for File Sharing, Screen Sharing, remote log in via SSH, or other sharing services.

### Key features

#### Automatic registration

With "Wake for Network access" or "Wake for Wi-Fi network access" or "Wake for Ethernet network access" enabled in the Energy Saver preferences, OS X will automatically detect the presence of a Bonjour Sleep Proxy service running on your AirPort Base Station, Time Capsule, or Apple TV and register its shared services with the Bonjour Sleep Proxy before going to sleep.

Works on any service

Because Wake on Demand uses Bonjour, it can handle any service that registers with Bonjour regardless of the underlying protocol.

Compatibility

Any Bonjour-enabled client (including both Mac and Windows) can discover Bonjour-registered shared services on your sleeping Macs. Any client that tries to connect to one of these shared services will cause the Mac to wake and provide the shared service to the client.

For example: On a home network with an AirPort Base Station, a Mac sharing an iTunes playlist goes to sleep. A Mac or PC user on the home network sees the iTunes playlist in its iTunes and clicks it. The Bonjour Sleep Proxy wakes the sleeping Mac and its iTunes playlist appears on the other Mac or PC ready to play shared media.

## Setting up Bonjour Sleep Proxy and Wake on Demand

To properly configure your network and devices for Bonjour Sleep Proxy and Wake on Demand, follow the steps below:

Setting the Bonjour Sleep Proxy on your AirPort Base Station, Time Capsule or Apple TV

Install the latest software updates for AirPort Base Station with 802.11n (or later including 802.11ac), Time Capsule, or Apple TV (second generation or later) to enable it to act as the Bonjour Sleep Proxy. Once installed, your AirPort Base Station, Time Capsule or Apple TV (when no AirPort base station or Time Capsule is present on the network) will make itself available as a Bonjour Sleep Proxy to other devices on your network with no other configuration necessary.

Setting up your Mac

Macs that ship with Mac OS X v10.6 or later have Wake on Demand enabled by default, but for some earlier Macs this option must be enabled using the steps below.

To enable Wake on Demand on a Mac follow these steps:

- 1. From the **Apple** menu, choose **System Preferences**.
- 2. From the **View** menu, choose **Energy Saver**.
- 3. Select (check) "Wake for network access". **Note**: The "Wake for network access" option's text may differ depending on the capabilities of your Mac:
- Wake for network access Your Mac supports Wake on Demand over both Ethernet and AirPort
- Wake for Ethernet network access Your Mac supports Wake on Demand over Ethernet only
- Wake for Wi-Fi network access Your Mac supports Wake on Demand over AirPort only

Setting up clients

Any Bonjour client can interact with a Mac running Mac OS X v10.6 or later and cause it to Wake on Demand. For Microsoft Windows, you should install Bonjour for Windows.

Wireless Wake on Demand

You can verify that your Mac supports wireless Wake on Demand by following these steps:

- 1. Open System Information.
  - While holding down the option key, click the Apple menu and select System Information...
- 2. In the Network section, click Wi-Fi.

If you see "Wake On Wireless: Supported", your Mac supports Wake on Demand when connected to your wireless network and automatically registered with the Sleep Proxy Server. If you do not see "Wake On Wireless: Supported", your Mac can use Wake on Demand if it is connected to your network with an Ethernet cable.

The wireless network you use with Wake on Demand should be the first wireless network in your list of Preferred Networks. The wireless network priority can be set within the Network pane of System Preferences using the following steps:

- 1. From the **Apple** menu, choose **System Preferences...**
- 2. From the View menu choose Network.
- 3. Select Wi-Fi from the list of network interfaces.
- 4. If the padlock icon in the lower left is locked, click it. When prompted enter an admin name and password to unlock.
- 5. Click the **Advanced...** button.
- 6. In the Preferred Networks list under the Wi-Fi tab, click and drag the name of your network that uses Wake on Demand to the top of the list.
- 7. Click OK to save the settings.
- 8. Click Apply, then close System Preferences

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Last Modified: Apr 21, 2016

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