

## Linux Server at Home

# SERVE YOURSELF

Kivest, Fotolia

Two ready-to-go Linux-based servers make it easy to set up your home network. **BY DMITRI POPOV**

If you want to add a Linux-based server to your home network, you have two options: build a server yourself using a spare machine or buy a ready-to-use solution. Choosing the ready-made option will save you a lot of hassle, but it leads to the perennial question: What Linux-based home server should you buy? At least two home server solutions deserve a closer look: Bubba Two from a Swedish company called Excito [1] and TonidoPlug from Texas-based CodeLathe [2]. But how good are they and can they meet your needs?

## Bubba Two

Despite its slightly silly name, Bubba Two is a rather competent little server with many talents: It can serve files and stream media content; act as a web and print server, firewall, and router; has a built-in torrent downloader and groupware software; and even fetches email for you. The server itself is surprisingly small – about the size of a thick paper-

back book – and it sports a clean and slick design. Bubba Two's enclosure is made of thick aluminum, which serves two purposes: It provides excellent protection against bumps and knocks and helps to dissipate heat generated by the processor and the hard disk.

Thanks to a low-power processor and passive cooling, the server is whisper-quiet, and the only moving part inside it is the hard disk. The server is also extremely energy efficient, requiring only 7-12W of power. Bubba Two is based on a Power PC processor running at 333MHz and backed up by 256MB of RAM. This might not sound like much, but this configuration is perfectly adequate for the

tasks Bubba Two is designed to perform. The back panel of the server (Figure 1) sports two Gigabit Ethernet jacks marked as WAN and LAN, two USB ports, and two eSATA ports for adding more storage and connecting a printer. Bubba Two is available in several configurations with different hard disk capacities: from a modest 80GB to a humongous 2TB. If you have a spare hard disk, you can also order Bubba Two without a disk. In case low noise and minimal power consumption are your primary concerns, you can opt for a version of Bubba Two with a 32GB solid-state disk. Excito also sells Bubba Storage, an exter-



Figure 1: Bubba Two sports eSATA and USB ports as well as two Gigabit Ethernet jacks.

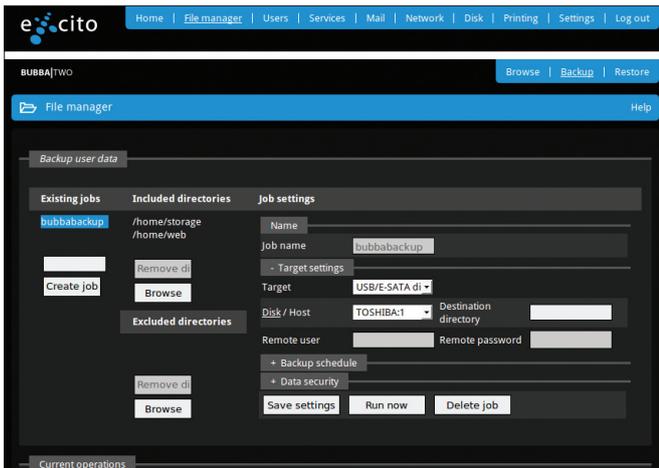


Figure 2: Bubba Two's file manager sports a powerful backup feature.

nal SATA hard disk enclosure that can be ordered with or without a hard disk.

Because Bubba Two can act as a router and firewall, it can replace a dedicated router on your network, and the supplied quick start guide explains how this can be done. Of course, you can also choose to use Bubba Two solely as a server. The initial configuration of Bubba Two takes only a couple of minutes. To connect Bubba Two directly to your computer via LAN ports (you need this computer to configure Bubba's settings), use the supplied crossover cable, then turn the server on, wait until it boots, then point the browser on the connected computer to `http://bubba`. Using the default username and password, log in as administrator and choose *Settings | Setup wizard*. The wizard then guides you through the process of setting up Bubba Two and configuring its settings.

Bubba Two sports a user-friendly, web-based interface that lets you easily control all of the server's functions and gives quick access to built-in applications such as a file manager, downloader, and photo album. The file manager (Figure 2) comes with a powerful backup feature that supports multiple backup jobs, scheduled and remote backups, and data encryption. The download tool can handle HTTP, FTP, and torrent downloads, and the photo album lets you turn any directory containing photos into slick web-based photo galleries.

As administrator, you can also use the web interface to control and configure the server. The *Users* section, for example, lets you add new user accounts, and you can enable and disable individual

services in the *Services* section. If you add external storage to Bubba Two, you can set up a RAID solution in the *Disks* section, and you can tweak the network and firewall settings in the *Network* section. Instead of – or in addition to – the web-based interface, you can connect and manage Bubba Two via SSH, which gives you unrestricted access to the server's inner workings.

Bubba Two comes with a vast collection of preinstalled software, which makes it suitable for a wide range of tasks. For example, you can use Bubba Two as a file server with support for the HTTP, Samba, FTP, and SCP protocols. The Apache server lets you use Bubba Two as a tiny web server, and publishing web pages is as easy as copying them to the web folder in your user directory on the server. Because Bubba Two comes with both PHP and MySQL, you can use the server to host web-based applications. Fetchmail lets you retrieve messages from multiple email accounts, and you can read them in a browser via the web-based PIM and email front end. The Firefly media server (Figure 3) can stream music stored in the *music* directory to DAAP-compatible music clients. And because Bubba Two runs Debian Etch, you have access to thousands of Debian packages. For example, if the built-in backup feature doesn't cut it for you, you can install the excellent *rsync* utility.

## Final Verdict

Bubba Two is a great little server that can handle pretty much any task you throw at it. The small size and low noise level make Bubba Two a perfect machine

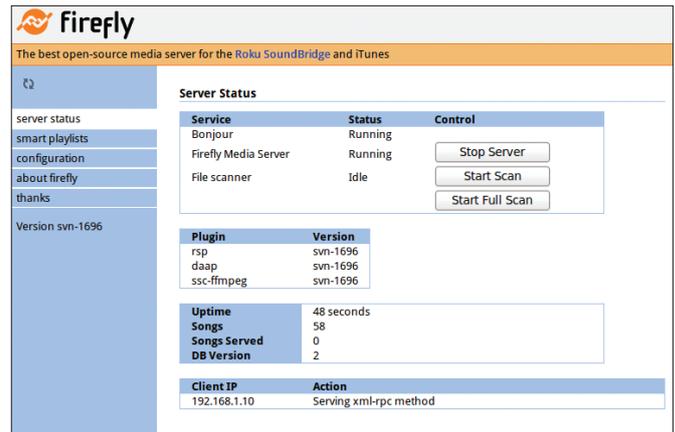


Figure 3: Bubba Two comes with a few useful applications, including the Firefly streaming server.

for home, whereas the bundled groupware and email software turn Bubba Two into an appealing solution for small businesses and workgroups. A slick and user-friendly web interface makes it easy to configure and manage Bubba Two, even for users without technical chops. Linux power users, in turn, will appreciate the full access to the underlying Debian system. All in all, if you are looking for a flexible and powerful server that is easy to maintain and extend, Bubba Two should be at the very top of your list.

## TonidoPlug

TonidoPlug looks nothing like a conventional server (Figure 4). The device itself is based on the Marvell SheevaPlug plug computer, which looks like a slightly oversized power supply. TonidoPlug is powered by an embedded Marvell Sheeva CPU core running at 1.2GHz backed up by 512MB of DDR2 RAM and a 512MB flash disk. The device sports an Ethernet jack for network connectivity and a single USB port. The default 512MB of storage can be expanded by plugging a USB stick or a USB hard disk



Figure 4: TonidoPlug.

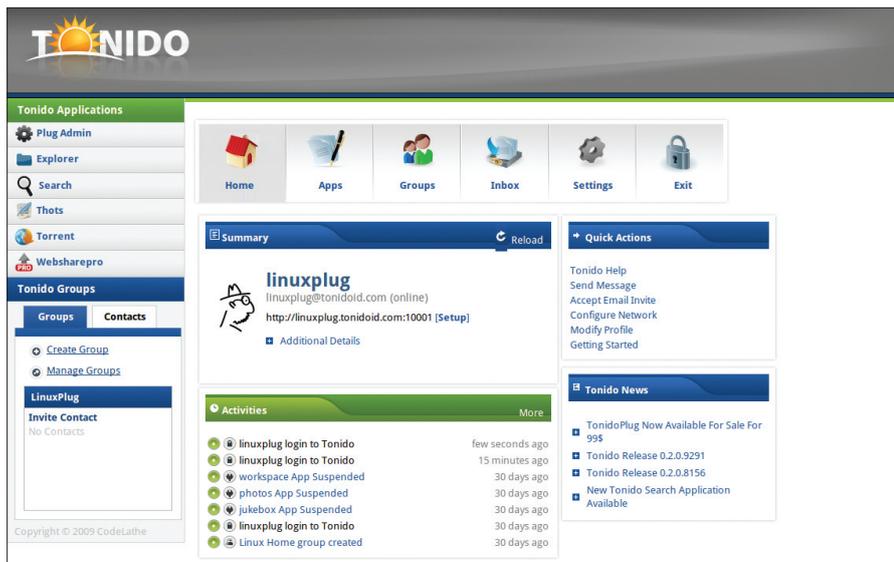


Figure 5: TonidoPlug ships with the Tonido software suite.

into TonidoPlug. As soon as you do that, TonidoPlug automatically detects the connected storage device, and you can use it right away. Better yet, TonidoPlug makes the storage device available on the network, so you can use the server as a simple NAS solution.

Installing TonidoPlug is a complete no-brainer: Just use the supplied Ethernet cable to connect TonidoPlug to your network, plug the device into the mains, and the server is ready to go. From another machine on the network, go to <http://www.tonidoplugid.com/ip> to locate the server on your network. Once it has been located, follow the configuration wizard to complete the setup process.

The form factor is not the only unusual thing about TonidoPlug: Instead of popular server applications and tools like Apache, Samba, and MySQL, the server offers its own Tonido server application suite (Figure 5). By default, Tonido comes with a torrent manager, a file sharing application, a PIM and collaboration solution, a file manager, a photo sharing tool, a music manager, and a personal blog application (the Tonido software suite was covered in issue 105 [3]). The supplied software bundle can be easily extended by installing additional applications (Figure 6). By default, TonidoPlug is not accessible from the web, but you can enable this feature from the Tonido dashboard. Once

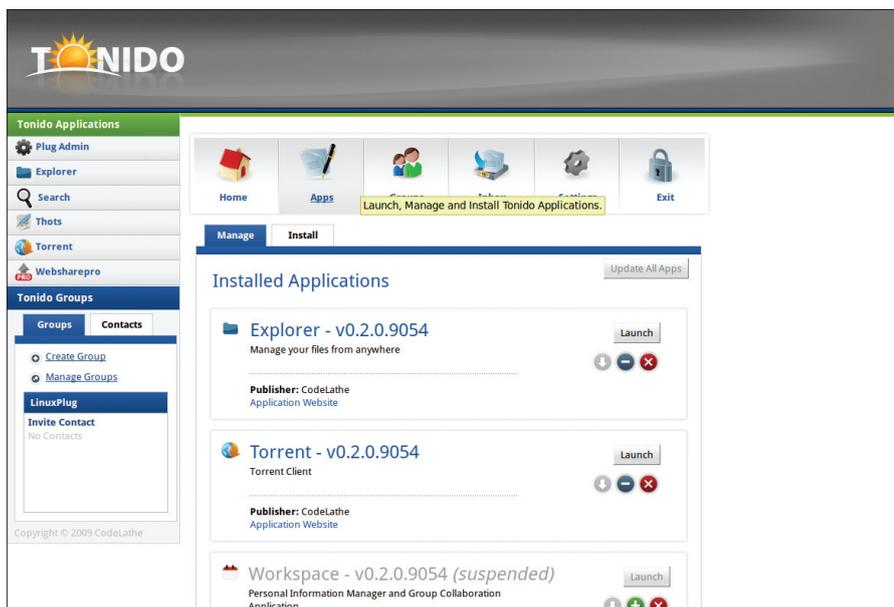


Figure 6: Enabling and disabling individual Tonido applications is easy.

you've done that, you can access your TonidoPlug server via the address `http://<tonidoid>.<tonidoid.com>:<port>`.

Although the Tonido suite provides a well-rounded collection of easy-to-use applications, there is a caveat: Tonido is based on peer-to-peer technology, so the users you want to collaborate and share your stuff with must also use the TonidoPlug or the Tonido software. Depending on your needs, this can be an advantage or a drawback. If you want to set up a secure collaboration or sharing environment in which you have full control over who has access to the shared data, then Tonido can be the right tool for the job. However, if you want to share a few photos with your friends, and they don't have either TonidoPlug or Tonido, you need to look somewhere else. Fortunately, you are not limited to the Tonido software. The server runs a slimmed-down version of Ubuntu, and you can access the server via SSH. This means that – with a bit of perseverance – you can install and run whatever server software you want. Obviously, this option is reserved for Linux users that feel comfortable working from the command line, but the possibility is there.

### Final Verdict

TonidoPlug is a very likable device: it's cheap, small, quiet, and extremely easy to install and configure. The Tonido software suite offers nifty applications that take care of your sharing and collaboration needs. Because TonidoPlug runs Ubuntu, you can access the underlying system via SSH, making it an appealing device for Linux tinkerers. However, adding TonidoPlug to your network only makes sense if you find the Tonido software useful. Of course, you can install and configure other server applications, but it would be as practical as buying a family car and trying to convert it into an SUV. ■

**INFO**

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[1] Excito official website: [www.excito.com](http://www.excito.com)

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[2] TonidoPlug official website: [www.tonidoplug.com](http://www.tonidoplug.com)

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[3] "Cloud 9" by Dmitri Popov, *Linux Magazine*. August 2009, pg. 82, <http://www.linuxpromagazine.com/Issues/2009/105/CLOUD-9>