[COMPARISON]

Affordable NAS boxes

GET MORE DIGITAL STORAGE FOR THE WHOLE HOUSE.

[LINDSAY HANDMER]

THESE DAYS EVEN the cheapest NAS boxes are not just a file repository. Typically they run a Linux based operating system and are actually more like a mini PC, able to download and run third party software. Apps available range from simple bit-torrent managers, to custom media serving or hosting WordPress webpages. You can stream video and music to DNLA compatible devices, such as Smart TVS, media players and consoles. Many NAS devices also let you send links via email to friends and family, giving access to holiday pictures or other content. You NAS can also have a lot of utility — free backup software makes it very simple to keep a copy of all your important files and automatically check and copy the latest changes. You can sync your online files with you NAS storage, giving even better file redundancy. Your new wiz bang colour printer may have inbuilt Wi-Fi, but your old reliable laser model that never seems to run out of toner doesn't. Instead of relegating it to a single computer, you can use a USB port on your NAS to get it on your network.

It may seem daunting, but these days setting up a NAS is very easy. While you can opt for a

"YOUR NEW NAS CAN ACTUALLY PERFORM A RANGE OF TASKS THAT YOU MAY NEVER HAVE THOUGHT POSSIBLE."

model with drives already installed, hot swappable tool less drive bays make adding your own drives as simple as slotting them in. You can use existing drives you have though buying your own is typically cheaper than getting a NAS with HDDs pre-installed. For ultimate reliability opt for higher spec NAS designed drives that have longer lifespans.

But what about beyond file serving and media streaming? Your new NAS can actually perform a range of tasks that you may never have thought possible. For those who love to watch YouTube videos, you can actually get your NAS to download them and make them available offline. It can automatically check for new content on your subscribed channels, or download videos of your choosing. Love to share pictures and video

on Facebook and YouTube? You can set a custom folder on your NAS and any files placed there will be automatically uploaded for you. For those who love to take happy snaps, some NAS boxes make backing up your photos super simple. Just plug your camera into your NAS via USB, and your NAS will use PTP to automatically copy your photos. You can set it to save them to a specific folder, sync that with your cloud storage, only copy new photos or delete photos once they are backed up. Most modern NAS devices can also act as a surveillance system. Simply add one or more IP cameras to your network and you can record and manage the footage through your NAS. You don't have to just plug your NAS into your wired Ethernet anymore either. While some models have inbuilt Wi-Fi, you can actually add the functionality to many via USB dongle. Check the compatibility lists — other devices are supported as well, such as Bluetooth and wireless keyboards and mice.

ASUSTOR AS-302T

WITH REAL TIME 1080P VIDEO TRANSCODING.

THE 302T USES a powerful Intel Atom Dual core CPU running at 1.6GHz, as well as 1GB of DDR3 RAM. It can handle dual 2.5-inch or 3.5-inch hot swappable HDDs, running in RAID 0 and 1, as well as JBOD. Connectivity is good, with dual USB 3.0 and USB 2.0, as well as Gigabit Ethernet. Thanks to the capable Atom processor, the AS-302T also has an HDMI output and can play your media files directly to your TV. It's even got an infrared receiver for an optional remote control. Via USB, it supports extra storage, a Wi-Fi or Bluetooth dongle, printer and even a keyboard and mouse.

Sometimes you can get a video file that your media player can't handle — with the 302T you can convert it on the fly to a suitable format, letting you play pretty much any video to any device. You can also adjust the resolution and bit-rate — important in low bandwidth situations.

As expected, installation of the tool-less HDDs and setup was quick and painless. Thanks to the high end hardware, access speeds are above average and the ASUSTOR is well suited to serving files to multiple clients simultaneously.

You can also get more use from your NAS through downloads from APP Central where a range of programs let you add functionality such as torrents downloads or popular apps such as Spotify. While the web interface is good, you can also get a range of fully featured mobile apps to remotely manage your NAS and access you files.

ASUSTOR AS-304T

FOCUSED ON YOUR MEDIA ADDICTION.

UNLIKE LOWER POWERED NAS boxes opting for lowest electricity use, the AS-304T uses a more powerful dual core Intel Atom CPU that runs at 1.6GHz. That said, considering the extra features and grunt, the Atom is a fairly efficient little CPU. The AS-304T puts the processor to work driving an HDMI 1.4a output, as well as a system capable of real time 1080P video transcoding. Combined with an IR receiver and optional remote plus the ability to use a USB wireless keyboard and mouse, the ASUSTOR NAS is gunning to replace your media player, if not your entire HTPC. Of course it can also stream music and video to your other media devices. The 304T is not a one trick pony either — HDD installation and setup is super simple and the control interface is intuitive and fully featured. You can also access your files remotely via the web interface or via the mobile device apps.

Differing from all the other 4 Bay NAS devices we tested, the AS-304T does not include dual Gigabit LAN ports. For those who want extra performance from link aggregation or failover support, this may be a deal breaker, though for the rest of us it doesn't really matter. It does feature dual USB 3.0 and 2.0 ports, which can handle external drives, Wi-Fi and Bluetooth dongles and printers.

The AS-304T is a great NAS if you are a power user with a media focused network, but it is worth noting that you pay a price premium for two extra bays over the smaller AS-302T, yet get identical hardware.

2 BAY	READ MB/S	WRITE MB/S
Synology DS214	94.75	90.89
ASUSTOR AS-302T	104.82	89.42
Shuttle KD22	89.52	85.63
Thecus N2520	98.77	94.17
WD MyCloud EX2	92.18	91.56
QNAP TS-231	94.58	89.71
Seagate 2 Bay NAS	91.11	82.47

4 BAY	READ MB/S	WRITE MB/S
QNAP TS-431	104.65	101.14
Synology DS414	101.53	100.46
WD MyCloud EX4	105.67	96.32
ASUSTOR AS-304T	103.88	96.35
D-Link DNS-340L	85.64	88.79
Seagate 4 Bay	90.25	87.68

13 NAS BOXES ON TEST

HOW WE TESTED

Each NAS was run with its installed drives or dual 2TB WD HDDs for unpopulated devices. Testing was performed with a dedicated Gigabit LAN via a Netgear Router. We ran the default setup for each NAS and mapped a folder as a network drive. Read and write speed benchmarks were performed with CrystalDiskMark.

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ASUSTOR AS-302T
$348
www.asustor.com

CRITICAL SPECS
Unpopulated, up to 12TB, Dual Core Intel Atom 1.6GHz, 1GB RAM, 2x USB 3.0, 2x USB 2.0, HDMI 1.4a output.

3½

ASUSTOR AS-304T
$498
www.asustor.com

CRITICAL SPECS
Unpopulated, up to 24TB, Intel Atom 1.6GHz, 1GB RAM, 1x Gigabit Ethernet, 2x USB 2.0 and 3.0, HDMI 1.4a output.