Windows AiO — napp-it CS

Windows All-in-One: NAS + Virtualization

Updated: July 2026 | napp-it.org · Translated and optimized.

1. Windows as NAS — Considerations

1.1 Which Windows version?

Windows 11 Pro

- Ideal for home/SOHO NAS
- HyperV for virtualization
- Storage Spaces + OpenZFS
- Affordable
- Recommended: version 24H2+

Windows Server 2022+

- More concurrent users
- Active Directory
- SMB Direct (RDMA): 3–10 GB/s
- Ideal for 4K/8K video editing
- Server Essentials: 1 CPU, 25 users

Recommendation

Windows 10 and older: End of support — not recommended.

SMB Direct with RDMA NICs enables NAS performance up to 10 GB/s with minimal CPU load. Especially interesting for 25G DAC connections without expensive switches.

2. Quick Start (TL;DR)

ZFS server with web-GUI on Windows in a few steps. napp-it cs includes an integrated http/https web server — copy and run, no XAMPP/Apache setup needed anymore.

Install and Start (Online Installer)

One command (admin terminal, PowerShell, or CMD) downloads, installs to C:\opt, and starts the web-GUI automatically — integrated http/https web server, no XAMPP/Apache needed.

```
cmd /c "curl.exe -ksLo %TEMP%\cs_setup.bat https://www.napp-it.org/cs_setup.bat && %TEMP%\cs_setup.bat"
```

Current nightly build (napp-it_cs_dev.zip, newest features, possibly less tested):

```
cmd /c "curl.exe -ksLo %TEMP%\cs_setup_dev.bat https://www.napp-it.org/cs_setup_dev.bat && %TEMP%\cs_setup_dev.bat"
```

Manual start / restart — universal start script with a menu (5s timeout, default: option 4), as Administrator:

```
C:\opt\perl\bin\perl.exe C:\opt\csweb-gui\start.pl
```

- 0 — stop all
- 1 — (re)start all in background (server + monitor + auto + webserver)
- 4 — (re)start all in minimized windows (one window per component) — default
- 8/9 — restart the webserver only (foreground/background)

Skip the menu prompt, e.g. option 4: C:\opt\csweb-gui\start_all.bat (calls start.pl 4)

Open Browser

```
http://localhost          or          https://localhost
```

Later updates
While running, use About > Update in the web-GUI — automatically fetches the latest stable or dev build, no need to re-run the installer.

3. Storage Methods

Storage Spaces (recommended for beginners)

Mix disks of any size into a pool. Redundancy defined per virtual disk (Space). Supports auto-tiering and NTFS/ReFS formatting.

OpenZFS for Windows

The OpenZFS Windows driver is in active development and already very usable. Full ZFS feature set: CoW, checksums, snapshots, RAIDZ, encryption.

```
https://github.com/openzfsonwindows/openzfs/releases
```

4. HyperV Virtualization

```
# Enable HyperV (PowerShell as admin):
Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Hyper-V -All
```

- Create VMs directly on ZFS/Storage Spaces pool
- Vhdx files on ZFS benefit from snapshot protection

5. Server Groups

napp-it CS on Windows can act as a central frontend for a mixed server group:

- Windows frontend manages Linux, FreeBSD, OmniOS backend servers
- Sync auth key (server.auth)
- Open port 63000 in Windows Firewall

```
# Windows Firewall rule:
New-NetFirewallRule -DisplayName "napp-it CS" -Direction Inbound -Protocol TCP -LocalPor
t 63000 -Action Allow
```