

My Cloud EX on a Business Network in 3 Steps

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Attract:

Can I use the My Cloud EX2 and EX4 on a traditional Business Network? Can it serve as an affordable basic Business NAS? ABSOLUTELY. In three steps – we will harden the NAS, join an AD, and configure and experience Protected File Sharing.

The Article:

The My Cloud EX2 and EX4 come out the box geared to the Prosumer, Creative Professional, and SOHO market. It comes with the very popular My Cloud Mobile applications for more of the Prosumer/Creative Pro that is on the Go. There is also application support for a handful of SOHO productivity and Prosumer photo, videos and music applications.

Can I use the My Cloud EX2 and EX4 on a traditional Business Network? Can it serve as an affordable Business NAS? ABSOLUTELY.

STEP 1: Harden the NAS

When taking the product into a Business Network, typically IT or technical consultants will want to stage a profile of what they need. For the My Cloud EX2 and EX4, a consultant may decide media and remote Mobile application features are not needed. Those remote experiences could be sourced by other Business Approved Application.

Dashboard: Login to My Cloud EX2 or EX4 from a PC or Mac on that is on the same network by opening a compatible Browser and typing the IP Address of the My Cloud EX2 or EX4. See Figure 1.

Hardening Checklist:

- ☐ *Install Latest Firmware and Security Patches.* This is the first step to making sure that new Hardening is done with the latest software. On the My Cloud Dashboard, click on “Settings” Control (see Figure 3); and “Firmware Update” tab.
 - If on a network that has Internet Access, click on “Check for Updates”.
 - If not allowed access to the Internet directly, download the latest Firmware from a PC or Mac that does have Internet Access by going to:
<http://support.wd.com/product/download.asp?level1=9&lang=en>
and selecting your product. Follow instructions from DOWNLOAD page to install firmware from file using the My Cloud Dashboard.
- ☐ *Harden Default Passwords.* The products come with a default administrator account. First important step is to make sure default for the **admin** is a STRONG password. IT professionals

and consultants should follow the guideline acceptable to the Company. Depending on guidelines from the web, typically this is 12 to 15 characters; upper and lower case alphabetic characters, numbers and symbols.

On the My Cloud Dashboard, BEFORE joining an Active Directory; click on “Users” Control and then select admin. See Figure 2. Make sure Password switch is “ON”, and click on “Configure >>” to make modifications.

- *Date Time and General Settings.* If running security applications or system reporting – it is important that an accurate Date Stamp is used; and that General Settings are configured in a way that suits the business need. On the My Cloud EX family, click on “Settings” Control (see Figure 2); and “General” tab.
 - Confirm that the date and time are correct against the Company Setting.
 - If NOT using the My Cloud remote access features, turn “Cloud Service” OFF.
 - Check the Energy Saver Settings – in some cases, Businesses may prefer to have Drive Sleep Off – in the case of 24/7 Utilization. In other cases, Businesses may want to set a Sleep Schedule.
 - In the case of there being no Mac or Time Machine Backup capable products, IT departments may disable Time Machine Backup.

- *Network Settings.* Review the network settings in the NAS to make sure they comply with your Company’s networking expectation. On the My Cloud Dashboard, click on “Settings” Control. From Figure 2, click on “Network Settings” Tab and review settings.

Example: some IT departments may disable the AFP service if they are 100% sure there are no Macs or Apple products

- *Media.* Review the media services settings against the usage needed by the Company. On the My Cloud Dashboard, click on “Settings” Control. From Figure 2, click on “Media” Tab and review settings. In most cases:
 - DLNA Media Server – if employees are not expected to stream video and play audio, confirm that this service is OFF.
 - iTunes Server -- if employees are not expected to use iTune Server service, confirm that this service is OFF.
 - Camera Settings -- if employees are not expected to directly connect cameras and automatically move photos to a folder, confirm that this service is OFF.

Deploying Hardened Profile to other NAS. The Profile Settings can be saved and reloaded onto other My Cloud EX2 or EX4. From “Settings” Control, “Utilities” Tab, hardened Configurations can be Saved. And the files can be Restored to other NAS. Remember to change the “Device Name” on other NAS.

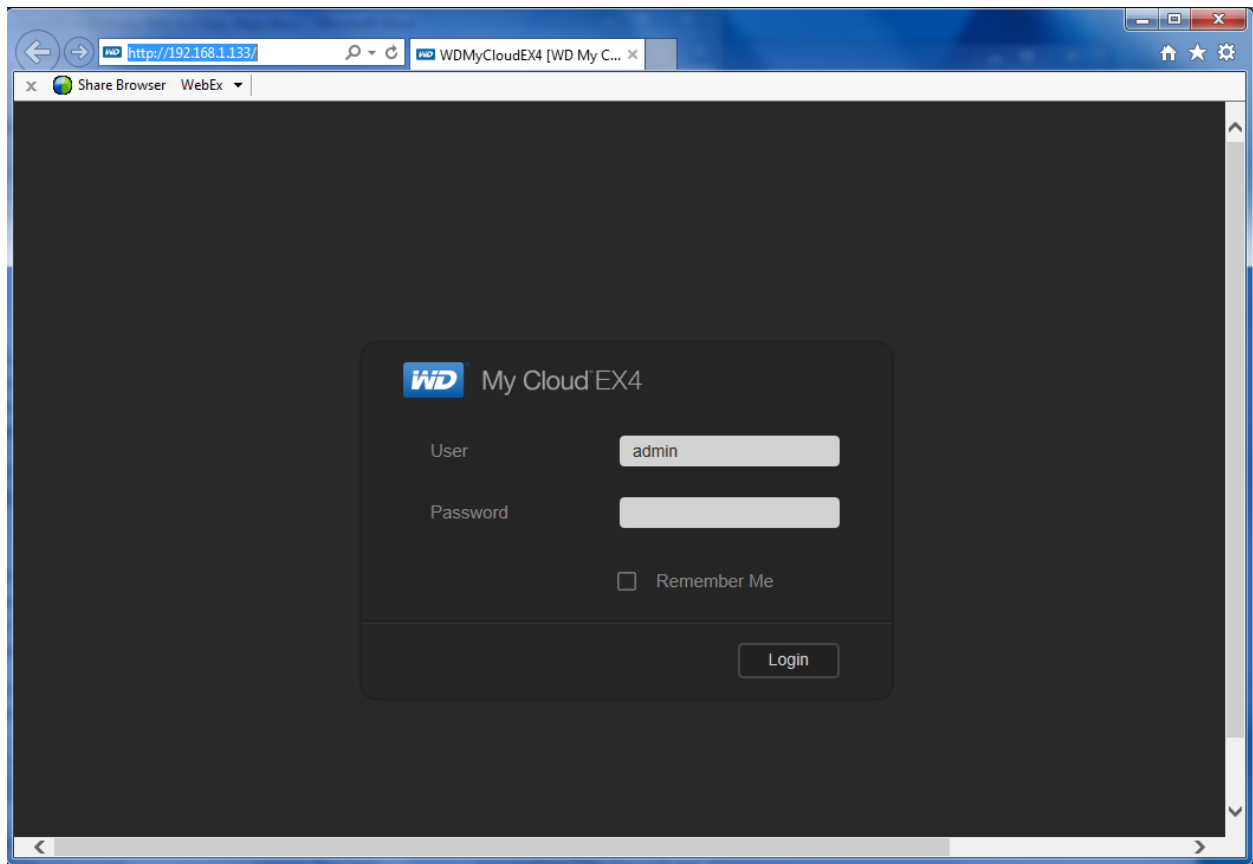


Figure 1: Login page of the My Cloud EX4.

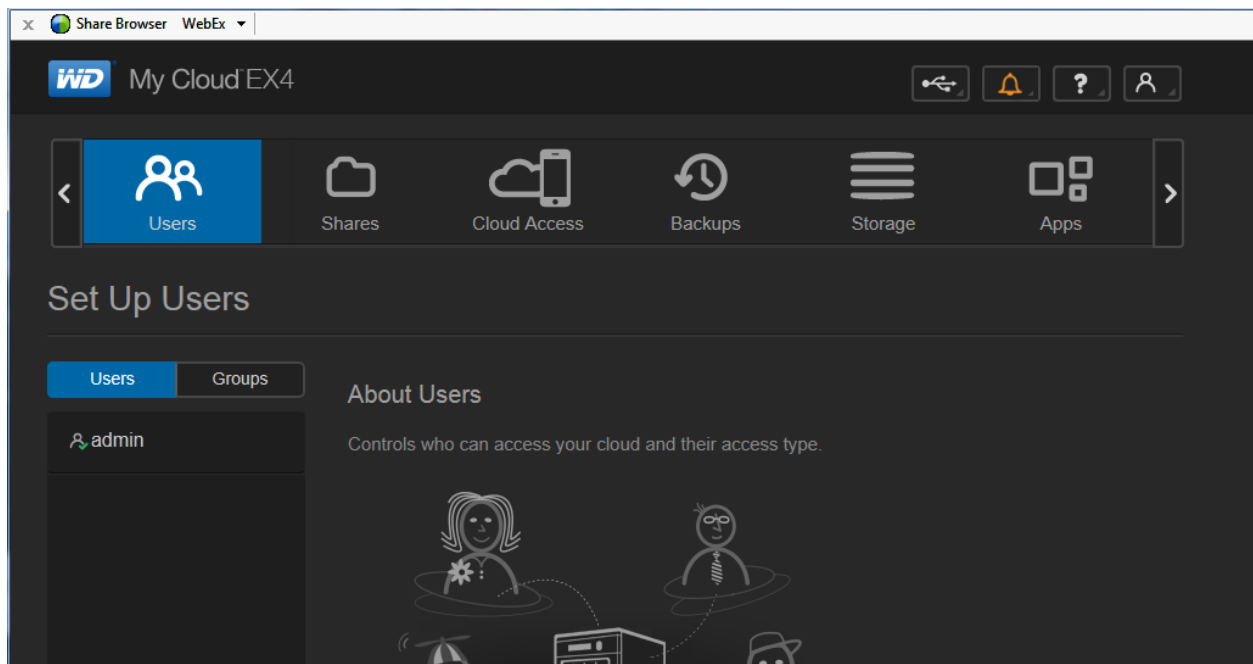


Figure 2: Selecting "Users" Control

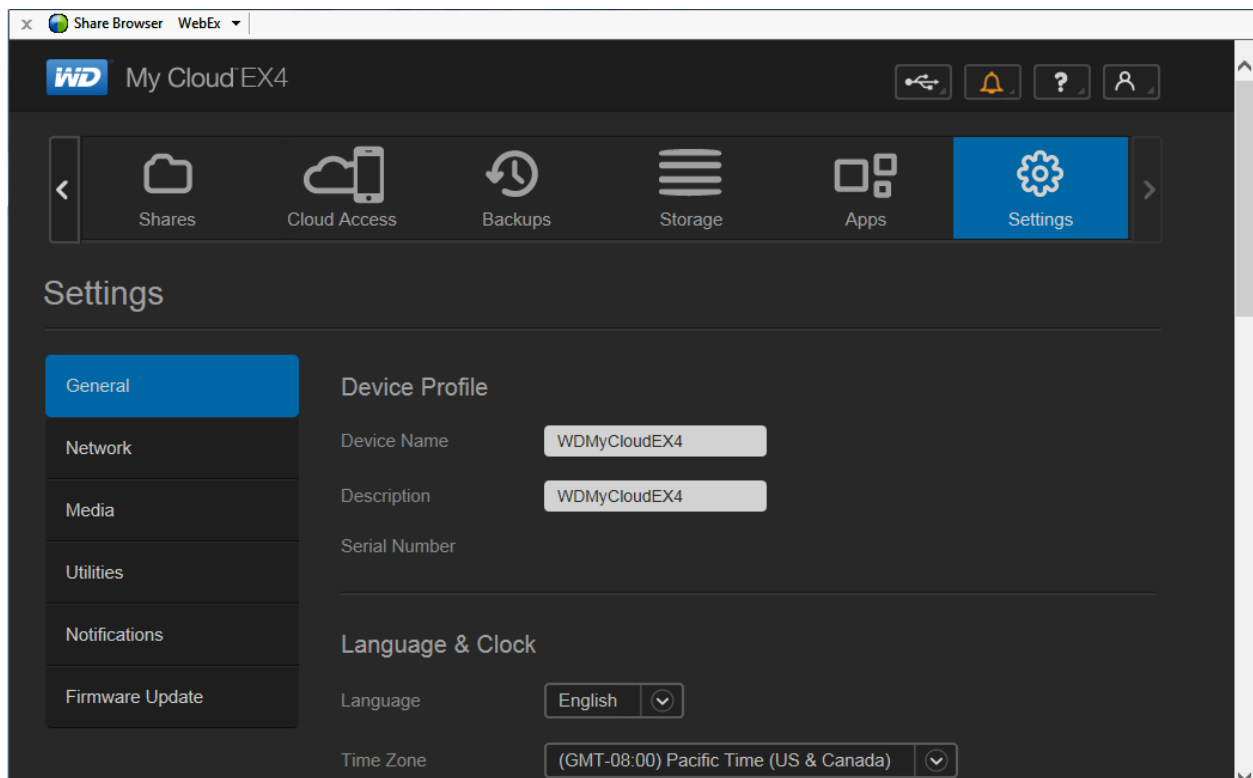


Figure 3: Scrolling to the right and selecting “Settings” Control

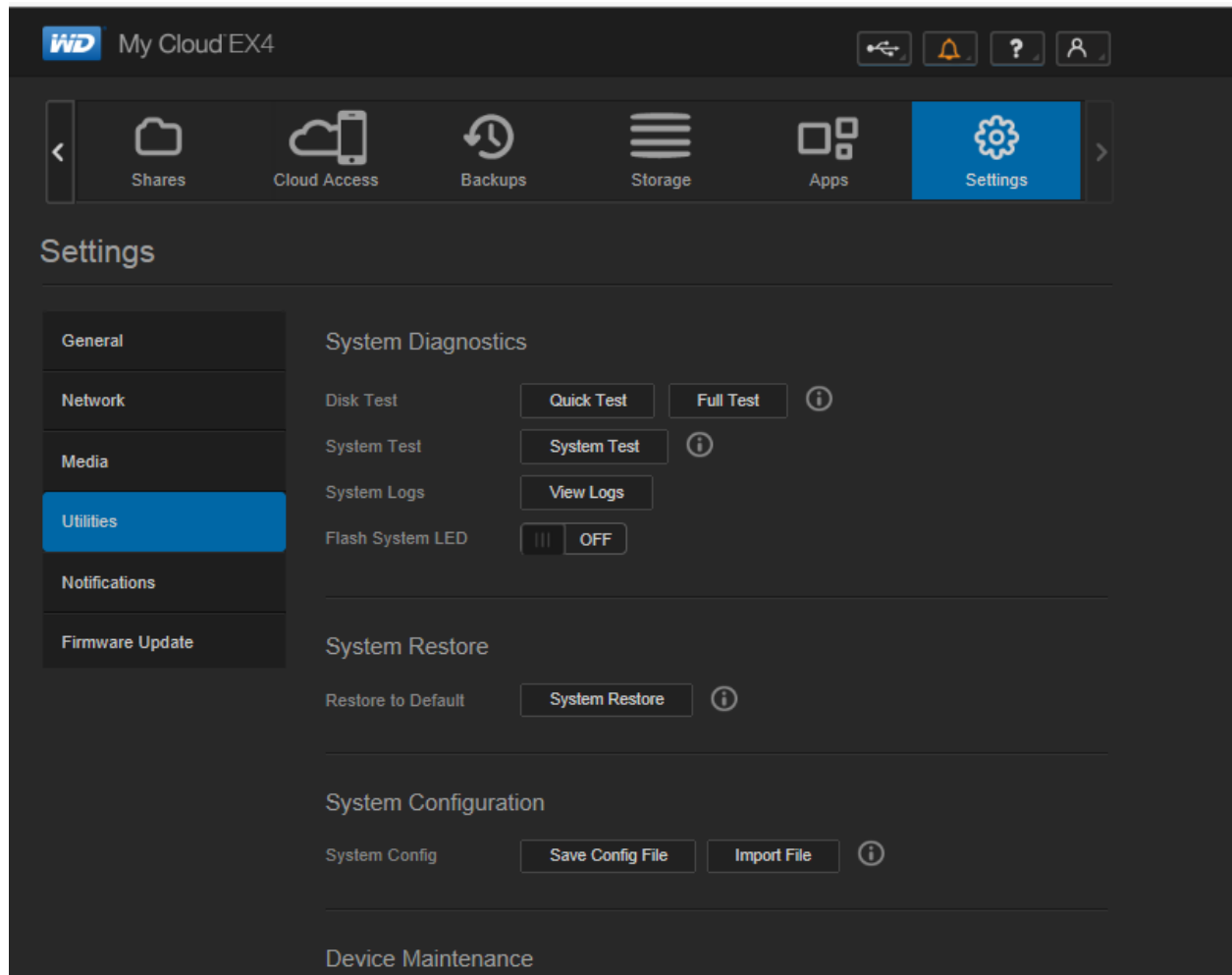


Figure 4: Saving the System Configuration.

STEP 2: Joining the Active Directory

As the User and IT administration needs grow, most small business networks are protected by a central authentication and authorization through Active Directory (AD). As per Figure 5, the benefits to this model are:

- IT admins and Consultants can deploy Users and Identity in one place using AD. They do not have to create the same set of users locally on each Network Attach Storage (NAS).
- Users have a single sign-on that both gives access to the right Resource and restrict access to the wrong Resources.

The Assumptions – there is a central Domain and an Active Directory available on the network that all of the Client PCs are connected to. For the purposes of this Whitepaper, we are using a WD Sentinel DS6100 – with is running Windows Server 2012 R2 Essentials.

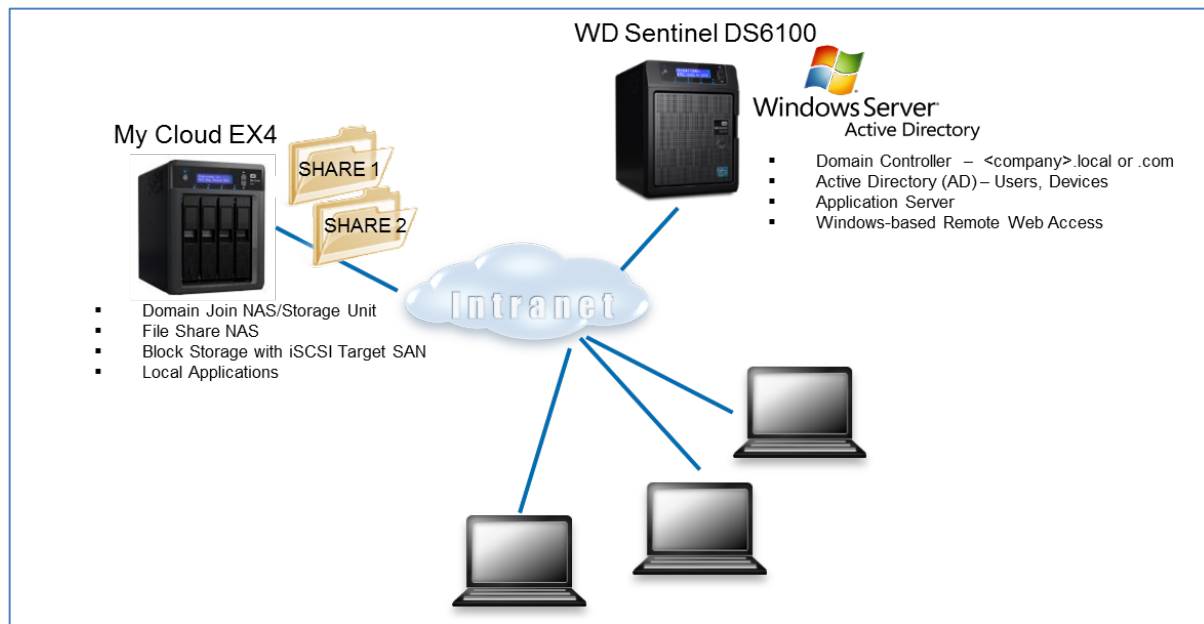


Figure 5: Business network topology

Joining a domain:

- ☐ On the My Cloud Dashboard, click on “Settings” Control. From Figure 2, click on “Network Settings” Tab – as shown in Figure 6.
- ☐ Scroll down and set Active Directory to ENABLE. Click on “Configure >>” see Figure 7.
- ☐ When asked to confirm, click on “Enable” – see Figure 8
- ☐ Enter the Domain Join information –
 - Username: <Account of a Domain Admin; Administrator who has the rights to join Computers to a Domain>
 - Password: <Password for the Domain Admin>
 - Realm Name: <the full Domain Name of the Server. See Figure 10 – from our Server Manager, the full name is GALLIVANTCORP.LOCAL >
 - DNS Server 1: <IP address of the DNS that points to the Active Directory. In the example case, the IP address is that of the WD Sentinel DS6100>

Confirming Users and Groups:

- ☐ On the My Cloud Dashboard, click on “User’s” Control.
- ☐ Confirm that the list of Users and Groups should now match that of the Active Directory. See Figure 11.

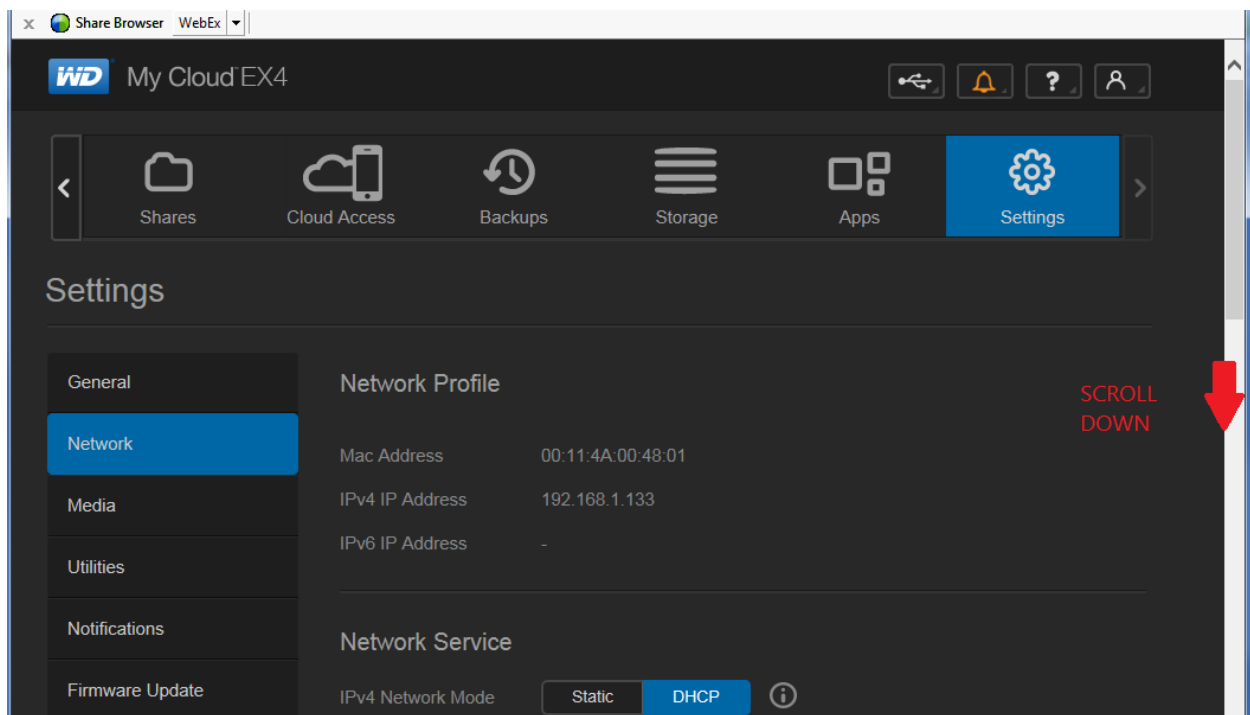


Figure 6: Network Settings page – Scroll down for Active Directory

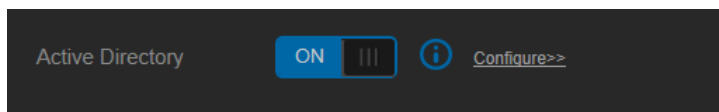


Figure 7: Active Directory switched to “ON”

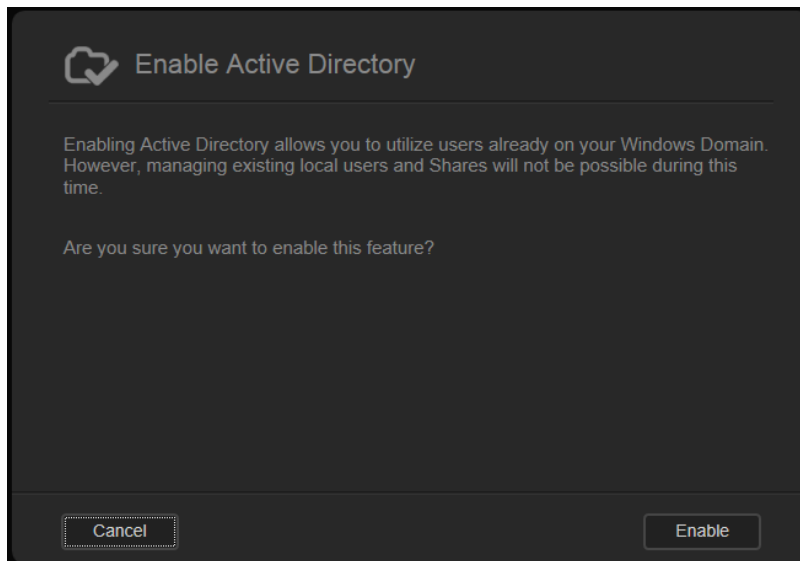


Figure 8: Confirming you want to enable AD

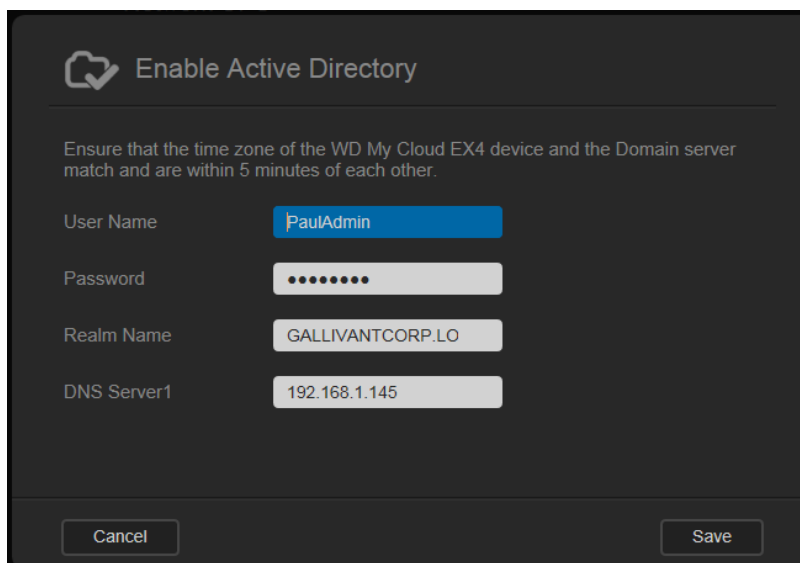


Figure 9: Entering the Properties.

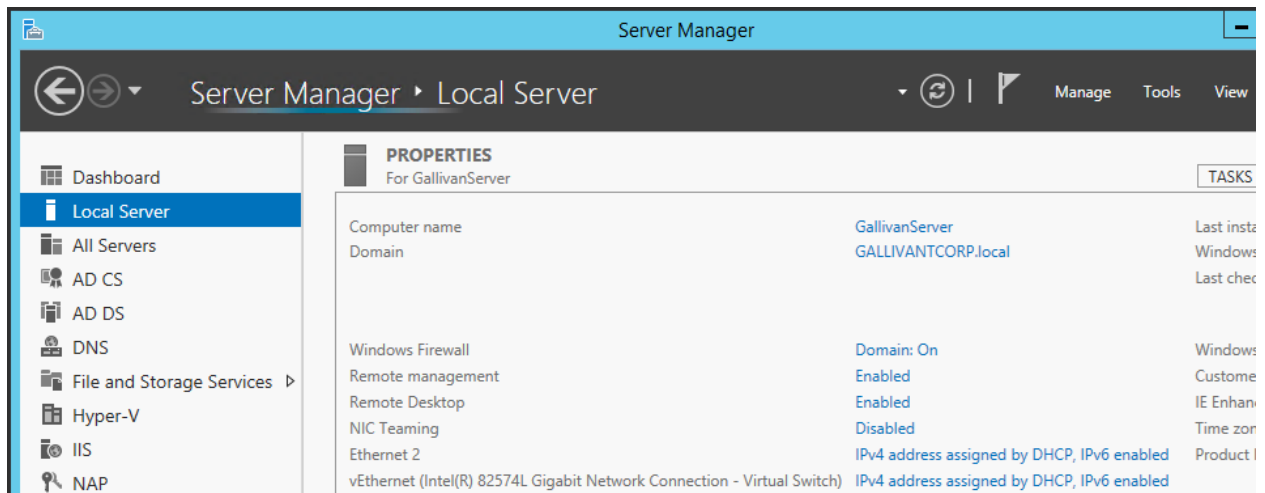


Figure 10: Windows Server – Server Manager.

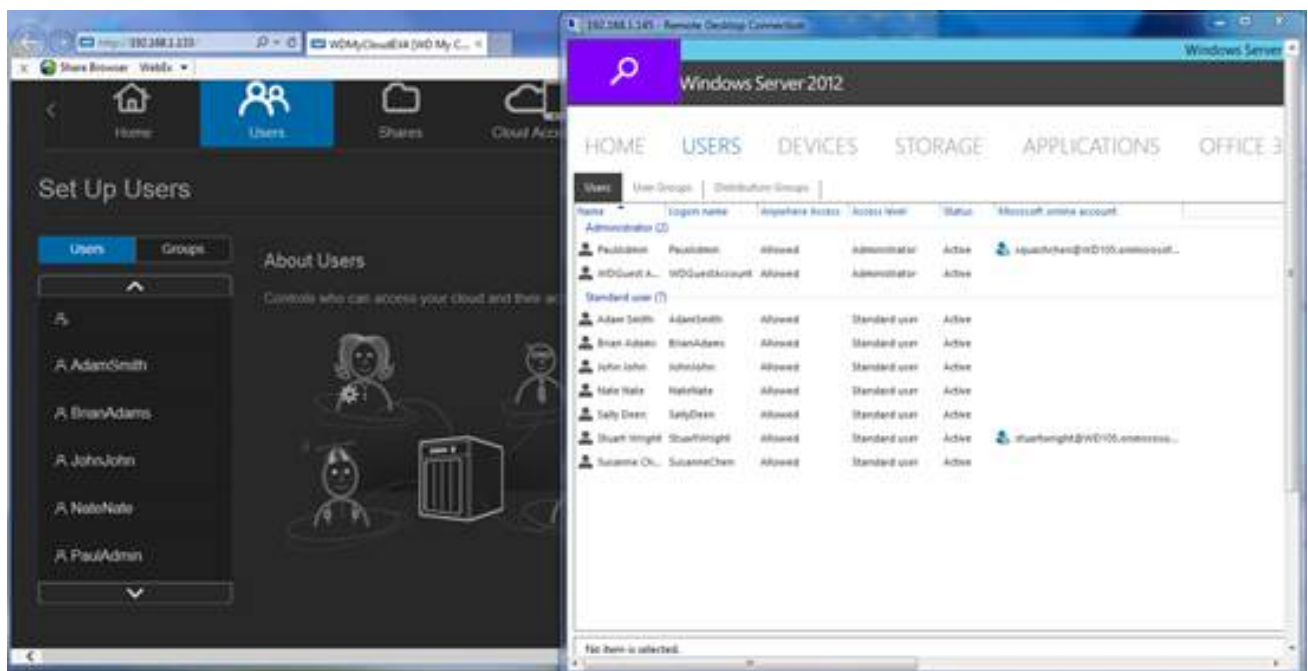


Figure 11: Side-by-side comparison. Left hand side is the My Cloud EX4 Dashboard – Users. On the right hand side is the Windows Server 2012 R2 Dashboard – Users.

STEP 3: Configure and Experiencing Protected File Sharing

The last step is to define the Storage Topology that meets the Company's needs. Here are a few steps to configure and start experiencing the Protected File Share.

1. Managing "Public" default folders

Products like the My Cloud EX2 or EX4 usually come preconfigured with generic folders. In a small office or prosumer deployment, this is very convenient. However, the default "Public Folder" is always in a "Public" state. For business deployments – IT and Consultants may want to delete this folder. See Figure 12.

The default "Smartware" and "TimeMachineBackup" folders have options to either turn OFF the "Public" State. IT and Consultants also have options to delete these folders. See Figure 13.

2. Creating Secure Folders

To create secure folders, click on the + Folder icon; and follow the instructions. Once created, turn OFF the "Public" State. See Figure 14. Scroll down and start managing the permissions specific to each User. See Figure 15. Note that in this example, AdamSmith has READ ONLY permission for the Finance Folder

3. Using and Testing Secure Folders

Figure 16 through 19 is a test of Access from a Windows PC Client running the same Local Network.

In Figure 16, from a PC client, we open Windows Explorer and entered the network path to the My Cloud EX4. In our case <\\wdmycloudex4>.

In Figure 17, we clicked on the FINANCE folder, and was met with an Authentication Screen. We entered AdamSmith's credentials; and AdamSmith is able to log in to access Finance – as shown in Figure 18.

Figure 19 shows the message given whenever we tried to create a new folder and write to the Finance folder. This isn't allowed because Adam only has READ ONLY permission.

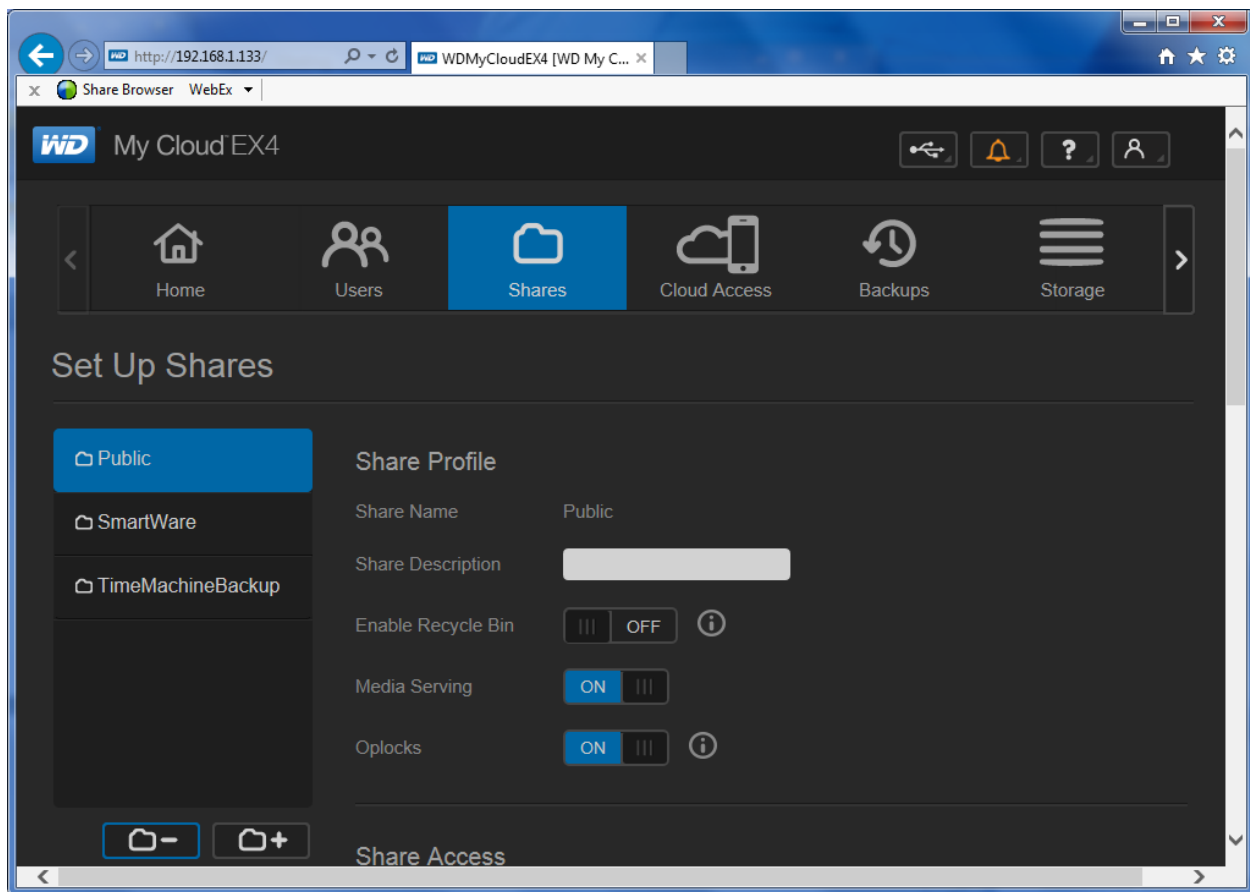


Figure 12: Default “Public Folder”.

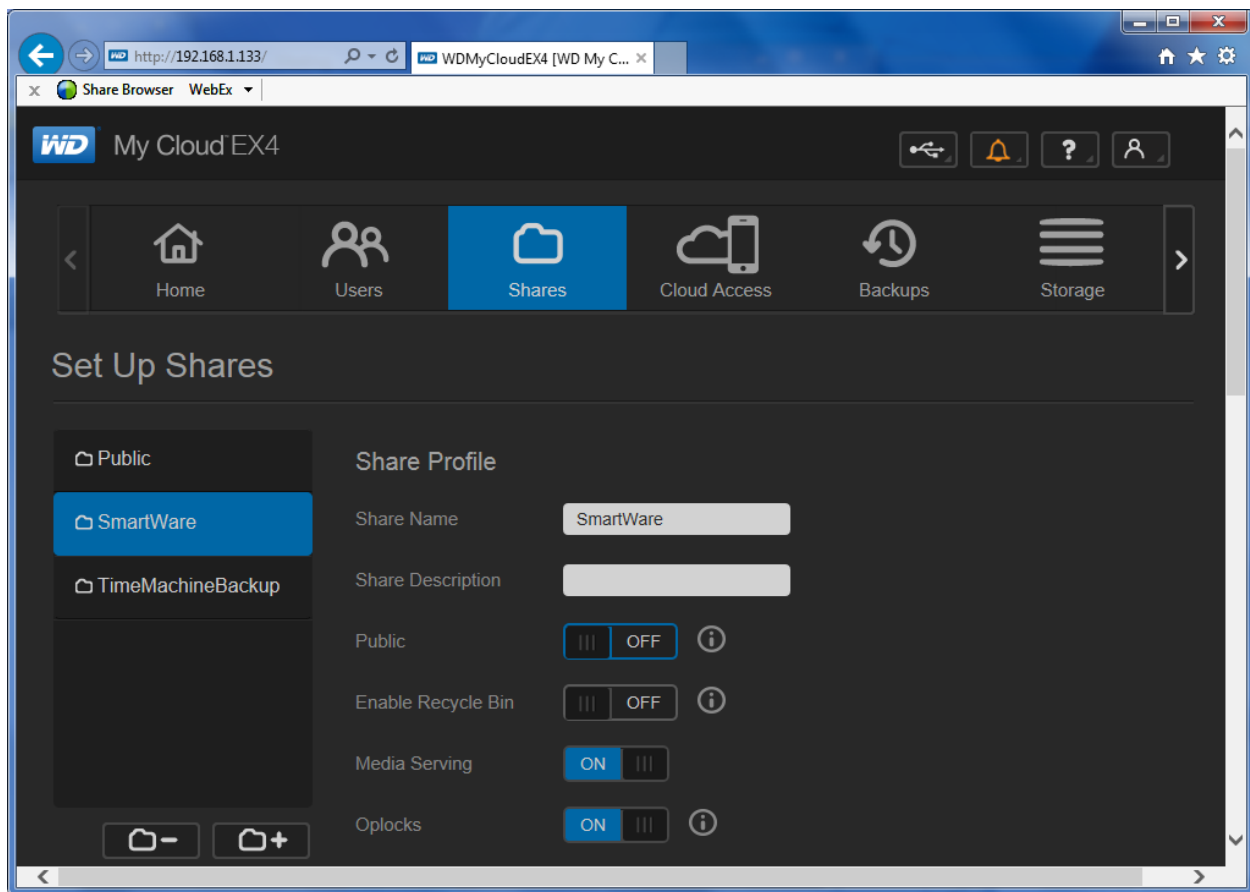


Figure 13: SmartWare – Public status turned OFF.

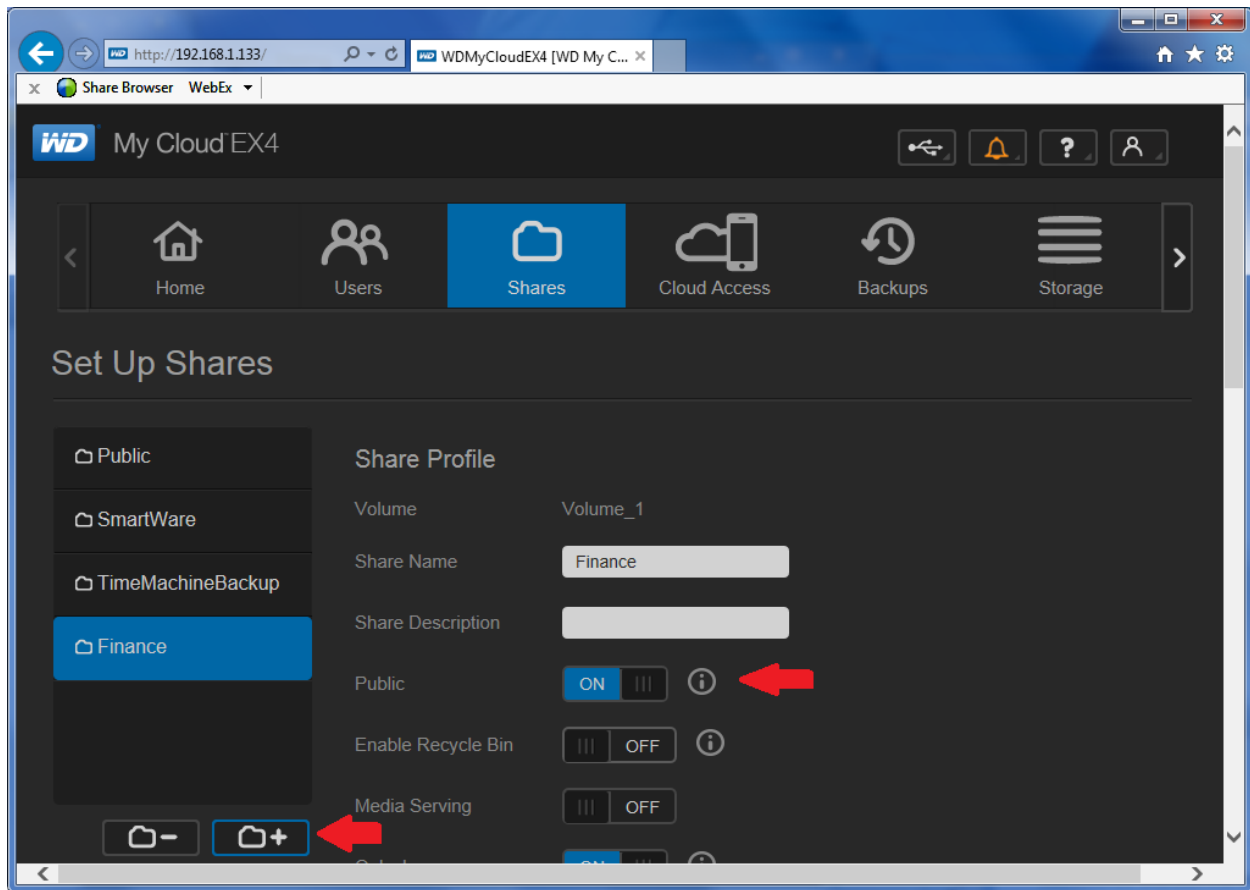


Figure 14: Add a new folder by clicking on + Folder sign. To make Share Secure, to turn “Public” OFF.

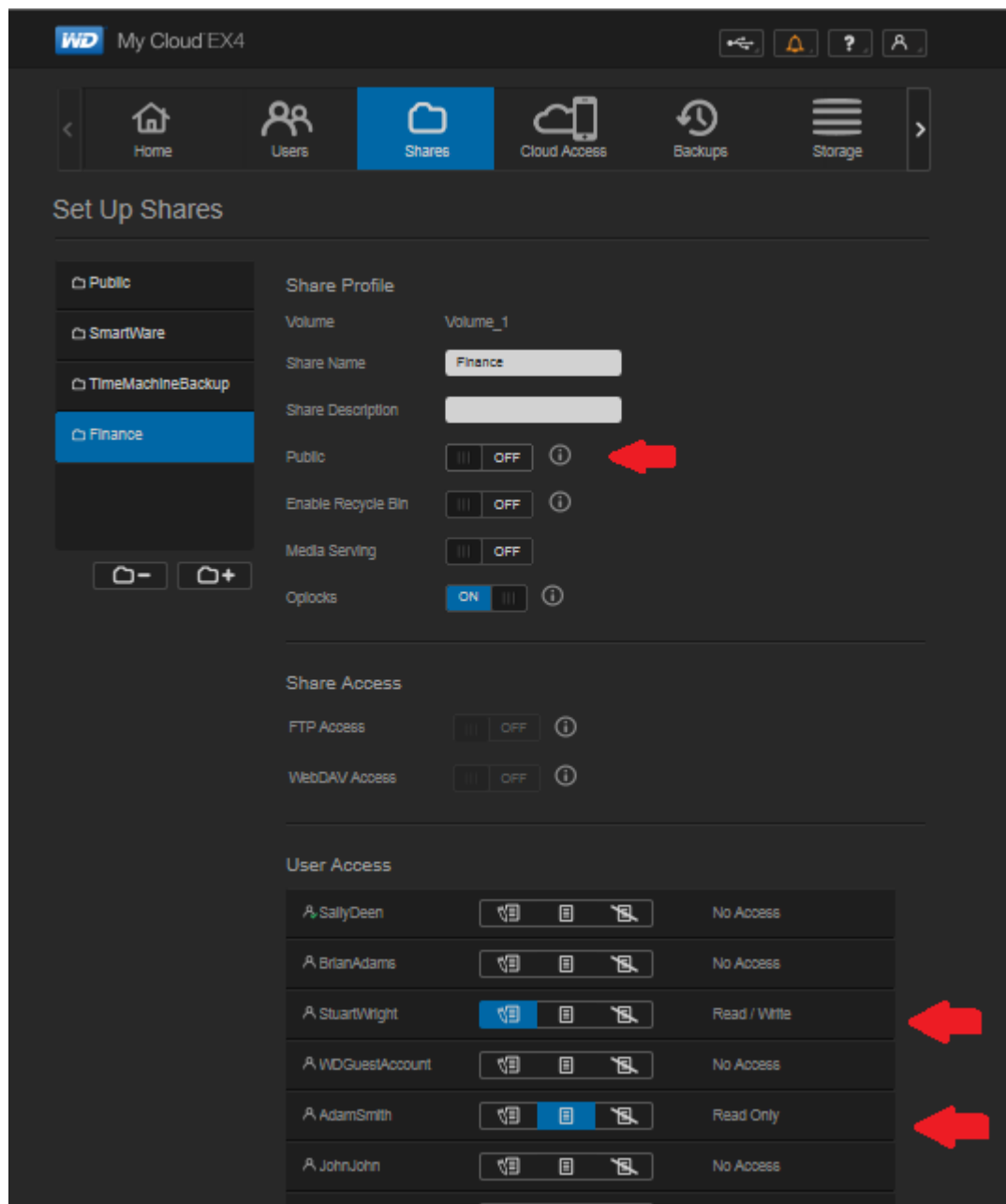


Figure 15: Turning “Public” OFF and giving specific Users READ/WRITE or READ ONLY access.

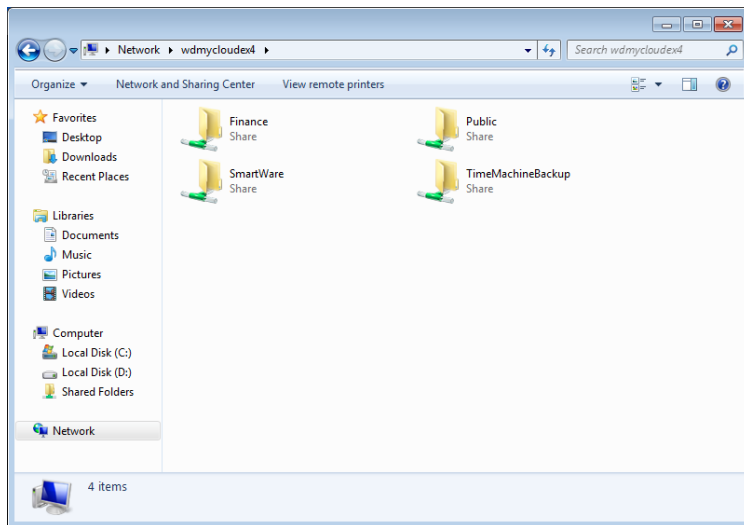


Figure 16: Accessing the Share over the network

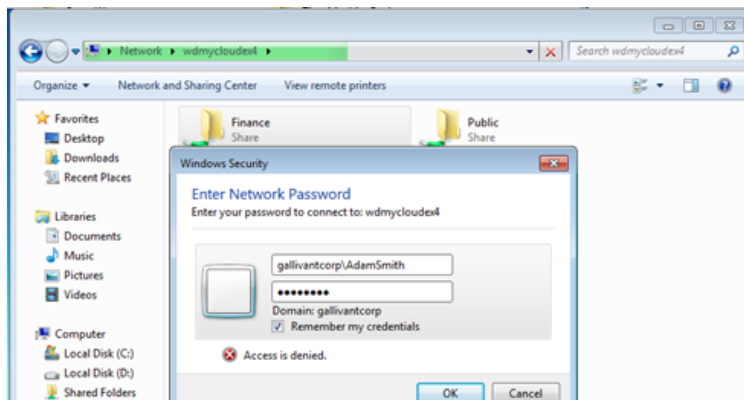


Figure 17: When trying to access Finance Folder, logging in as AdamSmith, a READ ONLY user

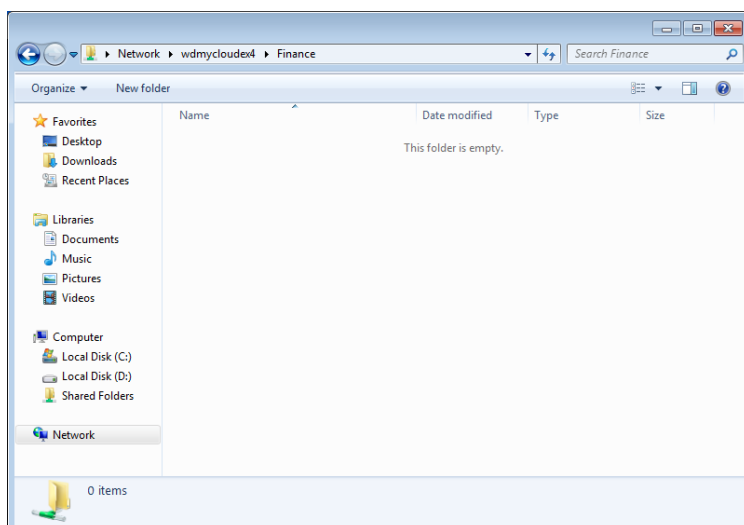


Figure 18: AdamSmith has access to the folder; again as READ ONLY user

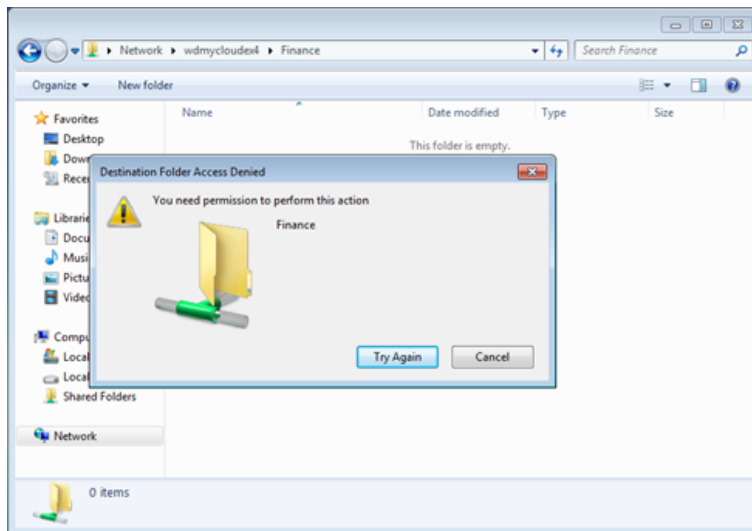


Figure 19: When trying to create new content or write to the folder, AdamSmith gets as Folder Access Denied.

Conclusion.

The My Cloud EX2 and EX4 is another great storage utility for the IT admin and consultant. It can be hardened to meet the needs of the average small business – with a Harden Profile that can be used by multiple NASes. They can also be joined to a Domain and Active Directory ecosystem – where the Authentication and Authorization helps IT admins and consultants deploy a accessible but also secure storage plan.

For more information -- contact [<....>](#) to learn more.