



Replication with TeraStation™ 3000/4000/5000/7000

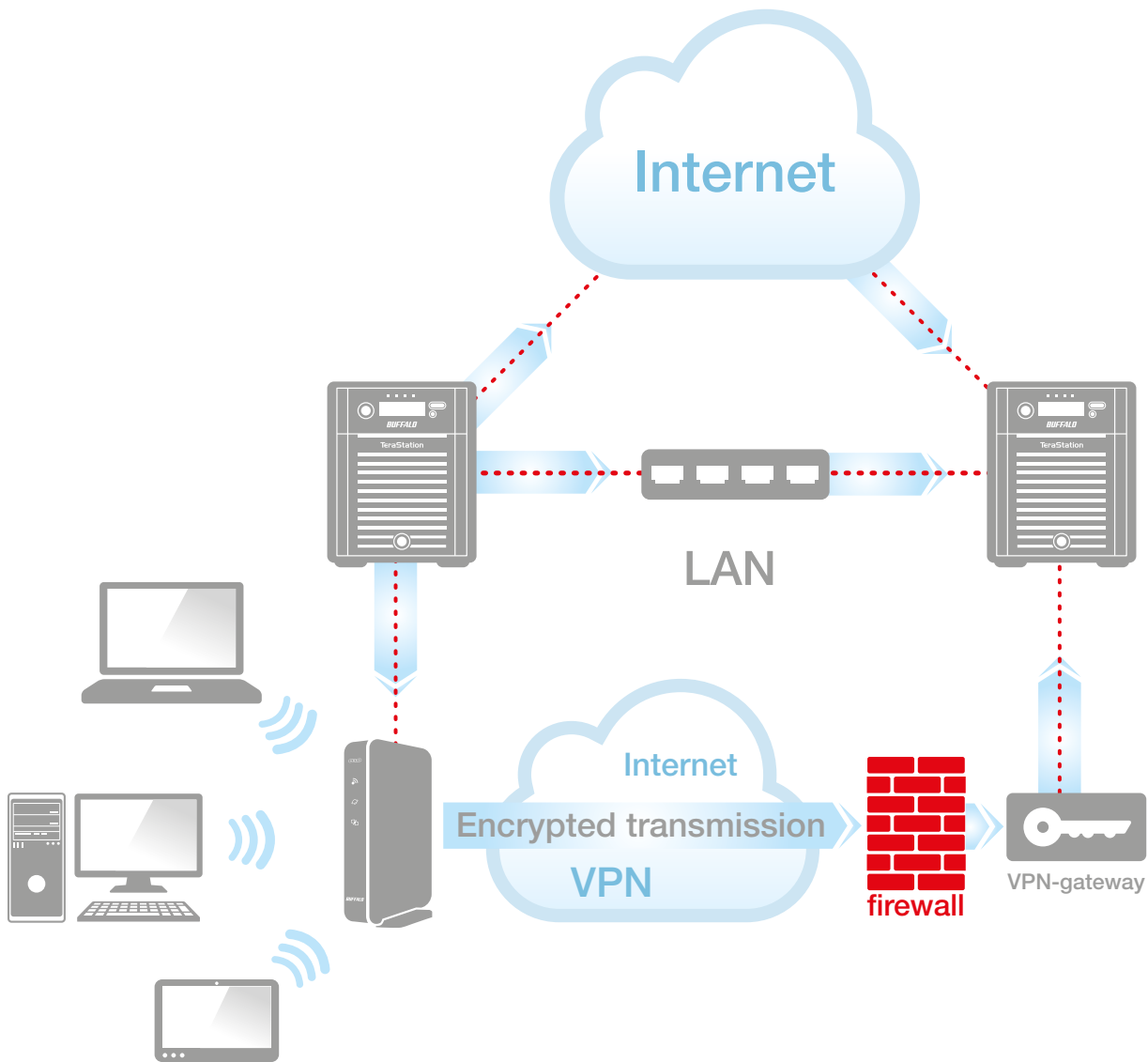
Buffalo Technology

BUFFALO™

Introduction

Replication is synchronising a folder on two separate TeraStations™ in almost real time. It works in only one way – not bi-directional, from source to destination. It is possible to set-up the function in LAN and WAN. The WAN setup includes the remote connection using port forwarding and a VPN setup. See picture below:

**Synchronise two separate
TeraStations™**



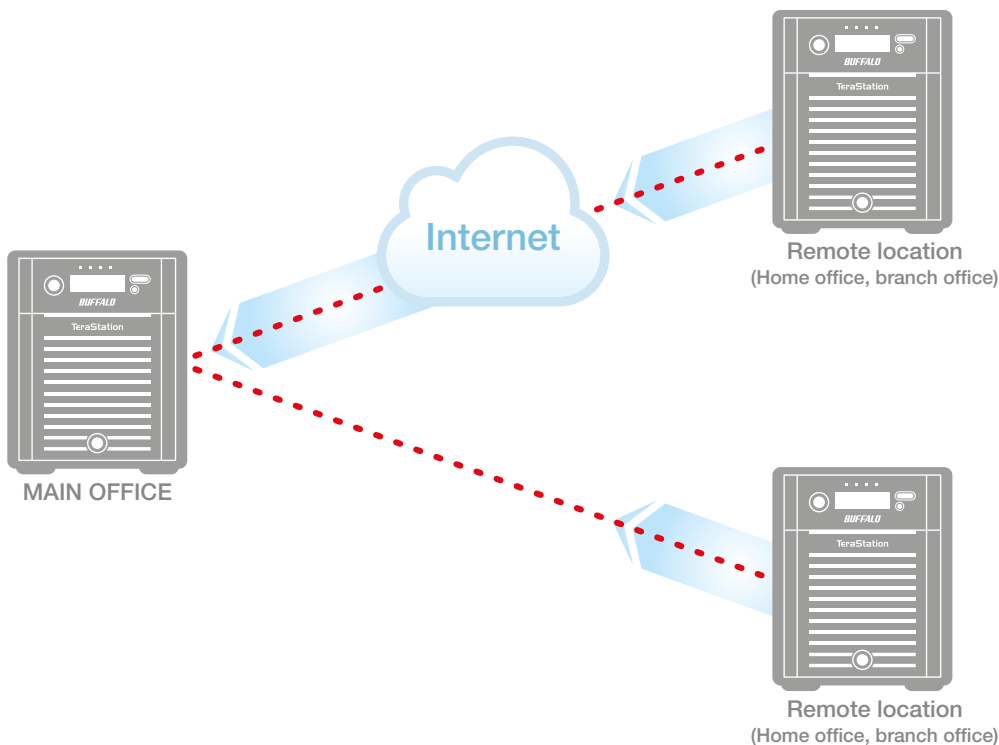
Although multiple backups can be scheduled to back up data more than once daily, some organisations may prefer real time backups. The Buffalo TeraStation™ supports real time backups through replication. Replication mirrors the data in a folder on the source TeraStation™ to a share on another TeraStation™ in near real time. After the initial mirroring of data, only changes at the byte level across the network. Thus, if changes were made to a large file, only the changes would be sent, not the entire file. Replication works only in one direction: from the source to the destination. Changes or deletions on the destination are not reflected back to the source, but all changes, additions and deletions made on the source are reflected on the destination. Of course, cross replication could be configured between sources and targets, but cross replication could present some issues if the same file is being written to on both ends. The replication is a function that provides high availability in providing business relevant data to employees in a company and an almost real time backup for critical data. The function is flexible and can be fully managed remotely.

The Buffalo TeraStation™ supports real time backups through replication

Examples

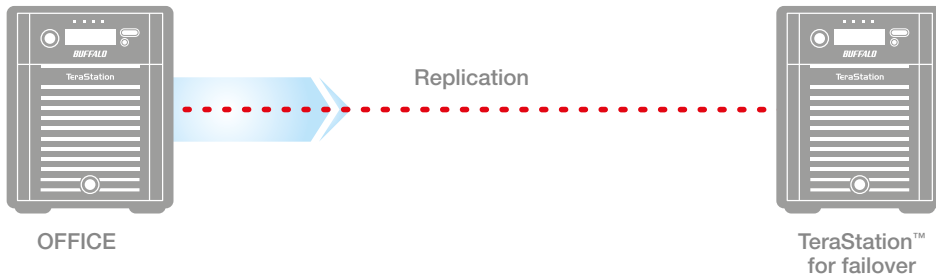
Even medium sized companies often have branches in different locations. Using the replication is an easy way to manage backups in a company with multiple remote locations. Most of the time you don't have an IT engineer on the site and sending someone to check and manage tape backups is time consuming and costly. After the initial setup the backup from remote locations to the main office could be centrally managed by the IT department. If you replicate multiple machines it is necessary to choose different folders on the target machine. Otherwise it will not work properly. One target folder for each replication job. It would also work via VPN tunnel.

The back up function is flexible and can be fully managed remotely

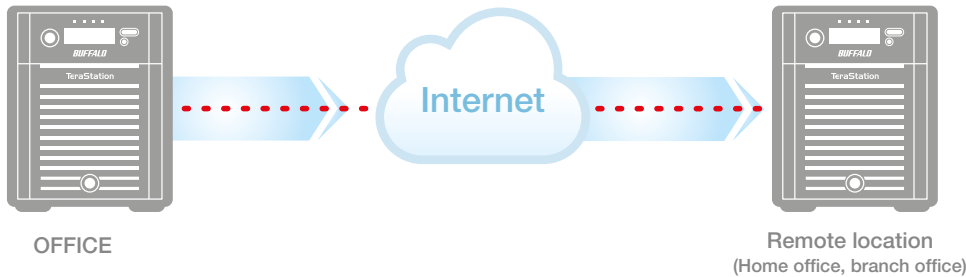


In an office you need high availability for certain data in a network and therefore it is necessary to plan for a fail over. You would replicate all data for high availability to a second TeraStation™ in the same network. Should the main unit fail you could simply make a few setting adjustments to continue work with the second unit. You could even load the saved settings of the first unit to the second one using the Buffalo utility for saving and restoring settings.

Should the main unit fail you could simply make a few setting adjustments to continue work with the second unit



To be safe in case of physical damage like water, fire etc. it is common practice to hold all files on a second location. Using a simple port forwarding in a router/firewall enables two TeraStations™ to replicate all business relevant data from one location to another one.



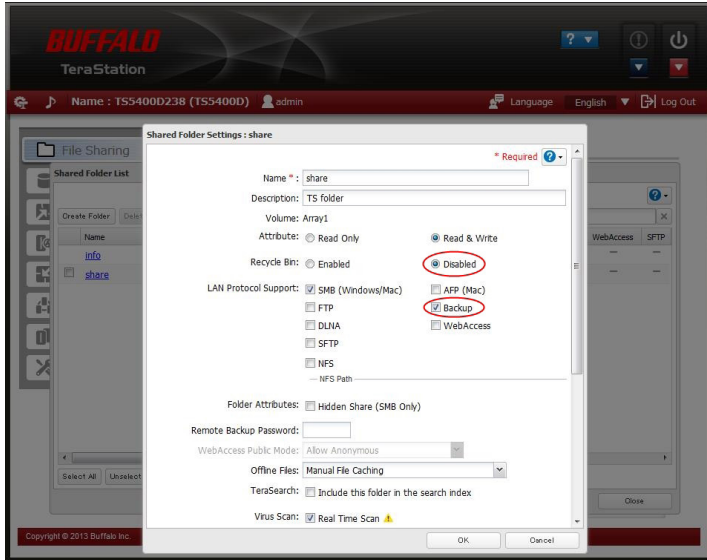
This works in the same way utilising a VPN connection. All the routing is managed by the company router/firewall and in the ideal case it works like in a LAN. Nevertheless it is possible to add a target manually in case the automatic detection has difficulties.

1. Configuration in LAN

Let's start with the procedure in LAN. It is the base of all other set-up as well. The configuration is quite similar to a backup. The destination folder should have the option for backup activated. Afterwards you set up the Replication job on the source machine.

The configuration of the destination unit is the same in all scenarios

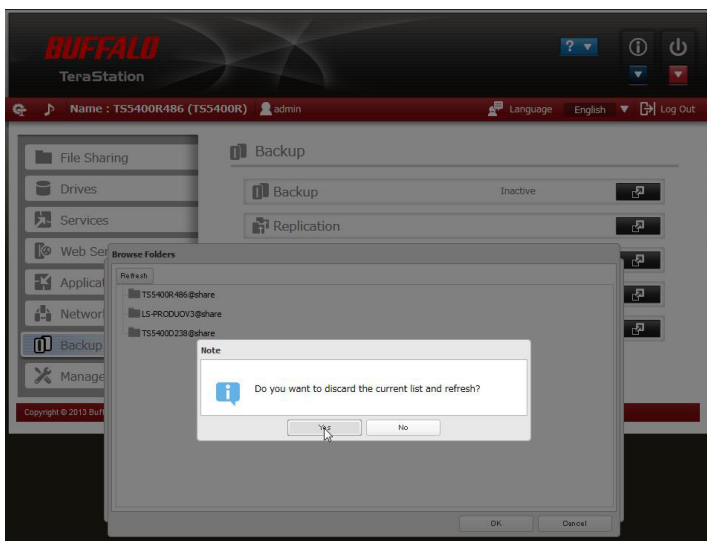
On the destination TeraStation™ interface do the following:



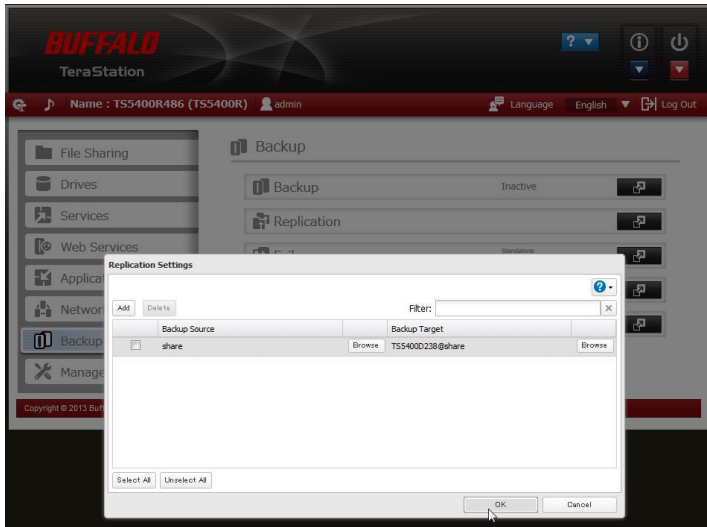
Remember - the content of the destination will be overwritten without request. Therefore we would suggest to create a new folder. We recommend to deactivate the recycle bin and please don't forget to tick the backup option. The configuration of the destination unit is the same in all scenarios.

On the source TeraStation™ interface do the following:

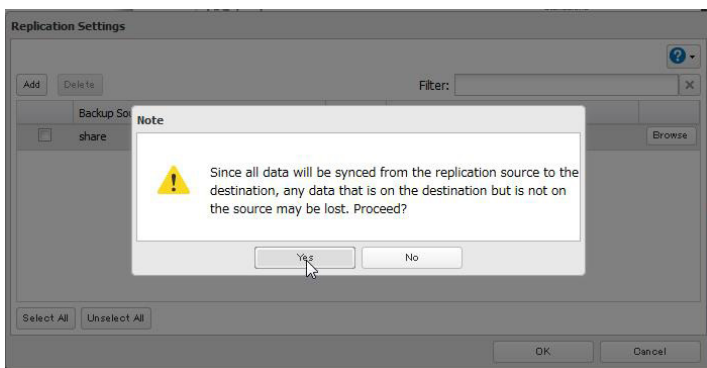
Go to Backup and open the Replication menu. Press on "Edit" and "Add". "Browse" for a source and a destination. You might have to use "Refresh" for the destination, to find new devices.



When you have selected your source and destination, press OK to enable and start Replication. Of course name and structure should be according your setup and your needs.



After clicking “OK” you will get this message. Read and confirm this with “Yes”.



The first time of course it could take quite a while to copy all the files to the destination. Following this, all changes whether it is deleting a file or adding one, will be made on the destination folder as well almost immediately.

2. Configuration with VPN

In this scenario there is no real difference because all the connection and routing is done externally and it is just a matter of correct configuration of the VPN tunnel. Everything else works like in the local set-up in the LAN. In some rare cases it is necessary to put in the IP manually as described in the next chapter.

3. Configuration with remote connection via router

The destination set-up never changes. The important part: It is necessary to forward the ports to the TeraStation™ IP as shown in the picture below on both sides: the source and the destination.

Additional requirements:

- Source and destination TeraStation™ need Internet connectivity.
- The share folder on the destination unit would have to be set to support Disk Backup.
- A static Internet.

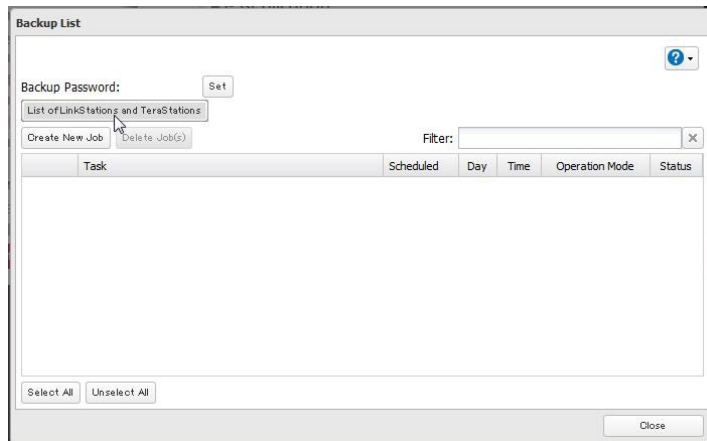
The destination TeraStation™ should have a folder configured as described in the first step in chapter one

Port Forward					
Forwards					
Application	Port from	Protocol	IP Address	Port to	Enable
backup	873	TCP	10.0.0.10	873	<input checked="" type="checkbox"/>
backup	8873	TCP	10.0.0.10	8873	<input checked="" type="checkbox"/>
backup	22939	TCP	10.0.0.10	22939	<input checked="" type="checkbox"/>

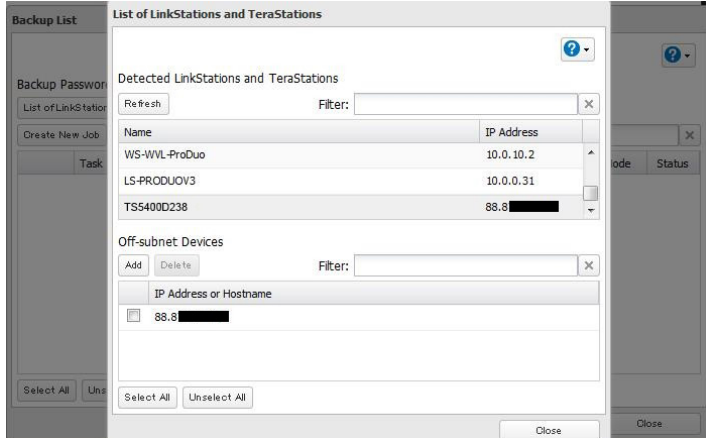
This is all on the network side. Now there are a few differences by configuring the source TeraStation™. The destination TeraStation™ should have a folder configured as described in the first step in chapter one.

On the source TeraStation™ interface do the following:

Add a remote destination TeraStation™. Go to Backup and open the Backup menu. Press on “List of LinkStations™ and TeraStations™”.



Based on your VPN or WAN setup, enter the remote IP of the VPN connected TeraStation™ or the WAN IP of the remote destination to “Off-subnet Devices”. To do so press “Add” and type the relevant IP. Then press “Refresh” and see if your TeraStation does appear. If it is correctly configured it should look similar to the screenshot below.



From here the procedure is the same as in the LAN setup. Please refer to chapter one and continue with the second step of this chapter.

For further support, please visit our website at www.buffalo-technology.com, contact our help desk <http://www.buffalo-technology.com/en/support.html> or follow our Blog: <http://buffaloukbusiness.wordpress.com/>