Virtualmin Tiki Manager and Syncthing for automated offsite backups

In case you have some Tiki instances on Virtualmin and you want automatic backups of different Tiki instances to various local computers for safekeeping.
These are high level operation when it is about to combine Virtualmin , Tiki Manager and Syncthing to do so.
For a hosting company and its customer, this is the optimal solution: This permits a customer to delegate the hosting / management of an application while obtain automatic backups of their application and data.

At a high level:

1. Virtualmin will make incremental and automated backups of each virtual server to a local destination.
2. Tiki Manager (installed on the same server) will make incremental and automated backups of each site to a distinct folder
3. Syncthing will securely copy each folder to one or many devices.

Benefits / Features

https://wikisuite.org/Tiki-Manager-and-Syncthing-for-automated-offsite-backups#Benefits_Features

Install Virtualmin as web server

How to install WikiSuite
This installation of WikiSuite installs all the required modules in order to prepare for the installation of a Tiki instance, such as: **Tiki Manager GUI** and **CLI** and Syncthing installation script.
Each Tiki instance can be installed as a distinct website using Tiki Manager on a virtual server or sub-virtual server.

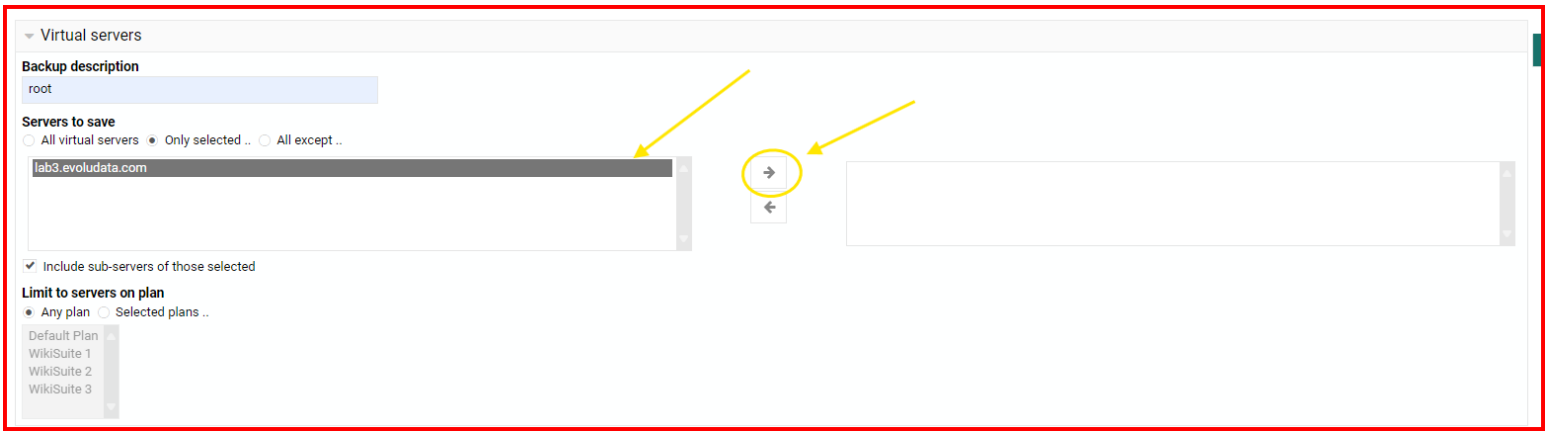
Configure Virtualmin to backup your virtual server

As we are planning to backup each Tiki instance, we can backup each virtualserver or sub-virtualserver with all configuration need.

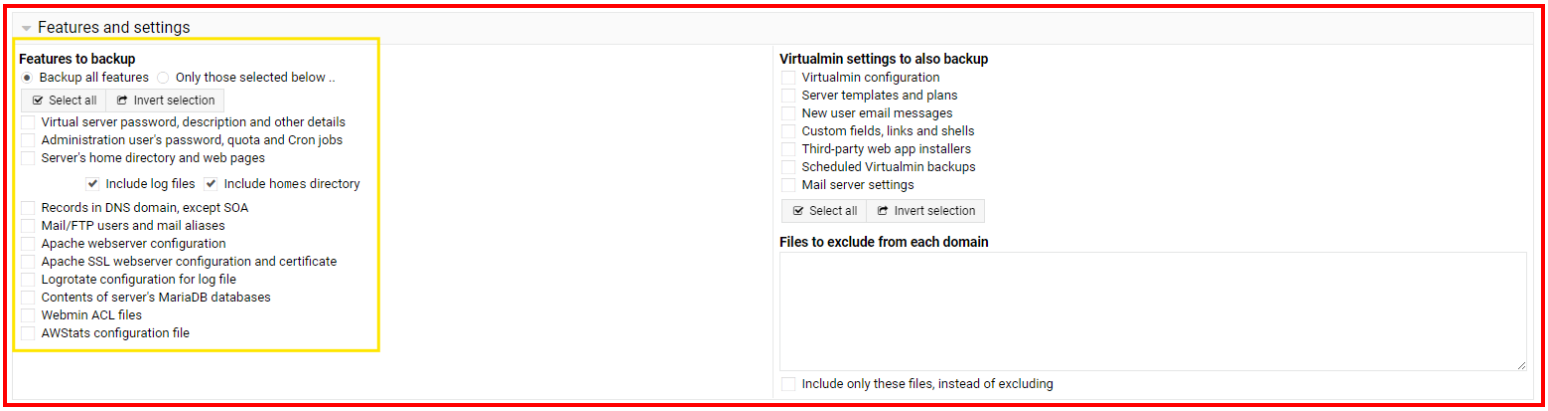
- From virtualmin, go to menu, **Backup and Restore** -> **scheduled Backups** then click on the **Add a new backup schedule** button. In case you already have an existing scheduler backup, click on it and it will open the page to edit if needed.



- In the list of virtual servers, select all or select only the one(s) you want to backup, there is an option to select only a few. Then click on the right arrow to validate the choice of the selected virtual servers.

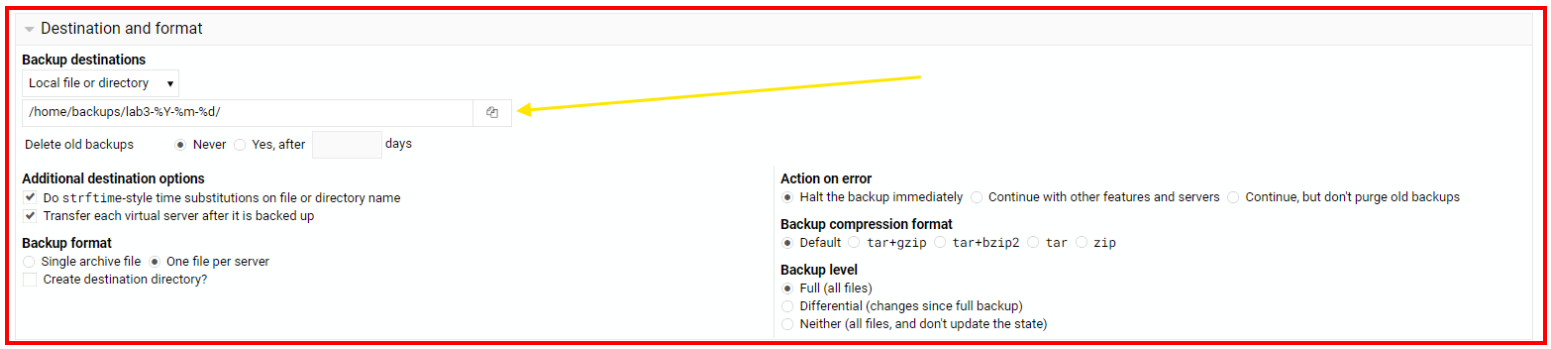


- Then select feature you want to backup, by default **backup all features** will be selected



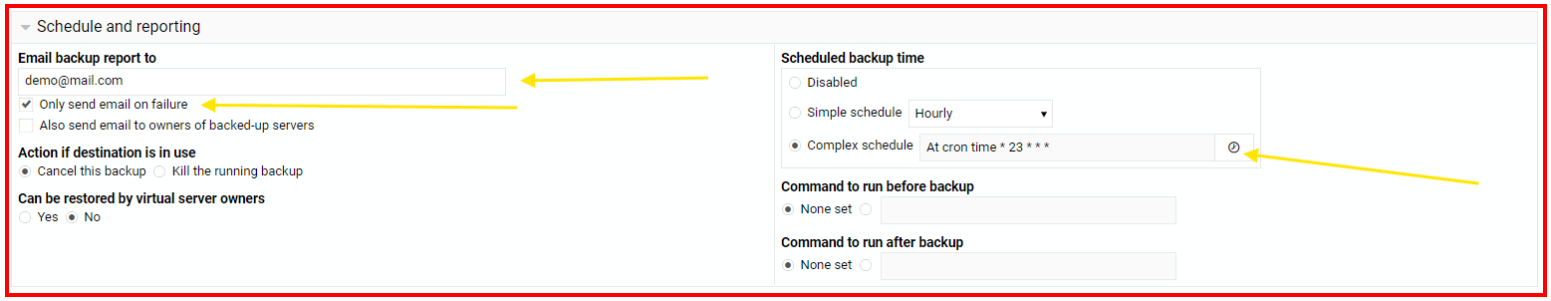
- Now you have to select the destination of your backup; as we are going to use **Syncthing** to sync backup data to external server(s), we are going to select **Local file or directory** and provide the path where we want our backup to be stored. It is recommended to put backup outside the website folder, so For my example we use the **/home/backups/lab3-%Y-%m-%d** directory. This is going to generate a backup with a different name for versioning(very important). For the compression format, by default virtualmin as a standard format that work

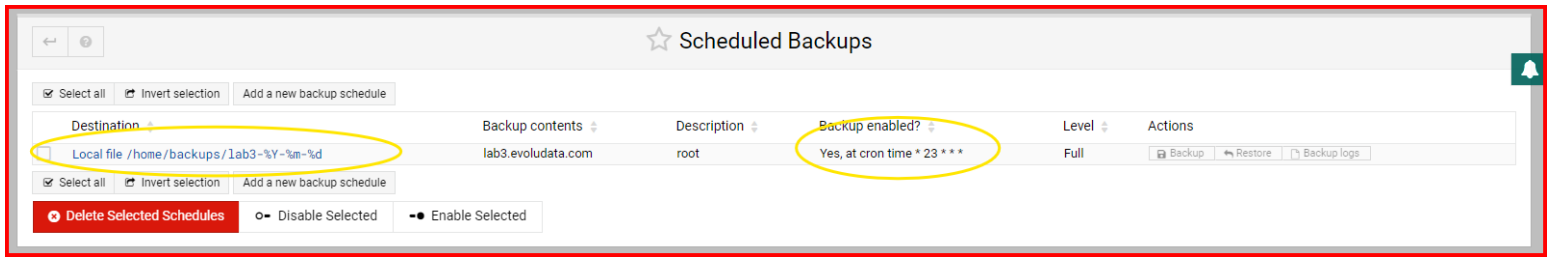
without any issue, you can select the one you prefer. **tar** can be fine to have only one file instead of multiple folders.



- For this step you can setup an email for reporting notification in case the backup fails, and then select the schedule time for the backup. on this example it will be everyday at 11h PM.

Then click on create to validate the scheduler.





Note that you can setup multiple backup schedulers depending on your needs, this can be based on day, month, year, etc.

Important:Virtualmin also provides a module to manually backup one or more instances, by simply going to menu, **Backup and Restore** -> **Backup Virtual Servers** and do the same operation as above.

Use Tiki Manager to make instances, or adopt them

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You can access Tiki Manager via GUI or CLI. For more details, see the commands offered by Tiki Manager here https://doc.tiki.org/Manager

Configure Tiki Manager to backup your Tiki instances

The Tiki Manager archive folders have the following pattern:

- /opt/tiki-manager/app/backup/archive/1-example.org/
- /opt/tiki-manager/app/backup/archive/2-example.com/
- etc.

Check that your backup is OK, and move on to the next step!

Set up automatic backups with Tiki Manager

Tiki Manager will make the backups and also has a retention cycle (keep last 7 days, last 4 weeks and once per month forever)

For all the instances

https://doc.tiki.org/Manager#manager:setup-backups

For just one of the instances

In case you want to backup one instance, you can proceed as shown above. make sure you are on Tiki-manager folder

```
php tiki-manager instance:backup --instances=3  --no-interaction
```

You may want to install this in a cronjob. To do it every day at midnight, do the following.

```
echo '0 0 * * * cd /opt/tiki-manager/app/ ; php tiki-manager instance:backup --instances=3  --no-interaction' > /etc/cron.d/tm-instance.wikisuite.org-backup
```

Install Syncthing

Syncthing is a continuous file synchronization program. It synchronizes files between two or more computers in real time, safely protected from prying eyes. Your data is your data alone and you deserve to choose where it is stored, whether it is shared with some third party, and how it’s transmitted over the internet. Please read more here https://syncthing.net/

On the server

- How to install Syncthing on Virtualmin

Foreach Virtual server you can install an instance of Syncthing, and each one can work without interfering with other.

On your laptop

- Install Syncthing for your local computer: https://docs.syncthing.net/intro/getting-started.html#installing

Setup Syncthing

- Connect the devices and setup shared folders as per https://docs.syncthing.net/intro/getting-started.html

Make sure Syncthing automatically restarts when you reboot so that you have unattended automatic backups. Just reboot to see if it's OK. If not, you need to look up the documentation for your Operating System.

Configuring Syncthing for

- **Virtualmin** : Your backup will be in something like **/home/backups/lab3-2024-07-25**. The the file name will vary based on the configuration you made when you set scheduler backup with virtualmin, sync that with your local computer.

- **Tiki archive folder**: Your archives will be in something like **/opt/tiki-manager/app/backup/archive/1-example.org/**: so, sync that folder with your local computer.

Setting up Syncthing for backups

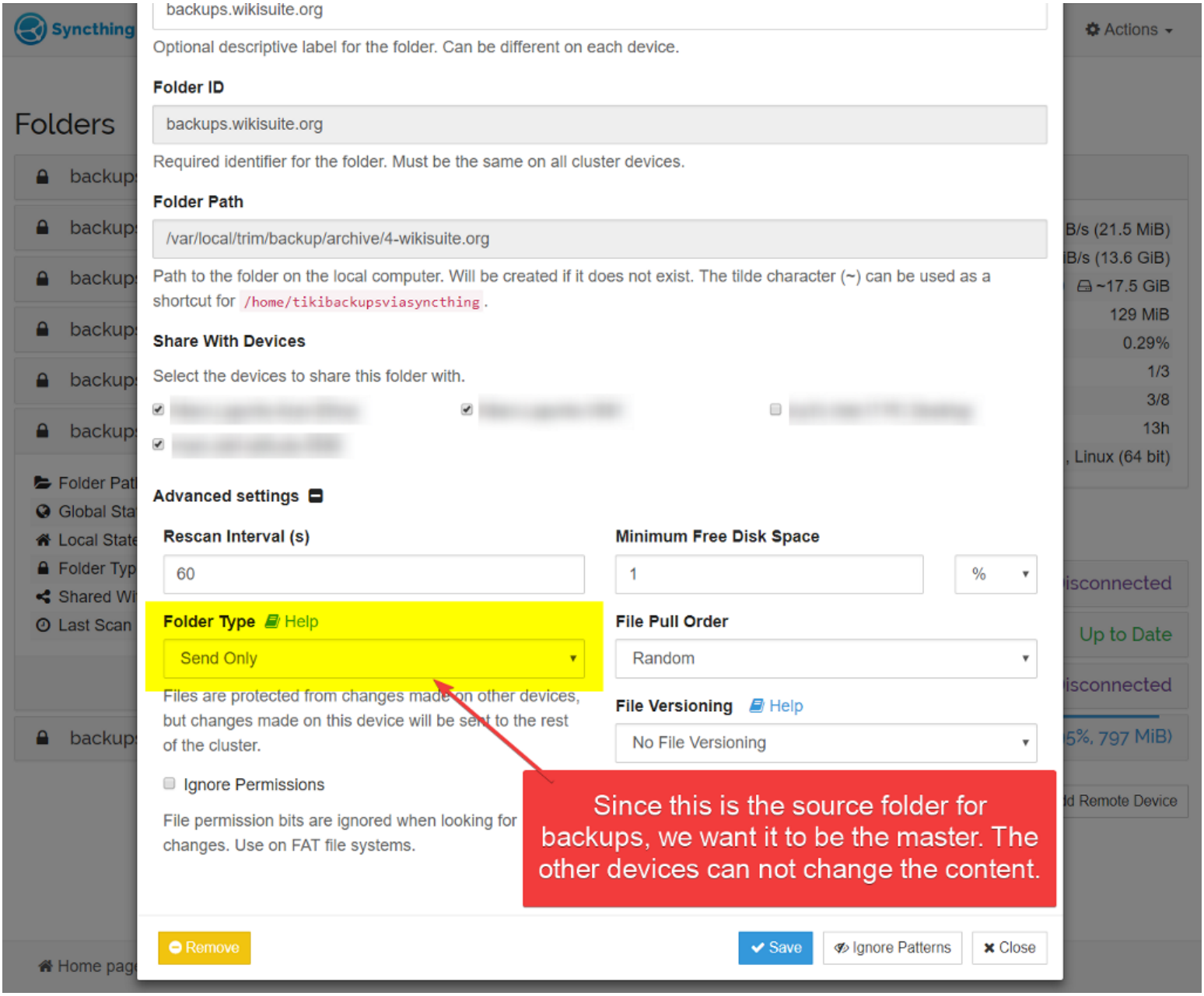
Syncthing by default is set to sync multiple folders so they get to the exact same set of files and folders. So, if you delete a file in one folder, the deletion is propagated. In the contexts of backups, this could cause issues. Examples:

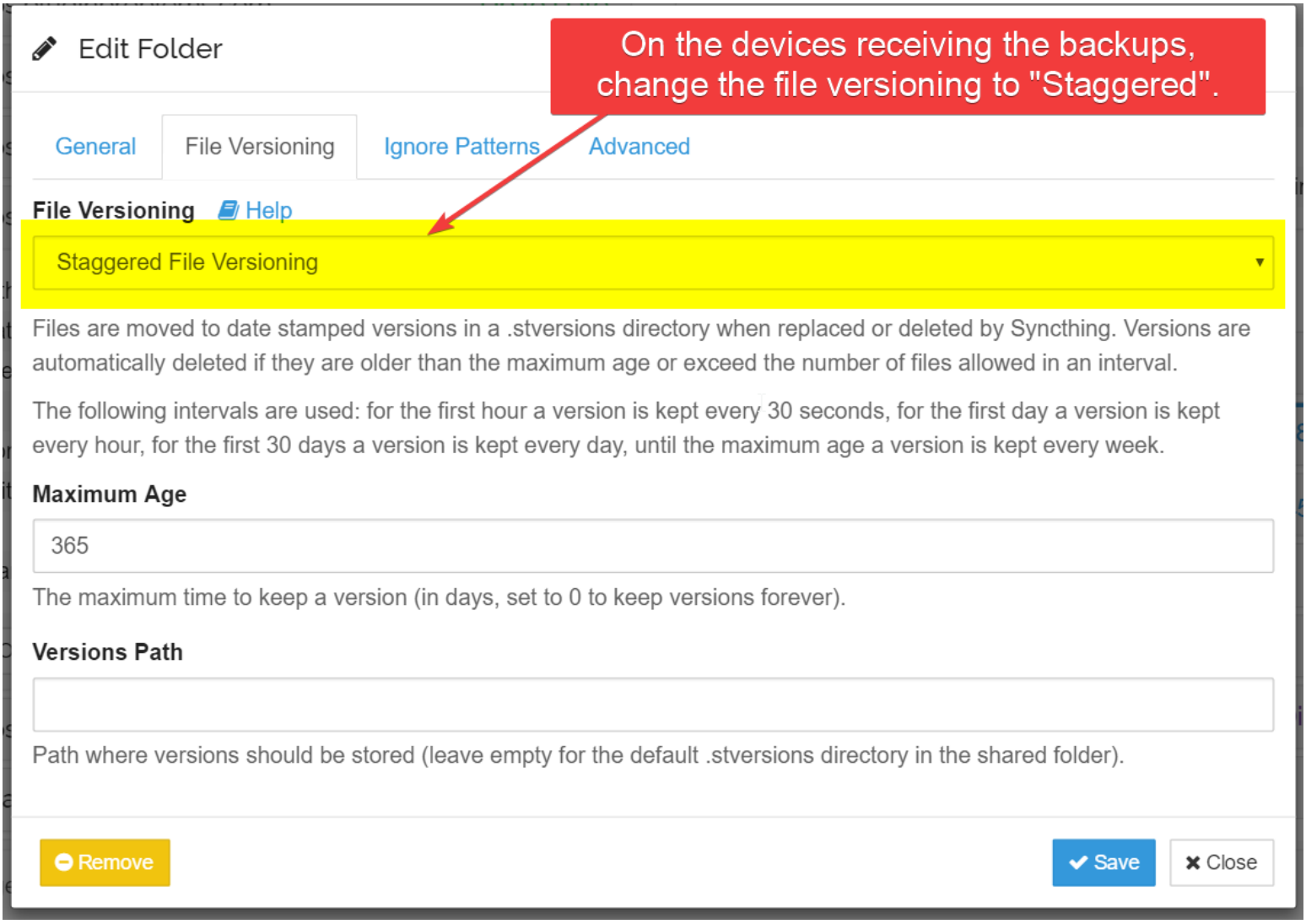
- Ransomware on any device: Then, all the devices would receive the corrupted data which replaces the valid data.
- One of the devices runs out of space, and its user decides to clear out old backups.

The solution is:

1. On the device sending the backups: set Folder Type to "Send Only"
2. On the device(s) receiving the backups: set File Versioning. Recommended setting is "Staggered"

Because the master server is set to "Send Only", there is no point in setting to "Staggered" (It doesn't receive any data, and thus doesn't need versioning).


backups.wikisuite.org
Optional descriptive label for the folder. Can be different on each device.
Folder ID
backups.wikisuite.org
Required identifier for the folder. Must be the same on all cluster devices.
Folder Path
/var/local/trim/backup/archive/4-wikisuite.org
Path to the folder on the local computer. Will be created if it does not exist. The tilde character (~) can be used as a shortcut for /home/tikibackupsviasyncthing.
Share With Devices
Select the devices to share this folder with.
Advanced settings
Rescan Interval (s)
60
Minimum Free Disk Space
1
%
Folder Type Help
Send Only
Files are protected from changes made on other devices, but changes made on this device will be sent to the rest of the cluster.
File Pull Order
Random
File Versioning Help
No File Versioning
Ignore Permissions
File permission bits are ignored when looking for changes. Use on FAT file systems.
Since this is the source folder for backups, we want it to be the master. The other devices can not change the content.
Remove
Save
Ignore Patterns
Close



Troubleshooting

- If sync is not working as expected, check the Syncthing folder interface for errors.