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Instructions for setting up git server on Synology Diskstation

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Configure Synology NAS as Git Server

Instructions for setting up a git server on a Synology NAS with Diskstation. Specifically, I am using a DS414 with DSM 5.0.

Set Up User and Folder

- Create user `gituser` via Diskstation interface (with File Station and WebDAV privileges)
- Add new shared folder called `git` (located at `/volume1/git`) with read/write access for `gituser` and `admin`. This folder will hold all the repos.
- Install Git Server package via Diskstation
- Open Git Server and allow `gituser` permissions
- Enable SSH access on Diskstation (Control Panel > Terminal & SNMP > Enable SSH Service)

Configure SSH Access

- create `~/ssh` folder for gituser on server

```
ssh admin@diskstation.local
mkdir /volume1/homes/gituser/.ssh
```

- copy public rsa key from local computer to gituser account on server

```
scp ~/.ssh/id_rsa.pub admin@diskstation.local:/volume1/homes/gituser/.ssh
```

- connect via SSH as `root` and rename `id_rsa.pub` to `authorized_keys` on NAS (or append if already exists, `cat id_rsa.pub >> authorized_keys`)

```
ssh root@diskstation.local
mv /volume1/homes/gituser/.ssh/id_rsa.pub /volume1/homes/gituser/.ssh/authorized_keys
```

- change permissions while logged in as root

```
cd /volume1/homes/gituser/
chown -R gituser:users .ssh
chmod 700 .ssh
chmod 644 .ssh/authorized_keys
```

Set Up New Repo on NAS

- create bare repo as root

```
ssh root@diskstation.local
cd /volume1/git/
git --bare init <repo-name>.git
chown -R gituser:users <repo-name>.git
```

```
cd <repo-name>.git
git update-server-info
```

NOTE: I'm not entirely sure if `git update-server-info` must be run for each repo or just initially. It seems to work without running this command, but I'm suspicious that it might cause problems later.

Add NAS as Remote for Local Repo

- Clone repo from NAS

```
git clone ssh://gituser@diskstation.local/volume1/git/<repo-name>.git
```

References

<http://blog.osdev.org/git/2014/02/13/using-git-on-a-synology-nas.html> <http://stackoverflow.com/questions/20074692/setup-git-on-a-nas-with-synologys-official-package> <http://www.heidilux.com/2014/02/setup-git-server-synology-nas/>



gazgeek commented on 19 Aug 2015

Hey.

Just wanted to say thanks - this has been really helpful in getting git up and running on my DS415+.

I ran in to a couple of issues.

- I had to specify `--shared` in the `git init` command otherwise I got errors about the config directory being inaccessible...

```
git init --bare --shared <repo-name>.git
```

- I couldn't get the password-less login to work unless I set the `authorized_keys` permissions to 600...

```
chmod 600 .ssh/authorized_keys
```

Cheers!



jerryfromearth commented on 27 Sep 2015

Hi,

Thanks for the post!

- To make "password-less ssh" work, aside from @gazgeek's suggestion, I also find out that I need to change the permission of the user folder (that contains `.ssh`) to 755. Previously it was 711:

```
chmod 755 /home/gituser
```

Reference:

<http://superuser.com/questions/736055/ssh-with-no-password-passwordless-on-synology-dsm-5-as-other-non-root-user>



jgudpns commented on 7 Nov 2015

Jeff - Trying to do this to my DS214, but I get stuck on understanding about how to get the rsa keys and where on my local (pc?) this would be.

Also - does "diskstation.local" by the name of the DS214?



eyesuk commented on 4 Jan 2016

Does anyone know if this package includes jekyll functionality like github?



natejlong commented on 13 May 2016

@eyesuk You could add git commit hooks on the server so that it built the jekyll site on every push up to it. You could then symlink the output directory to the `web` folder on the NAS and follow the steps [here](#)



ix-xerri commented on 19 Sep 2016

There is no `/volume1/homes/` directory. Any other options or do I have to create them?



vanlooverenkoen commented on 24 Nov 2016

Is there any GUI I can use with this? because the shell isn't that practical



robertveringa89 commented on 28 Jan 2017

Thank you for this!

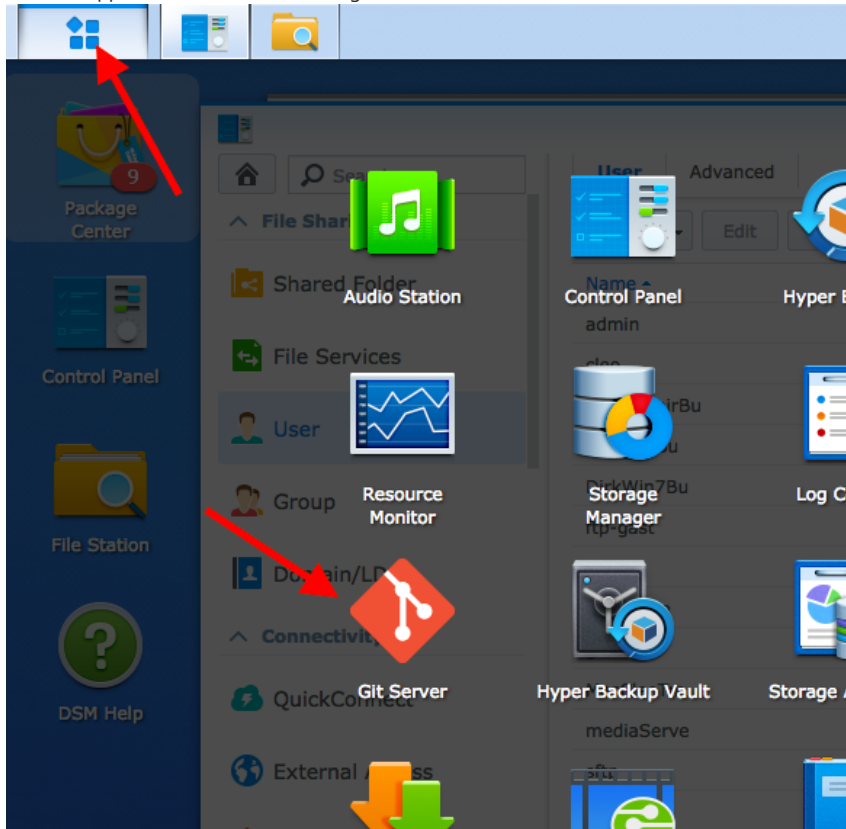


greyshine commented on 6 Feb 2017 • edited ▼

Thank you for your post.
I do stumble with "Open Git Server and allow `gituser` permissions".
I do not find anything to edit anything with the installed Git server.

As I understand it from your explanation, there is a `Git-Server/Settings/Users` navigation path to manage/add users.

Note: I just found it. I always looked at the installed packages in the Package Center. But it is located at the "Main Menu". The place where all installed applications have their starting home.



Another issue I watched (if I got it right):

It is mentioned that `git update-server-info` is somewhat needed; probably also or instead it is needed to set the chown again. I had the 'feeling' that the git server places new files into his `.git` folder with `root:root` ownership which breaks the git commands executed as/from client.



ockertbotha commented on 10 Feb 2017 • edited ▼

ssh as root is no longer supported

```
ssh root@diskstation.local
```

Instead:

```
ssh admin@diskstation.local
sudo -i
```

https://www.synology.com/en-us/knowledgebase/DSM/tutorial/General/How_to_login_to_DSM_with_root_permission_via_SSH_Telnet



ahmadalbakri commented on 13 May 2017

```
git clone ssh://gituser@diskstation.local/volume1/git/< repo-name >.git
```

Can be shorten to -> `git clone ssh:// diskstation / git /< repo-name >.git`

How-to:

1. change `diskstation` by editing `~/.ssh/config`. Example <https://mediatemple.net/community/products/grid/204644730/using-an-ssh-config-file>
2. symlink `git` in `root(/)` to target git folder as above `/volume1/git`



aalanan commented on 5 Jul 2017

git update-server-info saved me a headache. Thanks!



jforstner commented 10 days ago

There is no /volume1/homes/ directory. Any other options or do I have to create them?

I think this gets created when you first create a normal user through DSM. There's also a symlink in /var/services that points to /volume1/homes.