

## FreeNAS - Bug #12684

### Do not create an actual /nonexistent directory

12/07/2015 11:39 AM - Brett Keller

<b>Status:</b>	Resolved		
<b>Priority:</b>	Nice to have		
<b>Assignee:</b>	John Hixson		
<b>Category:</b>	OS		
<b>Target version:</b>	11.1		
<b>Seen in:</b>	9.3.1-STABLE-201511280648	<b>Needs Merging:</b>	Yes
<b>Severity:</b>	New	<b>Needs Automation:</b>	No
<b>Reason for Closing:</b>		<b>Support Suite Ticket:</b>	n/a
<b>Reason for Blocked:</b>		<b>Hardware Configuration:</b>	FreeNAS Mini
<b>Needs QA:</b>	No	<b>ChangeLog Required:</b>	No
<b>Needs Doc:</b>	Yes		

#### Description

For a user account with "/nonexistent" set as their home directory and "/sbin/nologin" set as the shell, the act of that user connecting to a CIFS share appears to result in the creation of an actual /nonexistent directory that contains user profile dot-files owned by that user. The /nonexistent directory should never actually exist. When it does exist and is owned by a particular user, it can break other FreeNAS functionality that relies on different user accounts. For example, e-mail alerts for cron jobs running as non-root users will fail to send when /nonexistent exists and is owned by a different user.

#### Steps to reproduce:

- Configure a FreeNAS server running FreeNAS-9.3-STABLE-201511280648 with two local user accounts, "brett" and "cron\_user"
  - Both accounts should have a home directory of "/nonexistent" and a shell of "/sbin/nologin"
  - Make sure cron\_user has a valid e-mail address that will receive alerts from cron jobs
- Configure a CIFS share to which the "brett" user will have access
- Check that the /nonexistent directory does not exist:

```
[root@fallingwater] ~# ls -la /nonexistent
ls: /nonexistent: No such file or directory
```

- Setup a test cron job in the web GUI that will run as cron\_user and will send e-mail
  - User: cron\_user
  - Command: echo "Sample cron output to be e-mailed"
  - Short description: Test cron job with stdout
  - Schedule every one or two minutes
  - Redirect stdout: unchecked
  - Redirect stderr: unchecked
  - Enabled: checked
- Wait and verify that an e-mail from the cron job arrives as expected
- On a Windows client, connect to the CIFS share as user "brett"
- Check /nonexistent and find out that it now exists:

```
[root@fallingwater] ~# ls -la /nonexistent
total 13
drwxr-xr-x  2 brett  brett   10 Dec  7 13:10 ./
drwxr-xr-x 20 root   wheel   29 Dec  7 13:10 ../
-rw-r--r--  1 brett  brett  898 Dec  7 13:10 .cshrc
-rw-r--r--  1 brett  brett  186 Dec  7 13:10 .login
-rw-r--r--  1 brett  brett   91 Dec  7 13:10 .login_conf
```

```
-rw----- 1 brett brett 301 Dec 7 13:10 .mail_aliases
-rw-r--r-- 1 brett brett 267 Dec 7 13:10 .mailrc
-rw-r--r-- 1 brett brett 680 Dec 7 13:10 .profile
-rw----- 1 brett brett 212 Dec 7 13:10 .rhosts
-rw-r--r-- 1 brett brett 909 Dec 7 13:10 .shrc
```

- Wait for the next cron job scheduled time, and note that e-mails have stopped arriving!
- Check the cron log and note new error messages referencing /nonexistent and permissions:

```
[root@fallingwater] ~# tail /var/log/cron
Dec 7 13:10:00 fallingwater /usr/sbin/cron[4985]: (root) CMD (/usr/libexec/atrun)
Dec 7 13:10:00 fallingwater /usr/sbin/cron[4984]: (cron_user) CMD (PATH="/bin:/sbin:/usr/bin:/usr/sbin:/usr/local/bin:/usr/local/sbin:/root/bin" echo "Sample cron output to be e-mailed")
Dec 7 13:11:00 fallingwater /usr/sbin/cron[5018]: (operator) CMD (/usr/libexec/save-entropy)
Dec 7 13:12:00 fallingwater /usr/sbin/cron[5040]: (cron_user) CMD (PATH="/bin:/sbin:/usr/bin:/usr/sbin:/usr/local/bin:/usr/local/sbin:/root/bin" echo "Sample cron output to be e-mailed")
Dec 7 13:12:00 fallingwater cron[5040]: _secure_path: /nonexistent/.login_conf is not owned b
y uid 1002
Dec 7 13:12:00 fallingwater cron[5041]: _secure_path: /nonexistent/.login_conf is not owned b
y uid 1002
Dec 7 13:14:00 fallingwater /usr/sbin/cron[5109]: (cron_user) CMD (PATH="/bin:/sbin:/usr/bin:/usr/sbin:/usr/local/bin:/usr/local/sbin:/root/bin" echo "Sample cron output to be e-mailed")
Dec 7 13:14:00 fallingwater cron[5109]: _secure_path: /nonexistent/.login_conf is not owned b
y uid 1002
Dec 7 13:14:00 fallingwater cron[5110]: _secure_path: /nonexistent/.login_conf is not owned b
y uid 1002
```

- Manually delete the /nonexistent directory:

```
[root@fallingwater] ~# rm -Rf /nonexistent
[root@fallingwater] ~# ls -la /nonexistent
ls: /nonexistent: No such file or directory
```

- Observe that the cron job e-mails start arriving again starting at the next scheduled time
- On the Windows client, connect to the CIFS share again as user "brett"
- Check for /nonexistent again, and see that it has returned:

```
[root@fallingwater] ~# ls -la /nonexistent
total 13
drwxr-xr-x  2 brett brett  10 Dec 7 13:30 ./
drwxr-xr-x 20 root  wheel  29 Dec 7 13:30 ../
-rw-r--r--  1 brett brett  898 Dec 7 13:30 .cshrc
-rw-r--r--  1 brett brett  186 Dec 7 13:30 .login
-rw-r--r--  1 brett brett   91 Dec 7 13:30 .login_conf
-rw-----  1 brett brett  301 Dec 7 13:30 .mail_aliases
-rw-r--r--  1 brett brett  267 Dec 7 13:30 .mailrc
-rw-r--r--  1 brett brett  680 Dec 7 13:30 .profile
-rw-----  1 brett brett  212 Dec 7 13:30 .rhosts
-rw-r--r--  1 brett brett  909 Dec 7 13:30 .shrc
```

- Wait for the next cron job time and note that e-mails have again stopped arriving
- Repeat as necessary...

I've attached a debug log from a server on which I ran the above steps. Please let me know if you need any further information. Thanks.

## Associated revisions

Revision b5b05785 - 07/26/2017 09:31 AM - John Hixson

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 5ca311d5 - 07/26/2017 09:33 AM - John Hixson**

Bump port revision

Ticket: #12684

**Revision bfce7848 - 11/29/2017 08:55 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 05a2b7e2 - 11/29/2017 09:09 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision f77c5026 - 04/05/2018 08:48 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 0d4c49d5 - 04/12/2018 11:49 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 1111f0b9 - 04/12/2018 01:29 PM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 36328df1 - 09/20/2018 11:03 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 0d95d9bb - 09/21/2018 06:28 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision e194acad - 09/21/2018 08:49 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 06196c7c - 09/24/2018 12:24 PM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 0154d080 - 12/13/2018 06:33 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 47cc63f4 - 12/13/2018 08:50 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision f778cc57 - 12/13/2018 09:32 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 06e61acf - 04/22/2019 01:34 PM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision fc7499ac - 04/22/2019 08:37 PM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 8a6a3024 - 04/23/2019 06:02 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision 25501ca8 - 04/24/2019 06:08 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

**Revision afa4d63f - 07/23/2019 04:30 AM - John Hixson**

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

Revision c28f9081 - 09/05/2019 08:11 AM - John Hixson

Don't create /nonexistent directory

- Courtesy of "Anonymous"

Ticket: #12684

## History

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### #1 - 12/08/2015 08:16 PM - Jordan Hubbard

- Category changed from 81 to 57

- Assignee set to John Hixson

### #2 - 12/08/2015 08:23 PM - Sean Fagan

Oh, that's why I have a /noexistent directory...

### #3 - 12/08/2015 08:32 PM - John Hixson

- Status changed from Unscreened to Screened

So the nonexistent directory is in fact not nonexistent ? I assume the nonexistent directory should be nonexistent ? ;-)

### #4 - 12/10/2015 01:26 PM - Jordan Hubbard

BRB: Seems like the right fix is to remove the pam\_mkhome dir hack since home directory should either already exist or if /nonexistent obviously don't want it to exist.

### #5 - 02/25/2016 10:34 AM - Jordan Hubbard

- Assignee changed from John Hixson to Jakub Klama

### #6 - 05/09/2016 10:56 PM - Jordan Hubbard

- Assignee changed from Jakub Klama to Anonymous

See comments about changing the PAM module to special-case "/nonexistent" and not make that directory.

### #7 - 05/19/2016 06:48 AM - Anonymous

While working on fixing this bug, I came across PAM's configuration for SAMBA service in freenas/src/freenas/etc/ix/templates/pam.d/samba. The use of pam\_mkhome dir.so is to automatically create a /home/username directory if none exists the first time a person tries to access this machine.

Hence, removing 'session required /usr/local/lib/pam\_mkhome dir.so' from the file solves the issue of a /nonexistent directory getting created when the user accesses a CIFS share.

Does this work for you?

### #8 - 05/25/2016 06:37 AM - Josh Paetzel

- File patch-pam\_mkhome dir.c added

No, that won't work, because there are cases where the home directory needs to get created.

Here's an untested patch to pam\_mkhome dir.c that stops it from creating /nonexistent

**#9 - 05/25/2016 06:55 AM - Anonymous**

Okay! Where do I add this patch? Also, I need to build freenas from scratch after adding this patch, right?

**#10 - 05/25/2016 11:20 AM - Josh Paetzel**

You'll have to copy the entire security/pam\_mkhomedir port from the github freebsd ports tree repo to nas\_ports in the FreeNAS repo, then add the patch file I provided to nas\_ports/security/pam\_mkhomedir/files/

Then run make clean-package p=pam\_mkhomedir and then rebuild FreeNAS.

**#11 - 06/03/2016 03:51 AM - Anonymous**

I applied the patch and rebuilt freenas, it did not solve the issue of a /nonexistent directory getting created.

**#12 - 06/03/2016 04:29 AM - Anonymous**

- Status changed from Screened to Fix In Progress

**#13 - 06/03/2016 04:42 AM - Anonymous**

- Status changed from Fix In Progress to 19

**#14 - 06/03/2016 05:24 AM - Josh Paetzel**

I forgot a step which may have caused the old port to get included. You need to increment PORTREVISION in nas\_ports/security/pam\_mkhomedir/Makefile

**#15 - 06/07/2016 06:10 AM - Anonymous**

I added the PORTREVISION variable in the Makefile and set the value to 1. The build failed twice giving out the following logs:

```
[00:05:44] =====> [01][00:00:00] Starting build of security/pam_mkhomedir
[00:05:46] =====> [01][00:00:02] Saved security/pam_mkhomedir wrkdir to:
/root/freenas-build/_BE/objs/ports/wrkdirs/ja-p/p/pam_mkhomedir-0.2_1.tbz
[00:05:46] =====> [01][00:00:02] Finished build of security/pam_mkhomedir: Failed: build
[00:05:46] =====> Stopping 1 builders
[00:05:52] =====> No package built, no need to update the repository
[00:05:52] =====> Committing packages to repository
[00:05:52] =====> Removing old packages
[00:05:52] =====> Failed ports: security/pam_mkhomedir:build
[ja-p] [2016-06-07_17h04m42s] [committing:] Queued: 1 Built: 0 Failed: 1 Skipped: 0 Ignored: 0 Tobuild: 0 Time: 00:03:07
```

**#16 - 06/07/2016 06:56 AM - Josh Paetzel**

Somewhere above that will be the poudriere build log directory. Can you attach the pam\_mkhomedir log from that directory?

**#17 - 06/07/2016 10:55 PM - Anonymous**

- File patch-pam\_mkhomedir.c added

Hi Josh, I made slight modifications to the patch file you sent and rebuilt freenas. I have tested the issue and the fix is now working. Please find attached the modified patch file here.

**#18 - 06/08/2016 05:15 AM - Josh Paetzel**

Ok, could you create a pull request that moves the pam\_mkhome dir port to security/nas\_ports and adds this patch? It would be best to bump PORTREVISION in the port Makefile as well.

**#19 - 06/08/2016 10:32 PM - Anonymous**

Yeah, I have pulled a request [#169](#) with the required changes on github.

**#20 - 10/06/2016 12:31 PM - Kris Moore**

- Assignee changed from Anonymous to Anonymous
- Priority changed from No priority to Nice to have
- Target version set to 9.10.1-U3

**#21 - 10/10/2016 12:53 PM - Kris Moore**

- Target version changed from 9.10.1-U3 to 9.10.2

**#22 - 12/08/2016 02:40 PM - Vaibhav Chauhan**

- Target version changed from 9.10.2 to 9.10.2-U1

PR was never merged, punting to 9.10.2-U1

**#23 - 12/27/2016 12:28 PM - Vaibhav Chauhan**

- Target version changed from 9.10.2-U1 to 9.10.2-U2

This will not make into 9.10.2-U1 release

**#24 - 02/13/2017 01:01 PM - Kris Moore**

- Target version changed from 9.10.2-U2 to 9.10.3

**#25 - 03/14/2017 06:40 PM - Kris Moore**

- Target version changed from 9.10.3 to 9.10.4

**#26 - 04/19/2017 07:57 AM - Kris Moore**

- Target version changed from 9.10.4 to 11.1

**#27 - 07/13/2017 03:39 PM - Anonymous**

- Assignee changed from Anonymous to John Hixson

I haven't really been working on the middleware stuff lately so I don't know the status of this, passing to John

**#28 - 07/26/2017 09:35 AM - John Hixson**

- Status changed from 19 to Ready For Release

**#29 - 09/09/2017 11:01 AM - Dru Lavigne**

- Subject changed from The `"/nonexistent"` directory gets created when a user with `"/nonexistent"` set as their home directory accesses a CIFS share to Do not create an actual `/nonexistent` directory

**#30 - 09/26/2017 04:08 PM - Dru Lavigne**

- Target version changed from 11.1 to 11.1-BETA1



**#31 - 09/27/2017 06:27 AM - Kim Kam**

Until this bug is fixed in 11.1 or for older 9.10 I found a simple workaroud. Create /nonexistant directory manually and clear any permissions on it. Then it will still exists, but nothing will be able to create files there:

as ROOT:

```
rm -rf /nonexistent
mkdir /nonexistent
chown 000 /nonexistent
```

```
[root@freenas] ~# ls -la /nonexistent
```

```
total 3
```

```
drwxr-xr-x 2 root wheel 2 May 24 2016 ./
drwxr-xr-x 21 root wheel 28 Jul 27 10:10 ../
```

**#32 - 10/24/2017 04:48 AM - Dru Lavigne**

- Status changed from Ready For Release to Resolved

**#33 - 11/06/2017 12:46 PM - Joe Maloney**

- QA Status Test Fails FreeNAS added

- QA Status deleted (Not Tested)

This directory is still created on my 11.1-RC1 install when creating a new user.

**#34 - 11/09/2017 06:08 AM - Dru Lavigne**

- Status changed from Resolved to 46

- Target version changed from 11.1-BETA1 to 11.1

John: please review the failed QA test with Joe.

**#35 - 11/29/2017 04:45 PM - Nick Wolff**

PR submitted to pull back in commits that got lost between branches.

**#36 - 11/30/2017 06:15 AM - John Hixson**

Dru Lavigne wrote:

John: please review the failed QA test with Joe.

Reviewed

**#37 - 12/01/2017 01:10 PM - Nick Wolff**

- Target version changed from 11.1 to 11.1-RC3

**#38 - 12/01/2017 02:11 PM - Dru Lavigne**

- Target version changed from 11.1-RC3 to 11.1

**#39 - 12/01/2017 02:21 PM - Dru Lavigne**

- Status changed from 46 to Ready For Release

**#40 - 12/05/2017 09:55 AM - Dru Lavigne**

- File deleted (debug-fallingwater-20151207133817..tgz)

**#41 - 12/06/2017 06:40 AM - Nick Wolff**

- Needs QA changed from Yes to No

- QA Status Test Passes FreeNAS added

- QA Status deleted (Test Fails FreeNAS)

**#42 - 12/13/2017 04:10 PM - Dru Lavigne**

- Status changed from Ready For Release to Resolved

**Files**

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patch-pam_mkohomedir.c	549 Bytes	05/25/2016	Josh Paetzel
patch-pam_mkohomedir.c	552 Bytes	06/08/2016	Anonymous