

## FreeNAS - Bug #76971

### Run ZFS operations in a process pool

02/23/2019 11:07 PM - Joshua Serrine

<b>Status:</b> Done	
<b>Priority:</b> Blocks Until Resolved	
<b>Assignee:</b> William Grzybowski	
<b>Category:</b> Middleware	
<b>Target version:</b> Master - FreeNAS Nightlies	
<b>Seen in:</b> 11.2-U2	<b>Needs Merging:</b> No
<b>Severity:</b> Medium	<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>
<b>Needs QA:</b> No	<b>ChangeLog Required:</b> Yes
<b>Needs Doc:</b> No	
<b>Description</b>	
Tried to create a periodic snapshot task, and could no create it. After clicking save, the WebGUI rejects the dataset chosen saying "Select a valid choice. tank/Backups/Dropbox is not one of the available choices." This is a bit whimsical since it is a dropdown.	
I can reproduce this trivially. If a dev would like to see and debug this on my personal FreeNAS, have them contact me via Ryver.	
<b>Related issues:</b>	
Copied to FreeNAS - Bug #83908: Run ZFS operations in a process pool	<b>Done</b>

#### Associated revisions

##### Revision 9292732e - 03/28/2019 12:14 PM - William Grzybowski

feat(middlewared/utils): method to get attributes from a filter list

Ticket: #76971

##### Revision efa67bc4 - 03/28/2019 12:15 PM - William Grzybowski

feat(middlewared/zfs): use zfs(8) to get datasets names

Ticket: #76971

##### Revision ad45c549 - 03/28/2019 01:57 PM - William Grzybowski

feat(middlewared): load all plugins on workers so we can resolve schemas

Ticket: #76971

##### Revision 56321295 - 03/28/2019 01:58 PM - William Grzybowski

feat(middlewared/zfs): run ZFS operations in a process pool

py-libzfs is not thread-safe which means we were blocking at one ZFS operation. e.g. say snapshots were listing, no other operations could run.

Now we are only limited by the size of the process pool.

Ticket: #76971

**Revision 6fcbb7ee - 03/28/2019 02:05 PM - William Grzybowski**

feat(middlewareed): load all plugins on workers so we can resolve schemas

Ticket: #76971

**Revision ee8a95ec - 03/28/2019 02:05 PM - William Grzybowski**

feat(middlewareed/zfs): run ZFS operations in a process pool

py-libzfs is not thread-safe which means we were blocking at one ZFS operation. e.g. say snapshots were listing, no other operations could run.

Now we are only limited by the size of the process pool.

Ticket: #76971

**Revision f07104c1 - 03/28/2019 03:41 PM - William Grzybowski**

Remove unused modules

Ticket: #76971

**Revision bd2c56c5 - 03/28/2019 04:38 PM - William Grzybowski**

feat(middlewareed/utills): method to get attributes from a filter list

Ticket: #76971

**Revision 086b21c1 - 03/28/2019 04:38 PM - William Grzybowski**

feat(middlewareed/zfs): use zfs(8) to get datasets names

Ticket: #76971

**Revision 7b0489f9 - 03/28/2019 04:38 PM - William Grzybowski**

feat(middlewareed): load all plugins on workers so we can resolve schemas

Ticket: #76971

**Revision 0d199b56 - 03/28/2019 04:38 PM - William Grzybowski**

feat(middlewareed/zfs): run ZFS operations in a process pool

py-libzfs is not thread-safe which means we were blocking at one ZFS operation. e.g. say snapshots were listing, no other operations could run.

Now we are only limited by the size of the process pool.

Ticket: #76971

**Revision 8c6e7d6e - 03/28/2019 04:38 PM - William Grzybowski**

Remove unused modules

Ticket: #76971

**Revision b324a75c - 03/28/2019 04:38 PM - William Grzybowski**

feat(middlewared/utils): method to get attributes from a filter list

Ticket: #76971

(cherry picked from commit 9292732e33114e9a4eaf0855aee2f9d711c91c32)

**Revision 9120fe70 - 03/28/2019 04:55 PM - William Grzybowski**

feat(middlewared/zfs): use zfs(8) to get datasets names

Ticket: #76971

**Revision 78a9820f - 03/28/2019 05:35 PM - William Grzybowski**

feat(middlewared): load all plugins on workers so we can resolve schemas

Ticket: #76971

**Revision dbb1c82a - 03/28/2019 05:36 PM - William Grzybowski**

feat(middlewared/zfs): run ZFS operations in a process pool

py-libzfs is not thread-safe which means we were blocking at one ZFS operation. e.g. say snapshots were listing, no other operations could run.

Now we are only limited by the size of the process pool.

Ticket: #76971

**Revision af10ec57 - 03/28/2019 05:37 PM - William Grzybowski**

Remove unused modules

Ticket: #76971

## History

---

**#1 - 02/24/2019 05:02 AM - Dru Lavigne**

- Assignee changed from Release Council to Erin Clark
- Target version changed from 11.2-U3 to 11.2-U4

### #3 - 02/25/2019 06:30 PM - Dru Lavigne

Joshua: Is this reproducible in the legacy UI as well?

### #8 - 03/20/2019 01:07 PM - Erin Clark

That problem also doesn't happen on my box, I can select datasets from both of my pools in old UI

### #9 - 03/21/2019 12:45 PM - Joe Maloney

I've created 1000 snaps, and 20 datasets per pool with 11.2-U3. I have also tried to create "temptank/Backups/Dropbox" and select that with the snapshot task. With that I have not been able to reproduce. I will now go back, and test 11.2-U2 since that was the version reported here to determine if this has already somehow been fixed.

### #10 - 03/21/2019 01:51 PM - Joe Maloney

- File *debug-fn07-20190321164241.tgz* added

- File *debug-freenas-20190321164645.tgz* added

Also tested 11.2 and cannot reproduce. Attached are debugs from the systems I attempted.

I wrote the following script which did produce a hang in listing operations while the data set, and snapshot creation tasks where underway.

```
#!/bin/sh

if [ -z $1 ] ; then
    echo "Please provide pool name!"
    exit
fi

pool=$1

# Create 20 datasets
for i in `seq 1 1000`; do
    zfs create ${pool}/${i}
done

# Create 1000 snapshots
for i in `seq 1 10000`; do
    zfs snapshot ${pool}@${i}
done
```

I did crash middleware once on an encrypted volume while trying multiple operations to ddos the machine at the same time. However with single operations to create datasets, and snapshots in batch the UI became responsive again.

I also created a dataset with an extremely long name like this:

[temptank/reallylargedsnameisverylongonpurpose/CameCaseDSNAMEwith12345678/makingnameevenlongeronpurpose/letmakethenameevenlonger/howaboutmakingthenamethislong@auto-20190321\\_1321-2w`](#)

I was of course given warning about character limit so i shortened to the limits, and I was still able to create the perodic snap task successfully using both django, and angular UI.

**#11 - 03/21/2019 02:02 PM - Joe Maloney**

Just to clarify when I said I confirmed this affects new and old GUI I confirmed based on the screenshots Josh Serrine provided. I need to see the issue in his environment to proceed further.

**#12 - 03/21/2019 06:23 PM - Joe Maloney**

- *File Pasted Image- Mar 21, 2019 - 6-02-59pm.png added*

- *Assignee changed from Joe Maloney to William Grzybowski*

I found the issue on a call with Josh today. Let me know if you need a system setup for reproduction. Attached is an image showing autorepl.py trying to run and giving a traceback when a periodic snapshot is created. This is caused when a destination replication server goes offline. As a result of a replication server going offline no new periodic snapshots cannot be created. That is the bug we see here.

To reproduce:

Add a periodic snapshot

Add a replication task to a remote server

Take the remote server offline

Try to add another periodic snapshot task

**#13 - 03/21/2019 06:37 PM - William Grzybowski**

Joshua, whats the output of "midctl call pool.filesystem\_choices", while presenting the problem?

Also please attach a Save Debug.

**#14 - 03/21/2019 06:38 PM - William Grzybowski**

- *Status changed from Unscreened to Blocked*

- *Severity changed from New to Medium*

- *Reason for Blocked set to Need additional information from Author*

**#20 - 03/28/2019 02:02 PM - Bug Clerk**

- *Status changed from Blocked to In Progress*

**#21 - 03/28/2019 04:38 PM - Bug Clerk**

- *Status changed from In Progress to Ready for Testing*

11.3 PR: <https://github.com/freenas/freenas/pull/2816>

**#22 - 03/28/2019 04:38 PM - Bug Clerk**

- *Target version changed from 11.2-U4 to 11.3-BETA1*

**#23 - 03/28/2019 04:38 PM - Bug Clerk**

- *Copied to Bug #83908: Run ZFS operations in a process pool added*

**#24 - 03/29/2019 09:28 AM - Dru Lavigne**

- *File deleted (debug-fn07-20190321164241.tgz)*

**#25 - 03/29/2019 09:28 AM - Dru Lavigne**

- File deleted (debug-freenas-20190321164645.tgz)

**#26 - 03/29/2019 09:28 AM - Dru Lavigne**

- File deleted (debug.txt)

**#27 - 03/29/2019 09:31 AM - Dru Lavigne**

- Subject changed from *Periodic Snapshot task cannot be created - Dropdown is identified as "invalid" to Run ZFS operations in a process pool*
- Private changed from *Yes to No*
- Reason for Blocked deleted (*Need additional information from Author*)
- Needs Doc changed from *Yes to No*
- Needs Merging changed from *Yes to No*

**#28 - 03/29/2019 10:03 AM - Dru Lavigne**

- Status changed from *Ready for Testing to Done*
- Target version changed from *11.3-BETA1 to Master - FreeNAS Nightlies*
- Needs QA changed from *Yes to No*

**Files**

---

2019-02-24_00h03_23.jpg	147 KB	02/24/2019	Joshua Serrine
2019-03-05_17h15_35.jpg	201 KB	03/06/2019	Joshua Serrine
Pasted Image- Mar 21, 2019 - 6-02-59pm.png	46.3 KB	03/22/2019	Joe Maloney