

## napp-it auto service 20. november 2009

napp-it is a free and open web appliance software to manage your nexenta3 or eon zfs- nas/san server from your preferred browser.

it's not a huge and complex thing. it's just a small and simple perl cgi-script. copy it to the cgi-bin folder of your apache webserver, set permissions and run it from your browser.

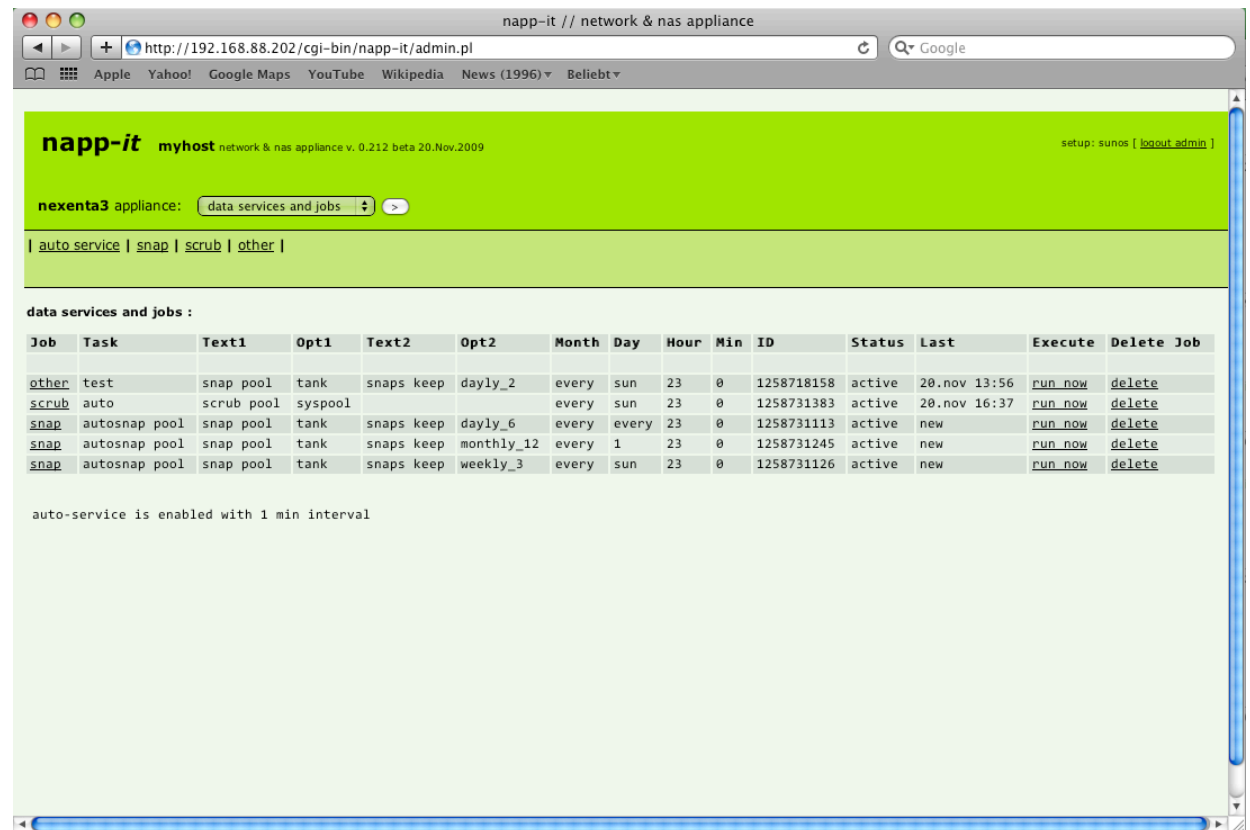
part of napp-it is a scriptable auto service for auto-snap, auto scrub and other tasks

### with napp-it auto service you can

- create your own jobs
- start them manually or per timetable

(c) g nther alka  
october 2009

my other documents see <http://www.babelcon.de/napp-it>  
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The screenshot shows a web browser window with the URL `http://192.168.88.202/cgi-bin/napp-it/admin.pl`. The page title is "napp-it // network & nas appliance". The main content area has a green header with "napp-it myhost network & nas appliance v. 0.212 beta 20.Nov.2009" and a "setup: sunos [logout admin]" link. Below the header, there is a dropdown menu for "nexenta3 appliance:" set to "data services and jobs". A navigation bar contains links for "auto service", "snap", "scrub", and "other".

The main section is titled "data services and jobs:" and contains a table with the following columns: Job, Task, Text1, Opt1, Text2, Opt2, Month, Day, Hour, Min, ID, Status, Last, Execute, and Delete Job.

Job	Task	Text1	Opt1	Text2	Opt2	Month	Day	Hour	Min	ID	Status	Last	Execute	Delete Job
<a href="#">other</a>	test	snap pool	tank	snaps keep	dayly_2	every	sun	23	0	1258718158	active	20.nov 13:56	<a href="#">run_now</a>	<a href="#">delete</a>
<a href="#">scrub</a>	auto	scrub pool	syspool			every	sun	23	0	1258731383	active	20.nov 16:37	<a href="#">run_now</a>	<a href="#">delete</a>
<a href="#">snap</a>	autosnap pool	snap pool	tank	snaps keep	dayly_6	every	every	23	0	1258731113	active	new	<a href="#">run_now</a>	<a href="#">delete</a>
<a href="#">snap</a>	autosnap pool	snap pool	tank	snaps keep	monthly_12	every	1	23	0	1258731245	active	new	<a href="#">run_now</a>	<a href="#">delete</a>
<a href="#">snap</a>	autosnap pool	snap pool	tank	snaps keep	weekly_3	every	sun	23	0	1258731126	active	new	<a href="#">run_now</a>	<a href="#">delete</a>

Below the table, it states: "auto-service is enabled with 1 min interval"

## create autosnap-job

The screenshot shows a web browser window with the URL `http://192.168.88.202/cgi-bin/napp-it/admin.pl?id=admin,!UubLZeXaLawk&action=&l=31_data%20se`. The page title is "napp-it // network & nas appliance". The main content area has a green header with "napp-it myhost network & nas appliance v. 0.212 beta 20.Nov.2009" and a "setup: sunos [logout admin]" link. Below the header, there is a dropdown menu for "nexenta3 appliance" set to "data services and jobs". A navigation bar contains links for "auto service", "snap", "scrub", "other", "help", "autosnap pool", and "show snaps".

The main section is titled "data services and jobs / snap / autosnap pool: run" and contains a table with the following data:

Job	Task	Text1	Opt1	Text2	Opt2	Month	Day	Hour	Min	ID	Status	Last	Execute	Delete Job
<a href="#">snap</a>	autosnap pool	snap pool	tank	snaps keep	dayly_6	every	every	23	0	1258731113	active	new	<a href="#">run now</a>	<a href="#">delete</a>
<a href="#">snap</a>	autosnap pool	snap pool	tank	snaps keep	monthly_12	every	1	23	0	1258731245	active	20.nov 16:46	<a href="#">run now</a>	<a href="#">delete</a>
<a href="#">snap</a>	autosnap pool	snap pool	tank	snaps keep	weekly_3	every	sun	23	0	1258731126	active	20.nov 16:46	<a href="#">run now</a>	<a href="#">delete</a>

Below the table is a section titled "create new auto-snap job" with the following form fields:

- Pool to snap:
- name of snaps (ex dayly):
- snaps to keep:
- Timetable:
  - Day (1..31 sun..sat):
  - Month (1..12):
  - Hour (0..23):
  - Minute:

A "submit" button is located at the bottom of the form.

will keep snaps up to date

napp-it myhost network & nas appliance v. 0.212 beta 20.Nov.2009 setup: sunos [ [logout](#) [admin](#) ]

nexenta3 appliance:  >

| [auto service](#) | [snap](#) | [scrub](#) | [other](#) |  
| [help](#) | [autosnap pool](#) | [show snaps](#) |

**data services and jobs / snap / show snaps:**

**Datsnap Overview** - autodelete older snapshots with used=0

NAME		CREATION	USED	REFER
tank	@weekly_1258732267	Fri Nov 20 16:51 2009	0	22.9K
tank/data	@daily_1258728720	Fri Nov 20 15:52 2009	20.9K	21.9K
tank/data	@daily_1258729034	Fri Nov 20 15:57 2009	18.9K	25.9K
tank/data	@daily_1258732231	Fri Nov 20 16:50 2009	20.9K	35.9K
tank/data	@monthly_1258732210	Fri Nov 20 16:50 2009	20.9K	35.9K
tank/data	@weekly_1258732183	Fri Nov 20 16:49 2009	20.9K	34.9K
tank/data	@weekly_1258732249	Fri Nov 20 16:50 2009	20.9K	35.9K
tank/data	@weekly_1258732267	Fri Nov 20 16:51 2009	0	35.9K

## example: script for autosnap (editable by user)

each script for automated task needs to have 3 Parts:

### 1. ask user (create form)

```
menue-item: autosnap pool: edit
```

```
part 1 of needed script:
```

```
ask user for pool, name of snaps and how much snaps to keep
```

```
#####  
sub my_action {  
#####  
my ($r, $txt,$t);  
  
#form answered  
if ($in{,answered'}) { &write_job; } ##write job to joblist  
  
#print overview  
#####  
&job_overview();  
  
#create form  
#####  
  
#ask basic infos like time  
#####  
print „<br><br><b>create new auto-snap job</b><br>“;  
&ask(,begin');  
  
$r=&list_pools(',');  
&ask(,select_pool,Pool to snap',$r);  
&ask(,text_name,name of snaps (ex daily)',',,20','daily');  
&ask(,select_max,snaps to keep','1,2,3,4,5,6,7,8,9,10,11,12,20,24,30,40,50','2');  
  
print „<br><br><b> Timetable</b><br>\n“;  
&ask(,select_day,Day (1..31 sun..sat)',',every,sun,mon,tue,wed,thu,fri,sat,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31','sun');  
&ask(,select_month,Month (1..12)',',every,1,2,3,4,5,6,7,8,9,10,11,12','every');  
&ask(,select_hour,Hour (0..23)',',every,0,3,6,9,12,15,19,22,23','23');  
&ask(,select_min,Minute',',every,0,15,30,45','0');  
&ask(,end');  
  
} #/ my_action  
#####
```

## 2. create job

menue-item: autosnap pool: edit

part 2 of needed script:

if user klick on form submit, a new job is created

```
#####
sub write_job { # write job to joblist
#####
  my ($action,$id,$svar); #

  # 1. parse input
  #####
  ${in{,text_name'}=~tr/A-Z/a-z/;
  ${in{,text_name'}=~s/[^a-z0-9-]//; #allowed in name. snap will have name pool@name_time

  if (${in{,text_name'} eq „“) { &mess(,unallowed or empty snapname'); }

  # 2. needed variables for this job : pool=syspool \n keep=3 \n name=snapname, (predefined are id=sec from 1970),
  #####
  $var="pool=${in{,select_pool'}\n";
  $var.="keep=${in{,select_max'}\n";
  $var.="name=${in{,text_name'}";

  # 2. id of this job #####
  #####
  $id=time();

  # 3. create job.pre with variables inside
  #####
  &job_create($id,$var,"snap pool",${in{,select_pool'},"snaps_keep","${in{,text_name'}\_${in{,select_max'}"); #parameter id,var,text1,opt1,text2,opt2

  # reload page
  reload;

} #/ write job
#####
```

### 3. action for this job

edit menue-item: autosnap pool

part 3 of needed script:

if job is run manually or by timetable it will do:

- create a new snap
- delete snaps > max snaps

```
##### auto_job begin ##### do not remove or rename this line
sub auto_job { # set needed variables as =variable= - they are stored via sub write_job when creating a job
#####
my ($r,$time,$snaps,@snaps,$i,$s,$name,$old,$keep);
$time=time(); #sec from 1970

$keep="=keep=";

#create new snapshot
$r=&exe(,,zfs snapshot -r =pool=@=name=_$time"); # ex tank@weekly_1274638

#delete snaps older max with names pool.@name_id # id doesnt matter
$snaps=&list_datasnaps(,l'); # commalist of snaps, autodelete older snapshost with used=0

@snaps=split(/,/, $snaps);
$i="1";
foreach $s (@snaps) {
    if (!$s =~ /\@/) { next; } # not a snap
    $name=$s; $name =~ s/\_.*//; # zfs@name_time -> zfs@name
    if ($name eq $old) { $i++; } else { $i="1"; } # count
    if ($i > $keep) { # more snaps than wanted
        &exe(,,zfs destroy $s");
    }
    $old=$name; # remember las name
}

return($r);
} #/auto job

# auto_job end ##### do not remove or rename this line
#####

####
#end of my script, do not delete the line below
1;
```