

Príkazy NetApp-u

1. SMTP autosuport

(https://docs.netapp.com/ontap-9/index.jsp?topic=%2Fcom.netapp.doc.dot-cm-cmpr-940%2Fsystem_node_autosupport_modify.html)
(https://mysupport.netapp.com/NOW/knowledge/docs/olio/autosupport/how_to.shtml)

a.) Odoslanie testovacej správy:

system node autosupport invoke -node **filer04-01** -type test

b.) Výpis zaslaných správ:

system node autosupport history show -node **filer04-01**

```
filer04::> system node autosupport destinations show
Node
  Destinations
-----
filer04-01
  autosupport@netapp.com
  netapp@tuke.sk
  netapp@uvt.tuke.sk
filer04-02
  autosupport@netapp.com
  netapp@uvt.tuke.sk
  sk-netappsupp@alef.com
  netapp@tuke.sk
2 entries were displayed.

filer04::> system node autosupport history show -node filer04-01
Node      Seq      Destination Status      Attempt  Percent  Last
         Num      Update
-----
filer04-01 2251
          smtp      cancelled   -         -         9/24/2018 10:42:52
          http      ignore      1         -         9/24/2018 10:10:36
          noteto    ignore      1         -         9/24/2018 10:10:36
          2250
          smtp      cancelled   -         -         9/24/2018 10:42:52
          http      ignore      1         -         9/24/2018 10:05:28
          noteto    ignore      1         -         9/24/2018 10:05:28
          2249
          smtp      cancelled   11        -         9/24/2018 10:42:52
          http      ignore      1         -         9/24/2018 10:03:51
          noteto    ignore      1         -         9/24/2018 10:03:44
          2248
          smtp      transmission-failed 15        -         9/24/2018 10:42:46
          http      ignore      1         -         9/24/2018 08:59:54
          noteto    ignore      1         -         9/24/2018 08:59:48
          retransmit sent-successful 1         100      9/24/2018 10:42:52
```

c.) Výpis mail serverov na zasielanie správ:

system node autosupport show -fields mail-hosts

```
filer04::> system node autosupport show -fields mail-hosts
node          mail-hosts
-----
filer04-01   147.232.3.20
filer04-02   147.232.3.20
2 entries were displayed.
```

d.) Výpis cieľov, kde majú byť zaslané správy:

system node autosupport destinations show

```
filer04::> system node autosupport destinations show
Node
Destinations
-----
filer04-01
  autosupport@netapp.com
  netapp@tuke.sk
  netapp@uvt.tuke.sk
filer04-02
  autosupport@netapp.com
  netapp@uvt.tuke.sk
  sk-netappsupp@alef.com
  netapp@tuke.sk
2 entries were displayed.
```

e.) Zrušenie odoslania správy:

system node autosupport history cancel -node **filer04-01** -seq-num **2248** -destination **smtp**

f.) Preposlanie správy na iný email:

system node autosupport history retransmit -node **Filer02-01** -seq-num **240** -uri **mailto:netapp@tuke.sk**

2. Nastavenie času

a.) Zobrazenie času

cluster date show

b.) Nastavenie časovej zóny

cluster date modify -timezone Europe/Bratislava

c.) Nastavenie časovej zóny a dátumu PLUS čas

cluster date modify -timezone Europe/Bratislava -date "1/12/2016 12:17:25"

d.) Nastavenie NTP servera

cluster time-service ntp server show

cluster time-service ntp server create -server 147.232.254.1

3. Príkaz na download súborov cez SCP

scp -P 2022 rc641og@people.tuke.sk:public_html/qual_devices.zip /mroot/etc

4. Výpis nastavenia záloh

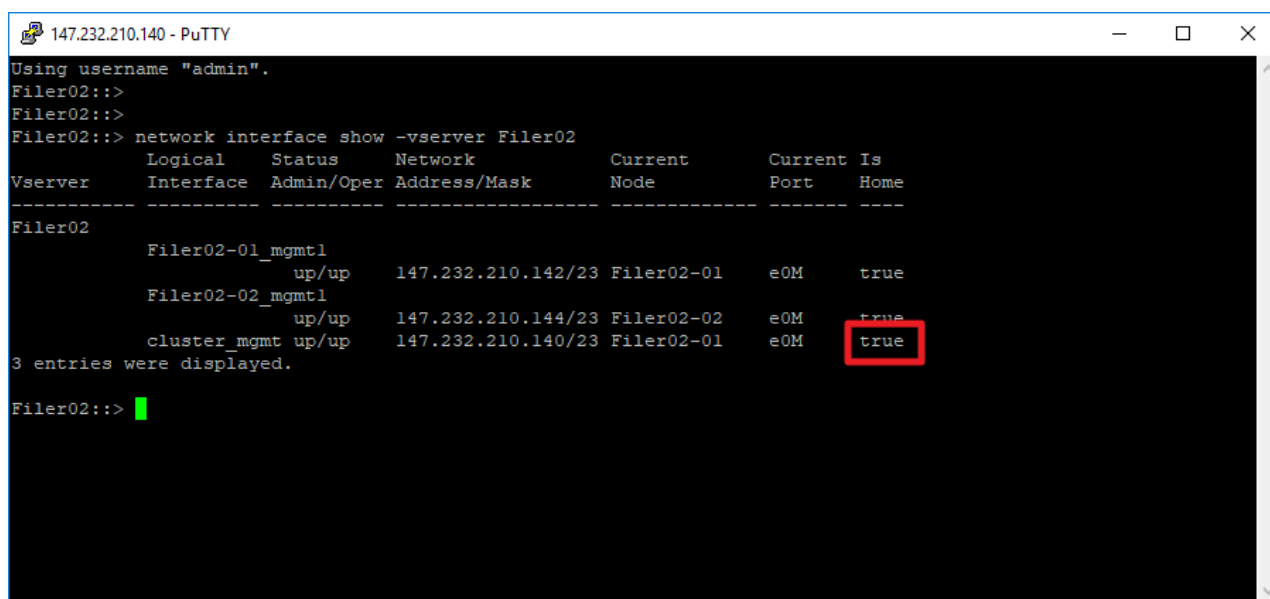
- a) set -privilege advanced
- b) system configuration backup show -node Fler03-0* -fields node,backup,backup-type, time , cluster-name , cluster-uuid , size , nodes-in-backup , version , is-auto , schedule

```
filer03:~> system configuration backup show -node filer03-0* -fields node,backup,backup-type,time,cluster-name,cluster-uuid,size,nodes-in-backup,version,is-auto,schedule
node      backup      backup-type time      cluster-name cluster-uuid size nodes-in-backup version is-auto schedule
-----
filer03-01 filer03.8hour.2018-10-16.02_15_00.7z cluster 10/16 03:15:00 filer03 862908bc-990d-11e5-8b81-00a098802812 61.48MB filer03-02,filer03-01 9.4P2 true 8hour
filer03-01 filer03.8hour.2018-10-16.10_15_02.7z cluster 10/16 11:15:02 filer03 862908bc-990d-11e5-8b81-00a098802812 62.61MB filer03-02,filer03-01 9.4P2 true 8hour
filer03-01 filer03.daily.2018-10-15.00_10_01.7z cluster 10/15 01:10:01 filer03 862908bc-990d-11e5-8b81-00a098802812 61.56MB filer03-02,filer03-01 9.4P2 true daily
filer03-01 filer03.daily.2018-10-16.00_10_01.7z cluster 10/16 01:10:01 filer03 862908bc-990d-11e5-8b81-00a098802812 62.64MB filer03-02,filer03-01 9.4P2 true daily
filer03-01 filer03.weekly.2018-10-07.00_15_00.7z cluster 10/07 01:15:00 filer03 862908bc-990d-11e5-8b81-00a098802812 57.83MB filer03-02,filer03-01 9.4P2 true weekly
filer03-01 filer03.weekly.2018-10-14.00_15_04.7z cluster 10/14 01:15:04 filer03 862908bc-990d-11e5-8b81-00a098802812 59.44MB filer03-02,filer03-01 9.4P2 true weekly
filer03-02 filer03.8hour.2018-10-15.18_15_01.7z cluster 10/15 19:15:01 filer03 862908bc-990d-11e5-8b81-00a098802812 61.66MB filer03-02,filer03-01 9.4P2 true 8hour
filer03-02 filer03.8hour.2018-10-16.02_15_00.7z cluster 10/16 03:15:00 filer03 862908bc-990d-11e5-8b81-00a098802812 61.48MB filer03-02,filer03-01 9.4P2 true 8hour
filer03-02 filer03.8hour.2018-10-16.10_15_02.7z cluster 10/16 11:15:02 filer03 862908bc-990d-11e5-8b81-00a098802812 62.61MB filer03-02,filer03-01 9.4P2 true 8hour
filer03-02 filer03.daily.2018-10-14.00_10_05.7z cluster 10/14 01:10:05 filer03 862908bc-990d-11e5-8b81-00a098802812 59.42MB filer03-02,filer03-01 9.4P2 true daily
filer03-02 filer03.daily.2018-10-15.00_10_01.7z cluster 10/15 01:10:01 filer03 862908bc-990d-11e5-8b81-00a098802812 61.56MB filer03-02,filer03-01 9.4P2 true daily
filer03-02 filer03.daily.2018-10-16.00_10_01.7z cluster 10/16 01:10:01 filer03 862908bc-990d-11e5-8b81-00a098802812 62.64MB filer03-02,filer03-01 9.4P2 true daily
filer03-02 filer03.weekly.2018-09-30.00_15_05.7z cluster 09/30 01:15:05 filer03 862908bc-990d-11e5-8b81-00a098802812 57.49MB filer03-02,filer03-01 9.4P2 true weekly
filer03-02 filer03.weekly.2018-10-07.00_15_00.7z cluster 10/07 01:15:00 filer03 862908bc-990d-11e5-8b81-00a098802812 57.83MB filer03-02,filer03-01 9.4P2 true weekly
filer03-02 filer03.weekly.2018-10-14.00_15_04.7z cluster 10/14 01:15:04 filer03 862908bc-990d-11e5-8b81-00a098802812 59.44MB filer03-02,filer03-01 9.4P2 true weekly
15 entries were displayed.
```

- c) set -privilege advanced

5. Vrátanie LIF portu do HOME (URL).

- a) Zistenie stavu portu – ak je chyba tak tam píše False
network interface show -vserver Filer02



```
147.232.210.140 - PuTTY
Using username "admin".
Filer02:~>
Filer02:~>
Filer02:~> network interface show -vserver Filer02
Logical      Status      Network      Current      Current      Is
Vserver      Interface   Admin/Oper   Address/Mask Node          Port         Home
-----
Filer02
  Filer02-01_mgmt1
                up/up      147.232.210.142/23 Filer02-01   e0M          true
  Filer02-02_mgmt1
                up/up      147.232.210.144/23 Filer02-02   e0M          true
  cluster_mgmt up/up      147.232.210.140/23 Filer02-01   e0M          true
3 entries were displayed.
Filer02:~>
```

- b) Príkaz na vrátenie portu do HOME
network interface revert -vserver Filer02 -lif cluster_mgmt

6. Disk Qualification Package Instructions – doinštalovanie SW verzia 3 a doplní aj verziu 2

(<https://mysupport.netapp.com/NOW/download/tools/diskqual/>)

Postup:

- 1.) set -privilege advanced
- 2.) storage firmware download -node * -package-url http://people.tuke.sk/robert.cecetka/qual_devices.zip
- 3.) skontrolovať príkazom:
 - a. node run -node filer04-01 -command rdfile /etc/qual_devices_v3
 - b. node run -node filer04-02 -command rdfile /etc/qual_devices_v3
- 4.) set -privilege admin

7. Upgrade firmware HDD

- a. Výpis modelov HDD a verzie firmware
storage disk show -fields disk,model,firmware-revision
- b. Zistenie či je novší na WEB NetApp-u, je tam aj popis ako to urobiť
(<https://mysupport.netapp.com/NOW/download/tools/diskfw/>)

8. Zmena certifikátu, popis na https://kb.netapp.com/app/answers/answer_view/a_id/1032196

- a.) set -privilege advanced
- b.) security certificate show – vypíše všetky certifikáty

```
Vserver Serial Number Common Name Type
-----
filer04 50946CEC18EAD59C4DD597EF759FA0AD
Certificate Authority: XRampGlobalCertificationAuthority server-ca
Expiration Date: Mon Jan 01 06:37:19 2035
filer04 200605167002 certSIGNROOTCA server-ca
Certificate Authority: certSIGN
Expiration Date: Fri Jul 04 19:20:04 2031
filer04 15C8BD65475CAF897005EE406D2BC9D
Certificate Authority: ePKIRootCertificationAuthority server-ca
Certificate Authority: "Chunghwa Telecom Co., Ltd."
Expiration Date: Wed Dec 20 03:31:27 2034
filer04 525EC044F0339 filer04 server
Certificate Authority: filer04
Expiration Date: Thu Dec 01 16:34:58 2016
filer04 344ED55720D5EDEC49F42FCE37DB2B6D
Certificate Authority: thawtePrimaryRootCA server-ca
Certificate Authority: thawte Primary Root CA
Expiration Date: Thu Jul 17 01:59:59 2036
filer04 35FC265CD9844FC93D263D579BAED756
Certificate Authority: thawtePrimaryRootCA-G2 server-ca
Certificate Authority: thawte Primary Root CA - G2
Expiration Date: Tue Jan 19 00:59:59 2038
filer04 600197B746A7EAB4B49AD64B2FF79FB
Certificate Authority: thawtePrimaryRootCA-G3 server-ca
Certificate Authority: thawte Primary Root CA - G3
Expiration Date: Wed Dec 02 00:59:59 2037
filer04-svm 52E4E59CA9D7D filer04-svm server
Certificate Authority: filer04-svm
Expiration Date: Sat Mar 18 09:15:32 2017
106 entries were displayed.
filer04:~>
```

- c.) security ssl show - výpis už neplatných certifikátov

```
filer04:~> security ssl show
Serial Server Client
Vserver Number Common Name Enabled Enabled
-----
filer04 525EC044F0339 filer04 true false
Certificate Authority: filer04
filer04-svm 52E4E59CA9D7D filer04-svm true false
Certificate Authority: filer04-svm
2 entries were displayed.
```


f.) vymazanie certifikátu pre filer04

```
security certificate delete -common-name filer04 -ca filer04 -type server -vserver filer04 -serial 525EC044F0339
```

Kontrolný výpis

```
filer04::*> security ssl show
      Serial
Vserver Number Common Name      Server Client
-----
filer04 - -                      false  false
Certificate Authority: -

filer04-svm
      52E4E59CA9D7D
      filer04-svm
Certificate Authority: filer04-svm

2 entries were displayed.
```

g.) vymazanie certifikátu pre filer04_svm

```
security certificate delete -common-name filer04_svm -ca filer04_svm -type server -vserver filer04_svm -serial 52E4E59CA9D7D
```

```
filer04::*> security ssl show
      Serial
Vserver Number Common Name      Server Client
-----
filer04 - -                      false  false
Certificate Authority: -

filer04-svm
      - -
Certificate Authority: -

2 entries were displayed.
```

h.) vytvorenie certifikátu

```
security certificate create -vserver filer04 -common-name filer04 -size 2048 -type server -country US -expire-days 3650 -hash-function SHA256
```

```
security certificate create -vserver filer04_svm -common-name filer04_svm -size 2048 -type server -country US -expire-days 3650 -hash-function SHA256
```

i.) kontrola vytvoreného certifikátu

```
security certificate show -instance -vserver filer04 -common-name filer04
```

```
security certificate show -instance -vserver filer04_svm -common-name filer04_svm
```

```
filer04::*> security certificate show -instance -vserver filer04 -common-name filer04
Vserver: filer04
FQDN or Custom Common Name: filer04
Serial Number of Certificate: 1560CADB78F81615
Certificate Authority: filer04
Type of Certificate: server
Size of Requested Certificate(bits): 2048
Certificate Start Date: Thu Oct 25 09:55:16 2018
Certificate Expiration Date: Sun Oct 22 09:55:16 2028
Public Key Certificate: -----BEGIN CERTIFICATE-----
MIIDTjCCAjagAwIBAgIIFWDK23j4FhUwDQYJKoZIhvcNAQELBQAwHZEQMA4GA1UE
AxMHZmlsZS5kaWVudDlMakGALUEBHMCMVVMwHhcNMTgxMDI1MDc1NTE2WhcNMjg5MDIy
MDE1NTE2WjAfmRAwDgYDVQQDEwdmaWxlLjA0MQswCQYDVQQGEwJVUzCCASIAwDQYJ
KoZihvcNAQEBBQADggEPADCCAQoCggEBALBHVAUhgtnAjDDiOy+1QjutyP5PwEQ
dg5m6lWF/DecKo7zEsuDgUFC6T0CPcuedusMfmwKSUUAptYiJEiGuLcA3c5j41H
vLSzFhA3WCIWF/TBZSjPHVdH0ZQGATgr+wdROM77dEZy80TKiCE70x9VKWadBVVH
ySsuqSbCTReC8ACFb93csxDsR5Vh908txFE1XRezqGzKccM1zyJ+BuDnefl4LEUU
+ZVrtaUjaf2EO730X2q8zBQhcdlegsw1OXzW1glewE4FYLFnGNT6KayxRqyVUZ1
ERcyhhV2NUiW0sdJ5kZeCV1yT97o5WQ6LrdzLJxiQg5w/qDUGnTCpMCAwEAAaOB
jTCBijAMBgNVHRMERTADAQH/MASGALUdDwEAwIBBjAdBgNVHQ4EFgQUP/XKxJp3
aYgMwkrBjroOwmGrKkEwTgYDVR0jBEcwRYAUP/XKxJp3aYgMwkrBjroOwmGrKkEw
I6QhMB8xEDA0BgNVBAMTB2ZpbGVyMDQxMzA0MjYyMDQxMzA0MjYyMDQxMzA0MjYy
MDE1NTE2WjAfmRAwDgYDVQQDEwdmaWxlLjA0MQswCQYDVQQGEwJVUzCCASIAwDQYJ
BgkqhkiG9w0BAQsFAAOCAQEAXYJSYqrtjLWCNwstrf44fmpLhhFBkq215B+H9+jE
VYOF6RnTlqRMH81PTEJUnlCC2Y8U1FsPZ2fYpLy97ZE50qcF4/bDAkrViteSgPv8I
ubHRGyJHePALcrCaPszBfM1vyNTVvkMzBIxGQdFA7f7v1RL41hXkAHD9m7JJoBhs
ctLF4dQ2w09bjzsqcJLJUOmBkgcyoetljBIwAuv0TN4UKzJ5iYjcyQ3LlfmZsuP
2ewaMw8kx08nCR2iRIYsR7omObuftjxvZvEQUPzhayhkK8nOpYC7aWnWpkmXhCF9i
2oQ3KL3bbzWRwaqEAF1C/66/Ge0F7wJgUxrycvtPQV664A==
-----END CERTIFICATE-----
Country Name (2 letter code): US
State or Province Name (full name):
Locality Name (e.g. city):
Organization Name (e.g. company):
Organization Unit (e.g. section):
Email Address (Contact Name):
Protocol: SSL
Hashing Function: SHA256
Subtype: -
```

j.) povolenie certifikátu:

```
ssl modify -vserver filer04 -server-enabled true
```

```
ssl modify -vserver filer04_svm -server-enabled true
```

```
filer04::*> security ssl show
Serial Server Client
Vserver Number Common Name Enabled Enabled
-----
filer04 1560CADB78F81615
filer04 true false
Certificate Authority: filer04
filer04-svm
1560CAED4F21952C
filer04-svm true false
Certificate Authority: filer04-svm
2 entries were displayed.
```

```
ssl modify -vserver filer03 -ca filer03.cert -serial 158738A7A4D18C9C -server-enabled true
```

```
ssl modify -vserver filer03-svm -ca filer03-svm.cert -serial 158738ACEC215B23 -server-enabled true
```

k.) xxss

9. Vymazanie všetkých spare diskov - prepíše ich nulami

```
storage disk zerospares -owner node1b
```

Vypísanie stavu mazania

```
storage disk show -fields zeroing-percent
```

vypísanie nevmazaných spare diskov

```
storage disk show -fields zeroed
```

Na FAS8040 vymazanie spare diskov, ktoré nie sú zero:

```
disk zero spares
```

Na FAS8040 vypísanie stavu vymazania spare:

```
aggr status -s
```

10. Zistenie stavu pri tvorbe agregátu t.j. mazanie diskov.

```
storage aggregate show-status
```

11. Premenovanie agregátu ([URL](#))

```
storage aggregate rename -aggregate aggr5 -newname sales-aggr
```

12. Ping

```
network ping -node filer06-01 -destination 147.232.75.1 -show-detail
```

13. Nastavenie LIF-u aby sa vracal späť do svojho HOME portu

```
network interface modify -vserver filer06_svm -lif filer06_svm_nfs_lif1 -auto-revert true
```

```
network interface modify -vserver filer06_svm -lif filer06_svm_nfs_lif2 -auto-revert true
```

14. Vypísanie DNS záznamov:

```
vserver services dns show
```

15. Výpis teplôt a stavu zariadenia:

Pre Filer1A a 1B

```
environment status chassis
```

Pre ostatné DP

```
system node run -node filer04-01 -command environment status
```

16. Výpis senzorov

Pre Filer1A a 1B

```
environment chassis list-sensors
```

Pre ostatné DP

```
system node run -node filer04-01 -command environment chassis list-sensors
```


17. Príkaz na prístup ku shell úrovne NetApp-u

```
system node run -node filer04-01
```

potom sa dá dať príkaz napr.: `rdfile /etc/mib/netapp.mib`

Zoznam dostupných príkazov:

?	environment	ndmpcopy	sis
acpadmin	fcadmin	netstat	snap
aggr	fcstat	options	snapmirror
backup	file	partner	stats
cdpd	help	priority	storage
cf	hostname	priv	sysconfig
clib	ic	psmadmin	sysstat
cna_flash	ifconfig	rdfile	timezone
coredump	ifgrp	reallocate	uptime
date	ifstat	restore_backup	version
dcb	key_manager	revert_to	vfiler
df	lldp	rshstat	vmsservices
disk	logger	sasadmin	vol
disk_fw_update	man	sasstat	wafldtop
diskcopy	maxfiles	savecore	wrfile
ems	mt	shelfchk	

Zo shell režimu oddídeme príkazom `exit`.

18. Vypísanie histórie Autosupportu

```
autosupport history show  
autosupport history show -node Filer02-01
```

19. Reštart jedného nódu:

```
system node reboot -node Filer02-01 -reason "only node reboot "
```

potom sa dá zadať príkaz cez SP (service port) na úplné vypnutie
`system power off`

20. Presun dát z disku 1.0.12 na disk 1.0.2 (1.0.2 bol spare)

storage disk replace -disk 1.0.12 -replacement 1.0.2 -action start

disk show -fields replacing

disk show -fields replacing,copy-percent, copy-destination

job show -id 15895

21. Výpis spare diskov

storage aggregate show-spare-disks

22. Uvedenie disku do FAIL stavu

storage disk fail -disk 1.0.12

- Nanútenie výpadku na silu.

storage disk fail -disk 1.0.12 -immediate true

23. Zrušenie FAIL stavu disku

storage disk unfail -disk 1.0.2 -spare

24. Výpis chybných diskov

storage disk show -broken

25. Výpis verzií firmware a výrobcu

storage disk show -fields firmware-revision,vendor,model

26. Výmena disku pri Filer1A alebo Filer1B

(https://kb.netapp.com/app/answers/answer_view/a_id/1035597)

- najprv si nastaviť vyššie práva priv set advanced
- fyzicky vymeniť disk – dať tomu aspoň 1 minútu
- disk si vieme rozblikať blink_on 0c.27.11
 blink off 0c.27.11
- pridať disk pre daný NODE disk assign 0c.27.11
- zmeniť práva späť priv set

27. Nastavenie svetla pre daný HDD na 5 minút

storage disk set-led -disk 1.2.21 -action on -duration 5

28. Zmazanie pôvodného ownera na HDD, ak sa disk prekladal z iného NetApp-u

storage disk removeowner -disk 1.0.2

alebo

```
set -privilege advanced
storage disk removeowner -disk 1.0.22 -data true
storage disk removeowner -disk 1.0.22 -root true
```

29. Pridanie disku konkrétnemu OWNER-ovi

```
set -privilege advanced
storage disk assign -disk 1.0.22 -owner filer03-02 -data true
storage disk assign -disk 1.0.22 -owner filer03-02 -root true
```

30. Nastavenie SYS Log-u

Vytvorenie pravidla **syslog-ems** na server 147.232.3.180 :

```
event notification destination create -name syslog-ems -syslog 147.232.3.180
```

Povolenie zasielania notifikácií pre pravidlo **syslog-ems**:

```
event notification create -filter-name important-events -destinations syslog-ems
```

```
filer03::*> event notification destination show
Name                Type                Destination
-----
netpp-uvt-tuke-sk_server
                    rest-api            https://netpp.uvt.tuke.sk:9443/acq/ontap/ems
snmp-traphost        snmp                - (from "system snmp traphost")
syslog-ems           syslog              147.232.3.180
syslog-ems2          syslog              147.232.3.179
4 entries were displayed.
```

31. Nastavenie NFS pre pripojenie do Windows-u

a.) Povolit' mount vo Windows-e.
(<https://graspingtech.com/mount-nfs-share-windows-10>)

- b.) Na strane NetApp-u urobiť:
- I. Vytvoriť volumes
 - II. Povolit' NFS ver3
 - III. Vytvoriť „Export Policies“ pre danú IP adresu
 - IV. Zadať v NetApp-e nasledujúce príkazy:

(<https://library.netapp.com/ecmdocs/ECMP12454943/html/GUID-EA9CFAD6-7F78-4997-A6C7-D2EC42EBD3A3.html>)

```
Vserver: filer03-svm

  General Access:  true
                   v3:  enabled
                   v4.0: enabled
                   4.1:  enabled
                   UDP:  enabled
                   TCP:  enabled
  Default Windows User:
  Default Windows Group: -
```

```
vserver nfs modify -vserver filer03-svm -showmount enabled
```

```
vserver nfs modify -vserver filer03-svm -v3-ms-dos-client enabled
```

- V. NFS sa do Windows pripojí príkazom:
mount \\147.232.210.245\filer03_vol4 z:

32. Using inactive data reporting ([URL](#))

a) Výpis stavu:

```
volume show -fields performance-tier-inactive-user-data, performance-tier-inactive-user-data-percent
```

b) Nastavenie:

```
storage aggregate modify -aggregate filer03_aggr1 -is-inactive-data-reporting-enabled true
```

33. sss