Open Infrastructure - Task #6601

Task # 6557 (Closed): Rebuild the whole DCL infrastructure - aka place9

Setup the arista switches at place6-east and place9

04/16/2019 11:16 AM - Nico Schottelius

Status:	Closed	**Start date:**	04/16/2019
Priority:	Normal	**Due date:**	
Assignee:	ll nu	**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:			
PM Check date:			

Description

by serial console

- update switches to latest EOS that we have
- Setup default passwords
- Connect to existing switches, understand the existing mlag configuration
  - show running
- Setup mlag on new switches switch: switch5, switch6
  - find out whether mlag / ipv6 works
  - not sure if the mlag vlan needs to be unique (??)
- Setup hostnames (switchX-placeY)
- Checkout that switch config is clean / empty

Connect / configure place9 switches

- with mlag
- test that it works between your switches

Add IPv6 addresses to switches

- Use the transfer network
- Checkout [[datacentelight:Networking]]

connecting to existing switches

- Connect high numbered ports from switch5 and switch6 to high numbered ports on switch1/switch2
  - Ping nico at this stage
- Create a port-channel with mlag over two switches connecting to switch3/switch4
- Place that port-channel intro trunk mode
- port channel number = first interface number in the port channel
  - i.e. ethernet 51/52 -> port-channel 51
- Containing 4 ports (2 per switch)
- switch3/4 will be configured by Nico (=the other side)

hints

- switch2-place6#show lacp neighbor

History

#1 - 04/29/2019 11:28 AM - Samuel Hailu

~~* Fiber cable is in Port-33 in both sides~~

#2 - 04/29/2019 11:58 AM - Nico Schottelius

Which switch on provider (=dcl old) side?

#3 - 04/29/2019 03:27 PM - Samuel Hailu

- Correction Switch-1 Port-39 switch-1

#4 - 04/29/2019 08:20 PM - Nico Schottelius

Note: switch1, port33 is a 1gbit trunk port -> seems not to be the right one!

#5 - 04/30/2019 11:57 AM - Samuel Hailu

How to Arista

- first reset the used Arista switch
- Set up username and password

```
*To be Done*
```

- Set up the default route and the default gateway address

```
(config)#ipv6 route ::/0 2a0a:e5c0:1:7::7
```

- enable ipv6 all interfaces i.e(all interfaces are in vlan-1 by defaut)

```
(config)#interface vlan 1
```

```
(config-v1)#ipv6 enable
```

- check if the what is active

```
(config-if-Vl1)#show active
```

- if it works we will see this

```
interface Vlan1
  ipv6 enable
```

#6 - 04/30/2019 12:03 PM - Nico Schottelius

Port 39 in switch1 is not connected:

```
Et39                      notconnect   1        full   10G    Not Present
```

#7 - 05/01/2019 03:09 PM - Nico Schottelius

- Status changed from New to Closed

- It's reachable via IPv6, static route

#8 - 05/01/2019 03:39 PM - Nico Schottelius

- Status changed from Closed to In Progress

Please document how you updated the switch

#9 - 05/02/2019 12:10 PM - Samuel Hailu

Setting up Switch in Place 9

- So this is how it looks like from the beginning. * Frist we got the fibre-cable(up-stream) from the ISP (Nico), and we connected the fiber cable to our Arista switch (switch-1) in our side.
- Reseting the switch to factory default.
  - press

    ```
    ctl-c
    ```

when the Arista is booting.

- once you pressed that you will be in the

```
Aboot
```

mode.

- Type

```
fullrecover
```

and press Enter to revert /mnt/flash to factory default
state, or just press Enter to reboot: fullrecover. * At this point the Arista will be set to factory default

- Upgrading Arista

- getting ready a usb stick with fat32 format and coping the file into the stick

```
/dev/sdb1      40   409639   409600  200M EFI System
/dev/sdb2  411648 30238719 29827072 14.2G Microsoft basic data
root@line:~# mount /dev/sdb2 /mnt/
FUSE exfat 1.3.0
WARN: volume was not unmounted cleanly.
root@line:~# umount /mnt
root@line:~# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.32.1).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Command (m for help): m

Help:

  GPT
   M   enter protective/hybrid MBR

  Generic
   d   delete a partition
   F   list free unpartitioned space
   l   list known partition types
   n   add a new partition
   p   print the partition table
   t   change a partition type
   v   verify the partition table
   i   print information about a partition

  Misc
   m   print this menu
   x   extra functionality (experts only)

  Script
   I   load disk layout from sfdisk script file
   O   dump disk layout to sfdisk script file

  Save & Exit
   w   write table to disk and exit
   q   quit without saving changes

  Create a new label
   g   create a new empty GPT partition table
   G   create a new empty SGI (IRIX) partition table
   o   create a new empty DOS partition table
   s   create a new empty Sun partition table

Command (m for help): o
Created a new DOS disklabel with disk identifier 0xf9f75383.
The old gpt signature will be removed by a write command.

Command (m for help): n
Partition type
   p   primary (0 primary, 0 extended, 4 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
```

```
First sector (2048-30240767, default 2048):
Last sector, +sectors or +size{K,M,G,T,P} (2048-30240767, default 30240767):

Created a new partition 1 of type 'Linux' and of size 14.4 GiB.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

root@line:~# mkfs.vfat -F32 /dev/sdb1
mkfs.fat 4.1 (2017-01-24
```

- * plug it into the switch and run the following commands

```
switch1#copy usb1:/EOS-2GB-4.18.6M.swi flash:
switch1#configure
switch1(config)#boot system flash:/EOS-2GB-4.18.6M.swi
```

- finally reboot the arista
- Adding username and password
- The initial configuration provides one username, admin, that is not assigned a password.but we can set up a password to the default admin username.
    - `switch(config)#username admin secret <pasword-here>`
- Next steps are to set up the default route
- [redacted]
- enable ipv6 all interfaces i.e(all interfaces are in vlan-1 by defaut)

```
(config)#interface vlan 1

 (config-v1)#ipv6 enable
```

- check if the what is active

```
 (config-if-Vl1)#show active
```

- if it works we will see this

```
 interface Vlan1 ipv6 enable
```

- configuring ipv6 end point or default static ip address

```
 ipv6 route 2a0a:e5c0:1:7:18 vlan 1
```

#10 - 05/02/2019 01:26 PM - Nico Schottelius

Nice!

redmine@ungleich.ch writes:

#11 - 07/10/2019 10:22 AM - Nico Schottelius

- Subject changed from Setup the first arista switch to Setup the first arista switches

- Description updated

- Assignee changed from Samuel Hailu to ll nu

#12 - 07/10/2019 10:24 AM - Nico Schottelius

- Description updated

#13 - 07/10/2019 06:02 PM - Nico Schottelius

Suffixes are in [[datacenterlight:Networking]]

#14 - 07/10/2019 06:05 PM - Nico Schottelius

- Description updated

#15 - 07/10/2019 06:13 PM - Nico Schottelius

- Description updated

domain-id place9-east

#16 - 07/10/2019 07:24 PM - Nico Schottelius

kraftwerk:

- switch3
  - Et32 connected in Po31 full 10G 10GBASE-SRL
  - goes to switch5.place6 ET52
- switch4
  - Et32 connected in Po31 full 10G 10GBASE-SRL
  - goes to switch5.place6 ET51
- switch3
  - Et31 connected in Po31 full 10G 10GBASE-SR
  - goes to switch6.place6 ET52

... all 4 up!

#17 - 07/11/2019 08:44 PM - Il nu

Im trying to create a redundant sfp connection from mikrotik to 2 aristas. First i assumed that the port-channel is propagated through mlag and 2 physically seperate interfaces will bond (in practice i named the two ethernet ports with the same port-channel number), but ive read some docs and port-channel can only bond ports on one physical switch. Since mlag is already active I assuming bonding the two mikrotik sfp ports and connecting it to 2 arista switches is enough. First test worked (crs all ports and sfpbond in bridge, arista port17-s confed to tag with vlan 15, arista interface conf: (#interface ethernet 17, #switchport access vlan 15) on both) unplugging one sfp caused few second outage, got ip-s from coworking.
Then I realized I only need 1 port for vlan tagging in crs for wlan.
Now on both aristas both port17 in #switchport mode trunk
crs confed as
ether24 and sfpplus1 in bridge
interface bridge port add pvid=15 interface=ether24 bridge=bridge
bridge=bridge vlan-ids=15 tagged=sfp-sfpplus1
untagged=ether24 current-tagged=sfp-sfpplus1
current-untagged=ether24
interface bridge set bridge vlan-filtering=yes

#18 - 07/12/2019 12:26 PM - Nico Schottelius

Adding bgp routing to switch5.place6

```
switch5-place6#configure
switch5-place6(config)#router bgp 209898
! IP routing not enabled
switch5-place6(config-router-bgp)# router-id 0.0.0.25
switch5-place6(config-router-bgp)#bgp default ipv6-unicast
switch5-place6(config-router-bgp)#maximum-paths 4
switch5-place6(config-router-bgp)#   bgp listen range 2a0a:e5c0:1:8::/64 peer-group ungleich remote-as 209898
switch5-place6(config-router-bgp)#   neighbor ungleich peer-group
switch5-place6(config-router-bgp)#   neighbor ungleich maximum-routes 12000
switch5-place6(config-router-bgp)#exit
switch5-place6(config)#ip routing
switch5-place6(config)#ipv6 unicast-routing
switch5-place6(config)#write
```

#19 - 07/12/2019 12:38 PM - Nico Schottelius

hints for mikrotik:

- delete the port-channel
- et17: switchport mode trunk
- et17 NO channel-group

#20 - 07/16/2019 11:47 AM - Il nu

- Subject changed from Setup the first arista switches to Setup the arista switches place6-east and place9

- Status changed from In Progress to Waiting

place9:

```
add switches to DNS
```

```
add BGP configuration for new switches (with a PR in dot-cdist)
```

- Write wiki for current place6/9 setup

#21 - 07/16/2019 11:48 AM - ll nu

- Subject changed from Setup the arista switches place6-east and place9 to Setup the arista switches at place6-east and place9

#22 - 12/09/2019 11:54 AM - ll nu

- Status changed from Waiting to Closed

#23 - 12/09/2019 03:04 PM - ll nu

place9 is no more/ partially moved to place10