CLUSTERLION INSTALLATION GUIDE
(A220 and FAS27x0 Systems)

Please take time to read the following instructions thoroughly and carefully before the first use of ClusterLion.
The installation itself is a simple task and can be performed by a single technician with NetApp installation experience.
At the link http://prolion.at/documents/clusterlion/ClusterLion_detailed_cabling_a220-fas27x0.pdf you will find the correct cabling.
If there is still something unclear after reading that, please contact us.

Please follow these step-by-step instructions:

1) Please mount the ClusterLion appliances into the MetroCluster racks with the NetApp storage controllers. The rack mount kits are included.

2) Please connect the 4 power inputs of the ClusterLion appliance to the power supply (PDU).
   The use of different power sources makes the ClusterLion and also the NetApp Storage controller much more stable. So please use as many different power sources you have, including UPS, generator, regular power etc.

3) Please connect the ClusterLion appliances to the supplied Agent-Boxes via the PoE ports.
   Please make sure that, the Support-Mode switch is off.
   IMPORTANT: Only use direct-patch cabling, without active components (switches, routers etc.) that is no longer than 100 meters.
   The Agent-Boxes are powered via the battery backed ClusterLion PoE port. So even in case of a total power cut (UPS and normal grid) the Agent-Boxes continue working.

4) Setup of the NetApp Storage Controller:
   Under the link http://prolion.at/documents/clusterlion/create.users.txt you will find the commands for setting up the user and roles needed by the ClusterLion. Please execute the commands on each NetApp storage system.

   - Username: clusterlion
   - PW: please select a password

5) Setup of the Agent-Boxes:
   Please unplug one USB-stick from one Agent-Box and edit the config-file (config.local.json):
   - In the Line `"storagePass": "netapp123",` replace netapp123 with your selected password.
   - In the Line `"storageNodeIp01": "192.168.175.31",` replace the IP-Address with the Cluster-Management IP-Address (e0M) from your first Storage-Node.
   - In the Line `"storageNodeIp02": "192.168.175.32",` replace the IP-Address with the Cluster-Management IP-Address (e0M) from your second Storage-Node.

   Please also create a directory named `"core"` in the root directory of the USB-stick and create a further directory named `"on.boot"` within the `"core"` directory.

Within the "on.boot" directory, please create a file named "60--set-default-gw.sh" with the following content:

```bash
#!/bin/bash
PURPOSE="default gateway setup for configurations with storage node access on customer
mgmt lan (FAS27x0/A220)"
VERSION="2019-08-28"
AUTHOR="manuel.sanz@prolion.at";
#

# -- auto: path variables
scriptSelf=$0;
scriptName=$(basename $scriptSelf)
scriptCallDir=$(dirname $scriptSelf)
scriptFullDir=$(cd $scriptCallDir;echo $PWD)
scriptFullPath=$scriptFullDir/$scriptName;
scriptParentDir=$(dirname $scriptFullDir)
# -- /auto: path variables


# -- auto: import helpers
. $scriptParentDir/lib/helpers.sh || exit 1
# -- /auto: import helpers


# -- get configuration
cfgParse
# -- /get configuration


# -- default gw setup
sudo /sbin/route add default gw 192.168.175.1
# -- /default gw setup
```

ATTENTION: UTF-8 encoding and UNIX line break (LF) is necessary!

After that please plug in the USB-stick in the Agent-Box and unplug and re-plug the PoE of the Agent-Box. The config file will be installed automatically by rebooting the Agent-Box.
Then repeat this step with the remaining Agent-Boxes.

6)   Setup of the ClusterLion:
     Please connect your PC via Ethernet directly to the ClusterLion Routing port. Set the network interface of your PC to a fixed IP address in the network 192.168.168.0/24 (for example 192.168.168.99/24). Now open your web browser and navigate to the configuration IP address of the ClusterLion (Location 1: 192.168.168.100; Location 2: 192.168.168.200).

     Login:
     - Username: root
     - Password: routercheck

     Please configure the primary network interface to the designated IP address of the ClusterLion in your management LAN. (Please do not forget the Apply button at the bottom of the page!)
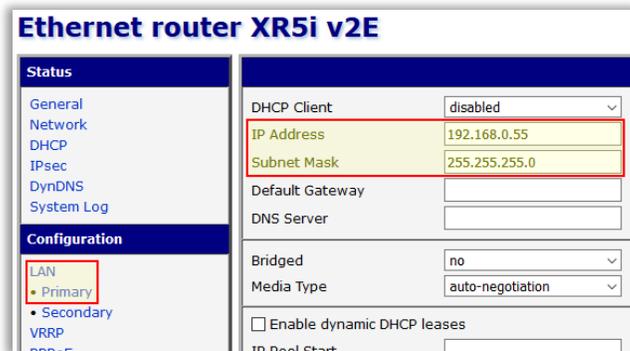
7) Please connect the Routing port from ClusterLion to the designated port of the management switch (where also the e0M management ports from the storage nodes are connected) and the serial ports from the ClusterLion to the serial ports of the NetApp storage controllers.

8) Please connect on each ClusterLion (Location 1 and Location 2) the IC Port directly with the other IC Port. For this Bypass (Bridge) please use the short patch cable (25 cm) that we have delivered.

9) Please login to the ClusterLion Portal with the standard user and standard password.
    You will receive the link to ClusterLion Portal, user and password from us, a few days before ClusterLion installation. (In case you don't, please request it from support@clusterlion.com)
    After login, please change the password.

10) Please enter all contact details incl. telephone number and email addresses of people that are meant to receive push notifications from ClusterLion under „Support" in the ClusterLion Portal.
    In Case of critical failures or if an automatic Switchover has been triggered , all listed contacts will be notified via email.
    Please also enter the telephone number of your 24x7 admin team for urgent cases.
    Under „Appliances" please enter the address of ClusterLion Location 1 and ClusterLion Location 2.
    Access times to the locations and the contact details of the responsible site admin are also required. This information is only used for support-purposes.

11) An initial Power-On at Location 1 and Location 2 shall be done via ClusterLion Portal.
    Please klick on the right top in ClusterLion Portal "Actions" and then Power-on Location 1 and Power-On Location 2.

12) Please check your ClusterLion Portal under "Dashboard" to ensure that all parameters are "green" (OK). Then check at Location 1 and Location 2 if all power out control LED's (green) on the ClusterLion rear sides are active.

13) If all values are green (OK) in the ClusterLion Portal and you have checked the power out control LED's (green), then the power connections of the NetApp Storage Controller can be disconnected from the PDU and connected to the ClusterLion.

    ATTENTION: Please always make sure to disconnect only one power cable from the NetApp controllers at a time! After reconnecting the first cable please check if the NetApp power supply is working (green LED on the power supply).
    If the first power supply runs again, please wait for 30 seconds before reconnecting the second power supply to the ClusterLion appliance.
    After reconnecting the second cable please check if the NetApp power supply is working (green LED on the power supply).
    Please continue until all power connections of the storage controllers are connected to the ClusterLion power outputs.

The installation is now completed and ClusterLion is active!

In case of any questions please contact us at support@clusterlion.com. Thank you!