mmhealth update

IBM Storage Scale Days 2024

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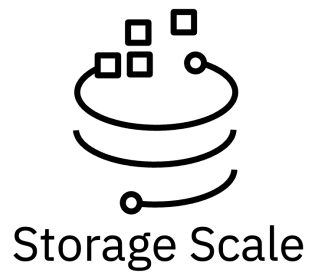
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Ever wondered what **DEPEND** really means? And how status of one component interacts with others?
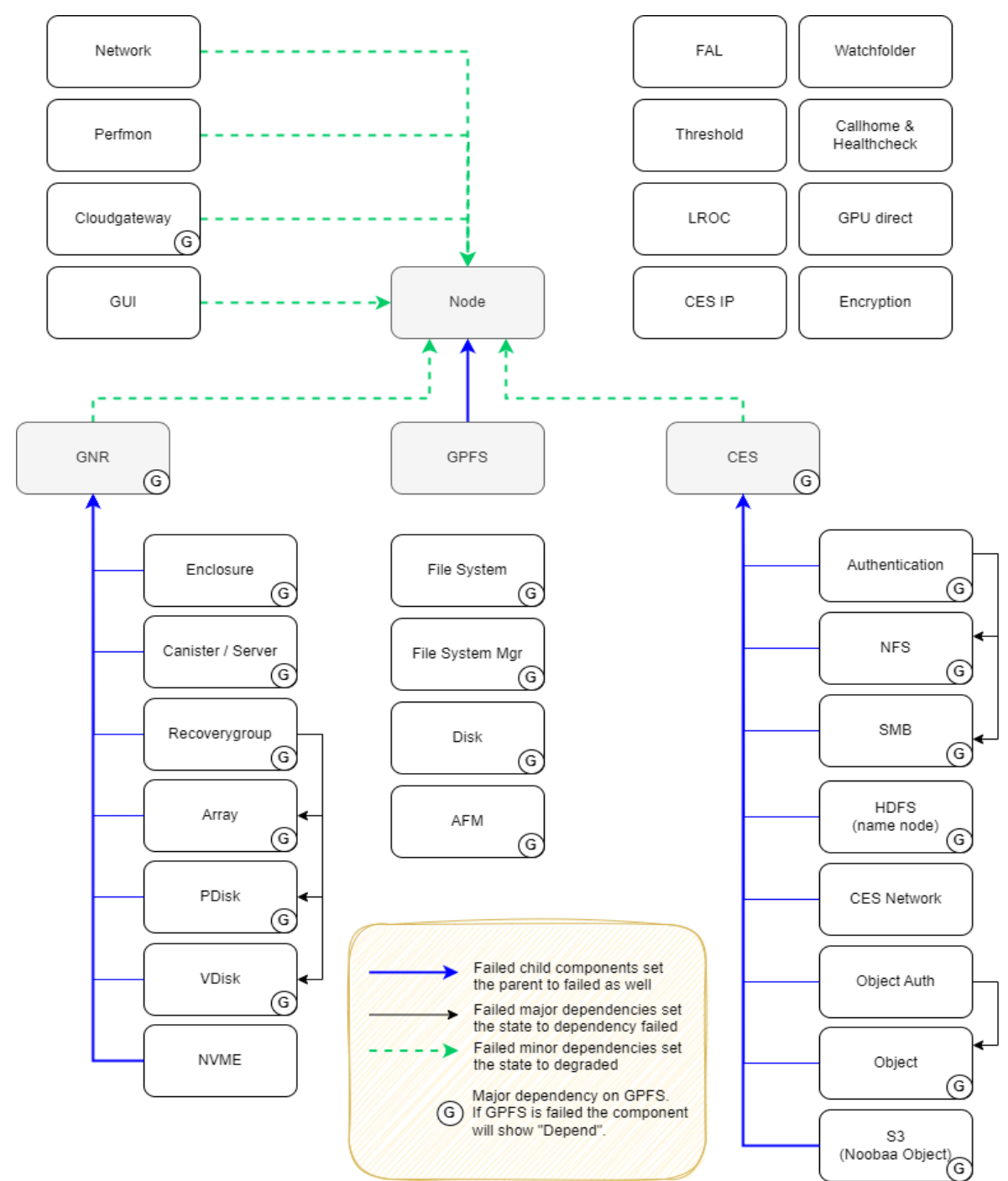
```
Node name:        nnode-13d.vmlocal
Node status:      FAILED
Status Change:  Now


Component         Status          Status Change       Reasons & Notices
--------------------------------------------------------------------------------
GPFS              FAILED          Now                 gpfs_down, quorum_down
NETWORK           HEALTHY         5 days ago          -
FILESYSTEM        DEPEND          Now                 unmounted_fs_check(cesSharedRoot, gpfs0)
DISK              DEPEND          Now                 -
CES               DEPEND          1 min. ago          ces_monitord_down, ces_network_ips_down
PERFMON           HEALTHY         5 days ago          -
THRESHOLD         HEALTHY         5 days ago          -
```

Inner workings of the same:

Because GPFS is failed `Filesystem`, `Disk` and CES are dependent failed. Events on dependent failed will never be the root cause of an issue.
Because GPFS is failed the Node state will also become failed.

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Some lesser used / know `mmhealth` options:

```
--refresh

--resync

--extended  /  -X

--no-notices
```

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```
# mmhealth node show --refresh

Monitoring refresh started asynchronously for all active components.
```

```
# mmhealth node show nfs --refresh

Node name:          node-13d.vmlocal
```

A refresh of a single component will be done synchronously directly giving updated output

```
Component       Status          Status Change       Reasons & Notices
-------------------------------------------------------------------------
NFS             HEALTHY         1 min. ago          -

There are no active error events for the component NFS on this node (node-13d.vmlocal).
```

Do you see differences between `mmhealth node show` and `mmhealth cluster show` ?
Command below to the rescue:

```
# mmhealth node show --resync
Resend events to cluster state manager
```

Less intrusive than `mmsysmoncontrol restart`, especially if you happen to restart on the cluster manager node which happens to collect all the state data – and a restart will cause a complete state sync-up across the cluster.
On the same note please be careful with `mmhealth node show –resync –a` because of the same overhead.

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```
# mmhealth node show --extended

Node name:      node-11d.vmlocal
Node status:    DEGRADED
Status Change:  1 min. ago
```

What to do when some events pop-up?
Just ask --extended/-X to get the details in one go.

```
Component       Status       Status Change       Reasons & Notices
----------------------------------------------------------------------------
FILESYSMGR      HEALTHY      29 min. ago         -
GUI             DEGRADED     17 hours ago        gui_refresh_task_failed
HEALTHCHECK     HEALTHY      17 hours ago        -
PERFMON         FAILED       1 min. ago          pmsensors_down
THRESHOLD       HEALTHY      17 hours ago        -


gui_refresh_task_failed warning event signals GUI to show DEGRADED
    Message:      The following GUI refresh task(s) failed: CES_SERVICE_STATE.
    Cause:        There can be several reasons.
    Description: One or more GUI refresh tasks failed, which means that data in the GUI is outdated.
    User Action: Check whether there is additional information available by using the '/usr/lpp/mmfs/gui/cli/lstasklog
                 [taskname]' command. Then, run the specified task manually on the CLI by using the
                 '/usr/lpp/mmfs/gui/cli/runtask [taskname] --debug' command. Check the GUI logs under
                 '/var/log/cnlog/mgtsrv' and contact IBM Support if this error persists or occurs more often.


pmsensors_down error event signals PERFMON to show FAILED
    Message:      The pmsensors service should be started, but is stopped.
    Cause:        The node has the perfmon designation in the 'mmlscluster' command, but the pmsensors service is not
                  running.
    Description: The performance monitor sensors are down.
    User Action: Start the service by using the 'service' or 'systemctl' command. Otherwise, remove the perfmon
                 designation by using the 'mmchnode' command.
```

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```
# mmhealth node show

Node name:      norbert-11d.vmlocal
Node status:    HEALTHY
Status Change:  22 min. ago

Component        Status      Status Change      Reasons & Notices
--------------------------------------------------------------------------
GPFS             HEALTHY     17 hours ago       [quorum_warn]
NETWORK          HEALTHY     18 hours ago       -

# mmhealth node show gpfs -v
Node name:      norbert-11d.vmlocal
Component        Status      Status Change      Reasons & Notices
---------------------------------------------------------------------------
GPFS             HEALTHY     2024-02-12 17:00:33     [quorum_warn]

Event                        Parameter  Severity   Active Since       Event Message
----------------------------------------------------------------------------------------------
[quorum_warn]                gpfs       warning    2024-02-13 10:20:03  The IBM  Spectrum Scale quorum monitor cannot
                                                                        be executed. This can be a timeout issue.


# mmhealth node show gpfs --no-notices

Node name:      norbert-11d.vmlocal

Component        Status      Status Change      Reasons
---------------------------------------------------------------------------
GPFS             HEALTHY     17 hours ago       -

There are no active error events for the component GPFS on this node (norbert-11d.vmlocal).
```

Ever wondered about events in **[square brackets]**?
Those are *Notices* and will vanish after 24 hours or when acknowledged by
`mmhealth event resolve <name>`.

The `--no-notices` option will not display those.
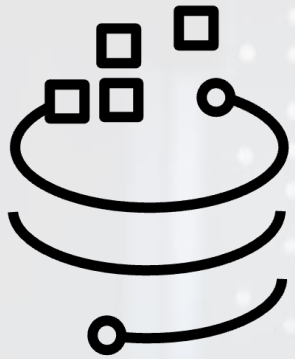
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Ever wondered about `hc_` events? Those are show up in the HEALTHCHECK component and are created by IBM using the callhome data to alert about recent findings. Use –X or `mmhealth event show <eventname>` to see details.

```
# mmhealth node show
Node name:      mynode2
Node status:    TIPS
Status Change:  2024-02-02 15:57:45

Component          Status      Status Change          Reasons & Notices
---------------------------------------------------------------------------------------------------------
GPFS               TIPS        2024-02-02 15:57:45    scale_ptf_update_available
NETWORK            HEALTHY     2023-12-06 01:54:24    -
FILESYSTEM         DEGRADED    2023-12-06 01:57:09    ill_replicated_fs(ibmfs)
CALLHOME           HEALTHY     2023-12-21 15:59:11    -
CES                HEALTHY     2024-02-02 16:03:15    -
CESIP              HEALTHY     2024-02-02 15:53:43    -
FILESYSMGR         HEALTHY     2024-02-02 15:53:33    -
GUI                DEGRADED    2024-02-02 15:53:58    gui_refresh_task_failed, [gui_login_attempt_failed]
HEALTHCHECK        DEGRADED    2023-12-06 03:54:29    hc_scale_afm_dr_00116_notok, hc_scale_flash6960571_cve_20204927_notok
PERFMON            HEALTHY     2023-12-06 01:54:32    -
THRESHOLD          HEALTHY     2023-12-06 01:54:22    -
```
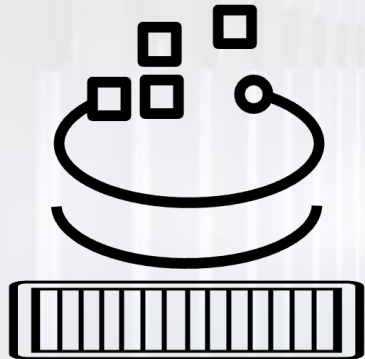
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https://cve.mitre.org/cgi-bin/cvename.cgi?name=*CVE-2020-4927*

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