

Linux Operations for SAP Basis Administration

SAP Basis Infrastructure & Operating System Support

This portfolio demonstrates Linux operating system activities commonly performed in SAP Basis administration, including capacity monitoring, SAP instance validation, SAP HANA verification, filesystem analysis, and operational troubleshooting.

CASE STUDY 1

Filesystem Capacity Check (df -h)

Objective

Verify filesystem utilization and identify potential storage risks before they impact SAP or SAP HANA operations.

Operational Scenario

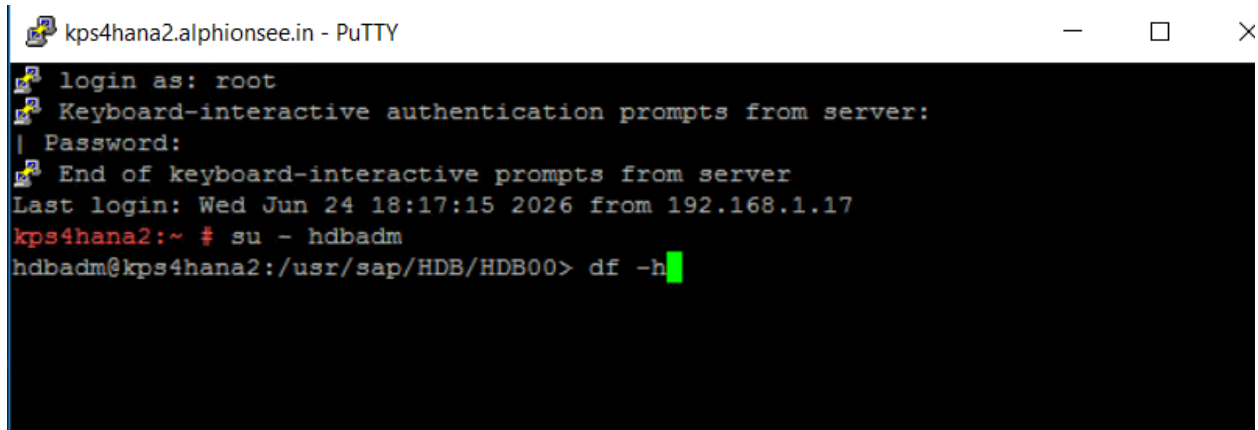
As part of routine SAP Basis operational monitoring, filesystem capacity was reviewed to ensure sufficient free space remained available for database and application operations.

Investigation

Command Executed:

`df -h`

Screenshot 1 – Linux Server Login



```
kps4hana2.alphionsee.in - PuTTY
login as: root
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server
Last login: Wed Jun 24 18:17:15 2026 from 192.168.1.17
kps4hana2:~ # su - hdbadm
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> df -h
```

Filename: step-1-linux-login.png

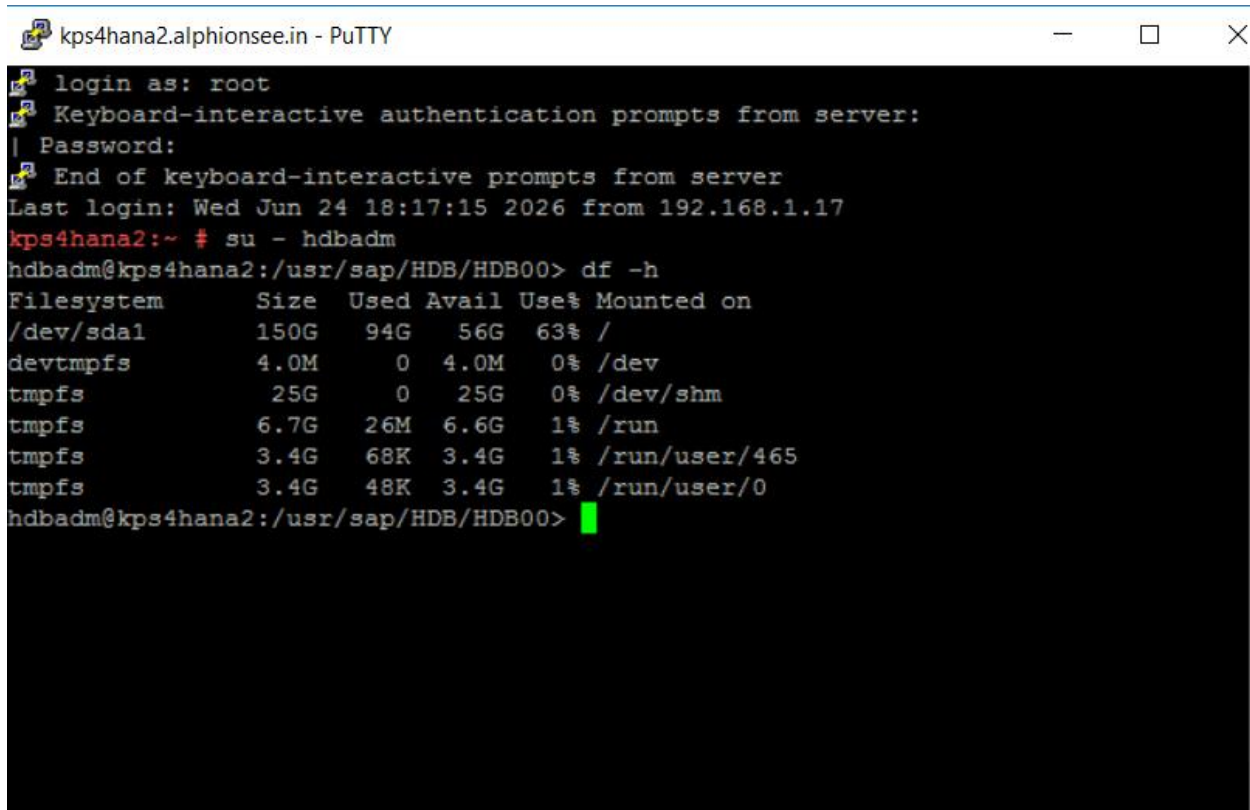
Capture:

- PuTTY session
- Connected Linux server
- Command prompt

Purpose:

Provides evidence of successful Linux server access.

Screenshot 2 – Filesystem Capacity Results



The screenshot shows a PuTTY terminal window titled "kps4hana2.alphionsee.in - PuTTY". The terminal output is as follows:

```
login as: root
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server
Last login: Wed Jun 24 18:17:15 2026 from 192.168.1.17
kps4hana2:~ # su - hdbadm
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda1       150G   94G   56G   63% /
devtmpfs        4.0M    0  4.0M    0% /dev
tmpfs           25G     0   25G    0% /dev/shm
tmpfs           6.7G   26M   6.6G    1% /run
tmpfs           3.4G   68K   3.4G    1% /run/user/465
tmpfs           3.4G   48K   3.4G    1% /run/user/0
hdbadm@kps4hana2:/usr/sap/HDB/HDB00>
```

Filename: step-2-df-h-results.png

Capture:

Filesystem: /dev/sda1

Size: 150G

Used: 94G

Available: 56G

Utilization: 63%

• Mounted Volumes

Purpose:

Provides evidence of filesystem capacity validation.

Findings

Filesystem utilization was reviewed using the `df -h` command after accessing the SAP HANA administrative account (`hdbadm`). The primary filesystem (`/dev/sda1`) reported

63% utilization with 56 GB of available free space. No storage-related risks or capacity constraints were identified during the review.

Analysis

Filesystem utilization percentages were reviewed to identify potential storage risks.

Particular attention was given to filesystems approaching 80%, 90%, or 95% utilization thresholds because excessive storage consumption can impact SAP and SAP HANA operations.

The reviewed filesystems were operating within acceptable utilization levels and no corrective action was required.

Skills Demonstrated

- Linux Administration
- Capacity Monitoring
- Infrastructure Operations
- SAP Basis Support

CASE STUDY 2

SAP HANA Service Status Verification (sapcontrol)

Objective

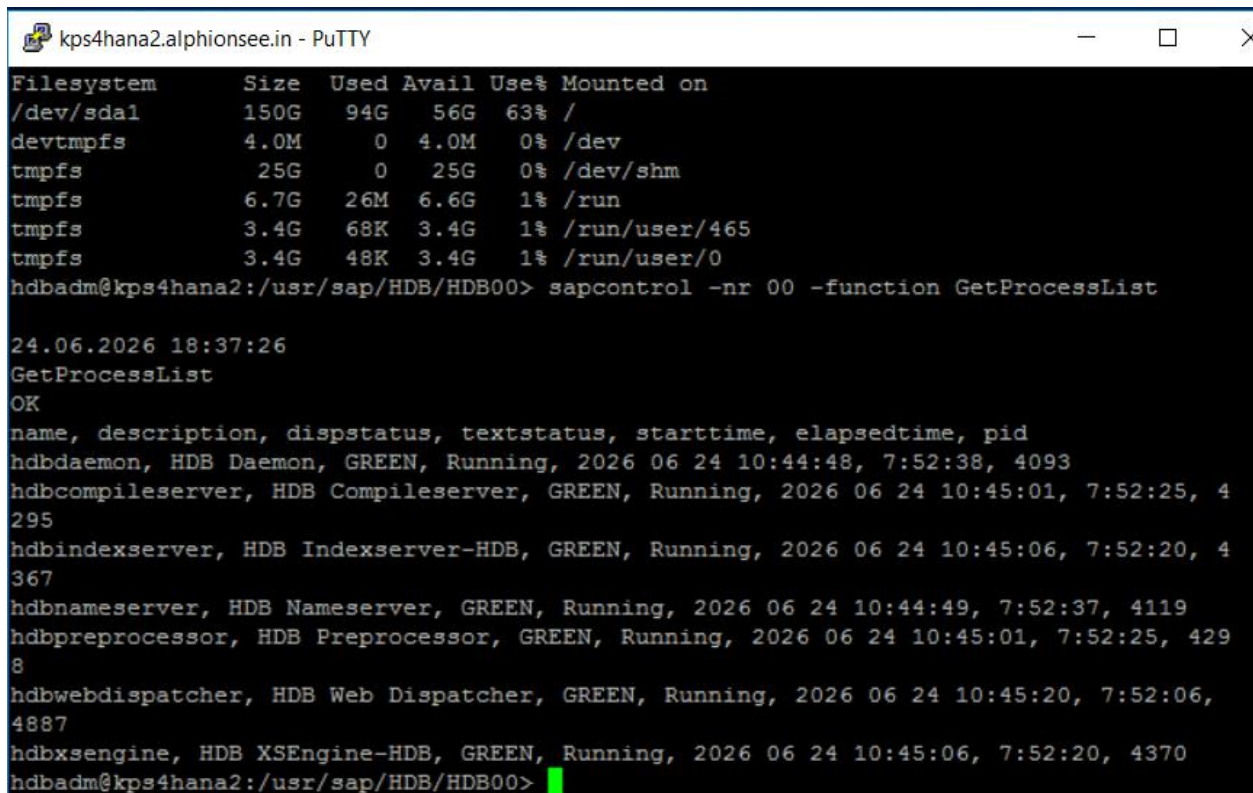
Verify SAP application instance availability and process health.

Investigation

Command Executed:

sapcontrol -nr 00 -function GetProcessList

Screenshot 3 – SAP Instance Status



```
kps4hana2.alphionsee.in - PuTTY
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda1       150G   94G   56G   63% /
devtmpfs        4.0M    0   4.0M    0% /dev
tmpfs           25G     0   25G    0% /dev/shm
tmpfs           6.7G   26M   6.6G    1% /run
tmpfs           3.4G   68K   3.4G    1% /run/user/465
tmpfs           3.4G   48K   3.4G    1% /run/user/0
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> sapcontrol -nr 00 -function GetProcessList

24.06.2026 18:37:26
GetProcessList
OK
name, description, dispstatus, textstatus, starttime, elapsedtime, pid
hdbdaemon, HDB Daemon, GREEN, Running, 2026 06 24 10:44:48, 7:52:38, 4093
hdbcompileserv, HDB Compileserv, GREEN, Running, 2026 06 24 10:45:01, 7:52:25, 4295
hdbindexserv, HDB Indexserv-HDB, GREEN, Running, 2026 06 24 10:45:06, 7:52:20, 4367
hdbnameserv, HDB Nameserv, GREEN, Running, 2026 06 24 10:44:49, 7:52:37, 4119
hdbpreprocess, HDB Preprocessor, GREEN, Running, 2026 06 24 10:45:01, 7:52:25, 4298
hdbwebdisp, HDB Web Dispatcher, GREEN, Running, 2026 06 24 10:45:20, 7:52:06, 4887
hdbxsengine, HDB XSEngine-HDB, GREEN, Running, 2026 06 24 10:45:06, 7:52:20, 4370
hdbadm@kps4hana2:/usr/sap/HDB/HDB00>
```

Filename: step-3-sapcontrol-status.png

Capture:

- sapcontrol command execution
- HDB Daemon
- HDB Compileserv
- HDB Indexserv
- HDB Nameserv
- HDB Preprocessor
- HDB Web Dispatcher
- GREEN status indicators

Purpose:

Provides evidence of SAP instance and SAP HANA service availability validation using the sapcontrol utility.

Analysis

The sapcontrol utility was used to review the operational status of SAP services.

Particular attention was given to the dispstatus and textstatus columns because service availability directly impacts SAP system accessibility and business processing.

All reviewed services reported GREEN and Running status, indicating that the SAP HANA instance was operational at the time of analysis.

Findings

hdbdaemon GREEN

hdbcompileserver GREEN

hdbindexserver GREEN

hdbnameserver GREEN

hdbpreprocessor GREEN

hdbwebdispatcher GREEN

hdbxsengine GREEN

The SAP instance process list was reviewed using the sapcontrol utility. All critical SAP HANA services reported GREEN status and Running operational state. No service failures, communication issues, or abnormal conditions were identified during the review.

Business Impact

Service availability directly affects SAP application accessibility and database operations.

Routine validation of SAP services helps identify potential issues before they impact production users and business processes.

Skills Demonstrated

- SAP Basis Administration
- SAP HANA Administration
- Service Monitoring
- System Health Checks

CASE STUDY 3

SAP HANA Process Verification

Objective

Verify SAP HANA database processes at the operating system level and confirm database process availability.

Operational Scenario

As part of routine SAP Basis operational monitoring, SAP HANA processes were reviewed from the Linux operating system to validate that critical database services were active and available for business processing.

Investigation

The Linux process list was reviewed using the following command:

Command Executed:

```
ps -ef | grep hdb
```

Screenshot 4 – SAP HANA Process Verification


```
kps4hana2.alphionsee.in - PuTTY
hdbxsengine, HDB XSEngine-HDB, GREEN, Running, 2026 06 24 10:45:06, 7:52:20, 4370
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> ps -ef | grep hdb
hdbadm      1860      1  0 10:37 ?                00:00:00 /usr/sap/HDB/HDB00/exe/sapstartsrv pf=
/usr/sap/HDB/SYS/profile/HDB_HDB00_kps4hana2
hdbadm      4086      1  0 10:44 ?                00:00:00 sapstart pf=/usr/sap/HDB/SYS/profile/H
DB_HDB00_kps4hana2
hdbadm      4093  4086  0 10:44 ?                00:00:03 /usr/sap/HDB/HDB00/kps4hana2/trace/hdb
.sapHDB_HDB00 -d -nw -f /usr/sap/HDB/HDB00/kps4hana2/daemon.ini pf=/usr/sap/HDB/SYS/pr
ofile/HDB_HDB00_kps4hana2
hdbadm      4119  4093  2 10:44 ?                00:13:24 hdbnameserver
hdbadm      4234      1  0 10:45 ?                00:00:01 hdbrsutil --start --port 30001 --volu
me 1 --volumesuffix mnt00001/hdb00001 --identifier 1782278105
hdbadm      4295  4093  0 10:45 ?                00:04:33 hdbcompileserv
hdbadm      4298  4093  0 10:45 ?                00:04:39 hdbpreprocessor
hdbadm      4367  4093  4 10:45 ?                00:20:47 hdbindexserver -port 30003
hdbadm      4370  4093  1 10:45 ?                00:08:58 hdbxsengine -port 30007
hdbadm      4778      1  0 10:45 ?                00:00:01 hdbrsutil --start --port 30003 --volu
me 2 --volumesuffix mnt00001/hdb00002.00003 --identifier 1782278119
hdbadm      4887  4093  0 10:45 ?                00:04:44 hdbwebdispatcher
stladm      6842  6835  0 10:56 ?                00:00:03 /usr/sap/ST1/HDB05/kps4hana2/trace/hdb
.sapST1_HDB05 -d -nw -f /usr/sap/ST1/HDB05/kps4hana2/daemon.ini pf=/usr/sap/ST1/SYS/pr
ofile/ST1_HDB05_kps4hana2
stladm      6867  6842  4 10:56 ?                00:23:19 hdbnameserver
stladm      6930      1  0 10:56 ?                00:00:01 hdbrsutil --start --port 30501 --volu
me 1 --volumesuffix mnt00001/hdb00001 --identifier 1782278813
stladm      7259  6842  0 10:57 ?                00:04:29 hdbcompileserv
stladm      7262  6842 18 10:57 ?                01:33:06 hdbpreprocessor
stladm      7302  6842  6 10:57 ?                00:31:10 hdbindexserver -port 30503
stladm      7305  6842  1 10:57 ?                00:08:58 hdbxsengine -port 30507
stladm      7404      1  0 10:57 ?                00:00:01 hdbrsutil --start --port 30503 --volu
me 3 --volumesuffix mnt00001/hdb00003.00003 --identifier 1782278846
stladm      7726  6842  0 10:58 ?                00:04:38 hdbwebdispatcher
root       14198 14119  0 18:18 pts/0          00:00:00 su - hdbadm
hdbadm     14199 14198  0 18:18 pts/0          00:00:00 -sh
hdbadm     20301 14199  0 19:24 pts/0          00:00:00 ps -ef
hdbadm     20302 14199  0 19:24 pts/0          00:00:00 grep --color=auto hdb
hdbadm@kps4hana2:/usr/sap/HDB/HDB00>
```

Filename: step-4-hana-process-check.png

Capture:

- hdbdaemon
- hdbnameserver
- hdbindexserver
- hdbcompileserv
- hdbpreprocessor
- hdbwebdispatcher
- Additional HANA processes

Purpose:

Provides evidence of SAP HANA process validation at the operating system level.

Analysis

The Linux process list was reviewed to verify that critical SAP HANA services were running.

Particular attention was given to the hdbdaemon, hdbnameserver, and hdbindexserver processes because these services are essential for SAP HANA database operation and availability.

Findings

Critical SAP HANA database processes were present and operational.

Services including hdbdaemon, hdbnameserver, hdbindexserver, hdbcompilesrv, hdbpreprocessor, and hdbwebdispatcher were identified within the operating system process list.

No missing or failed database processes were observed during the review.

Business Impact

SAP HANA process availability directly affects database accessibility and SAP application functionality.

Operating system process verification provides an additional layer of monitoring that supports early detection of service failures and helps maintain system availability.

Skills Demonstrated

- SAP HANA Administration
- Linux Administration
- Process Monitoring
- System Validation

CASE STUDY 4

SAP HANA Service Health Check

Objective

Verify the operational status of SAP HANA database services and validate service availability at the operating system level.

Operational Scenario

As part of routine SAP Basis monitoring activities, SAP HANA services were reviewed to confirm that critical database components were operational and available for business processing.

Investigation

The SAP HANA service status was reviewed using the following command:

Command Executed:

HDB info

Screenshot 5 – SAP HANA Service Health Check

```
kps4hana2.alphionsee.in - PuTTY
hdbadm 14199 14198 0 18:18 pts/0 00:00:00 -sh
hdbadm 20301 14199 0 19:24 pts/0 00:00:00 ps -ef
hdbadm 20302 14199 0 19:24 pts/0 00:00:00 grep --color=auto hdb
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> HDB info
Usage: /usr/sap/HDB/HDB00/HDB { start|stop|reconf|restart|version|info|proc|admin|kill|kill-<sig>
|term }
kill or kill-9 should never be used in productive environment!
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> HDB info
USER      PID      PPID      %CPU      VSZ      RSS      COMMAND
hdbadm    24896    24895     0.0       7664     4352     sh
root      25013    24896     0.0       18744    6272     \_ su - root
hdbadm    14199    14198     0.0       11388    5504     -sh
hdbadm    25202    14199     0.0       9628     3968     \_ /bin/sh /usr/sap/HDB/HDB00/HDB info
hdbadm    25238    25202     0.0      10448     3328     \_ ps fx -U hdbadm -o user:8,pid:8,pp
hdbadm    4778     1        0.0      567188    35196    hdbrsutil --start --port 30003 --volume 2
hdbadm    4234     1        0.0      567116    35252    hdbrsutil --start --port 30001 --volume 1
hdbadm    4086     1        0.0       9536     3456     sapstart pf=/usr/sap/HDB/SYS/profile/HDB_H
hdbadm    4093     4086     0.0     447684    82756     \_ /usr/sap/HDB/HDB00/kps4hana2/trace/hdb
hdbadm    4119     4093     2.5     6159764   3494480   \_ hdbnameserver
hdbadm    4295     4093     0.8     1059392    200460   \_ hdbcompilesrver
hdbadm    4298     4093     0.9     1279452    208352   \_ hdbpreprocessor
hdbadm    4367     4093     3.9     6777404   3940816   \_ hdbindexserver -port 30003
hdbadm    4370     4093     1.7     4286316   1266052   \_ hdbxsengine -port 30007
hdbadm    4887     4093     0.9     2165692    442364   \_ hdbwebdispatcher
hdbadm    1860     1        0.0      501556    58544    /usr/sap/HDB/HDB00/exe/sapstartsrsv pf=/usr
hdbadm@kps4hana2:/usr/sap/HDB/HDB00>
```

Filename: step-5-hdb-info.png

Capture:

- hdbnameserver
- hdbindexserver
- hdbcompilesrv
- hdbpreprocessor
- hdbwebdispatcher
- HANA service tree

Purpose:

Provides evidence of SAP HANA service availability validation.

Analysis

The HDB info utility was used to review SAP HANA service status and process hierarchy.

Particular attention was given to the nameserver, indexserver, compilesrv, preprocessor, and webdispatcher services because these components are required for normal SAP HANA database operations.

The review confirmed that all critical services were active and operational at the time of analysis.

Findings

SAP HANA service status was successfully reviewed using the HDB info command.

Critical services including hdbnameserver, hdbindexserver, hdbcompilesrv, hdbpreprocessor, and hdbwebdispatcher were identified within the service hierarchy.

No missing services or abnormal process conditions were identified during the review.

Business Impact

SAP HANA service availability is essential for database accessibility, application processing, and business continuity.

Routine service validation supports proactive monitoring and helps identify issues before they affect end users.

Operational Validation

To increase confidence in the investigation, the SAP HANA service status identified using **HDB info** was independently cross-checked using the **sapcontrol** utility.

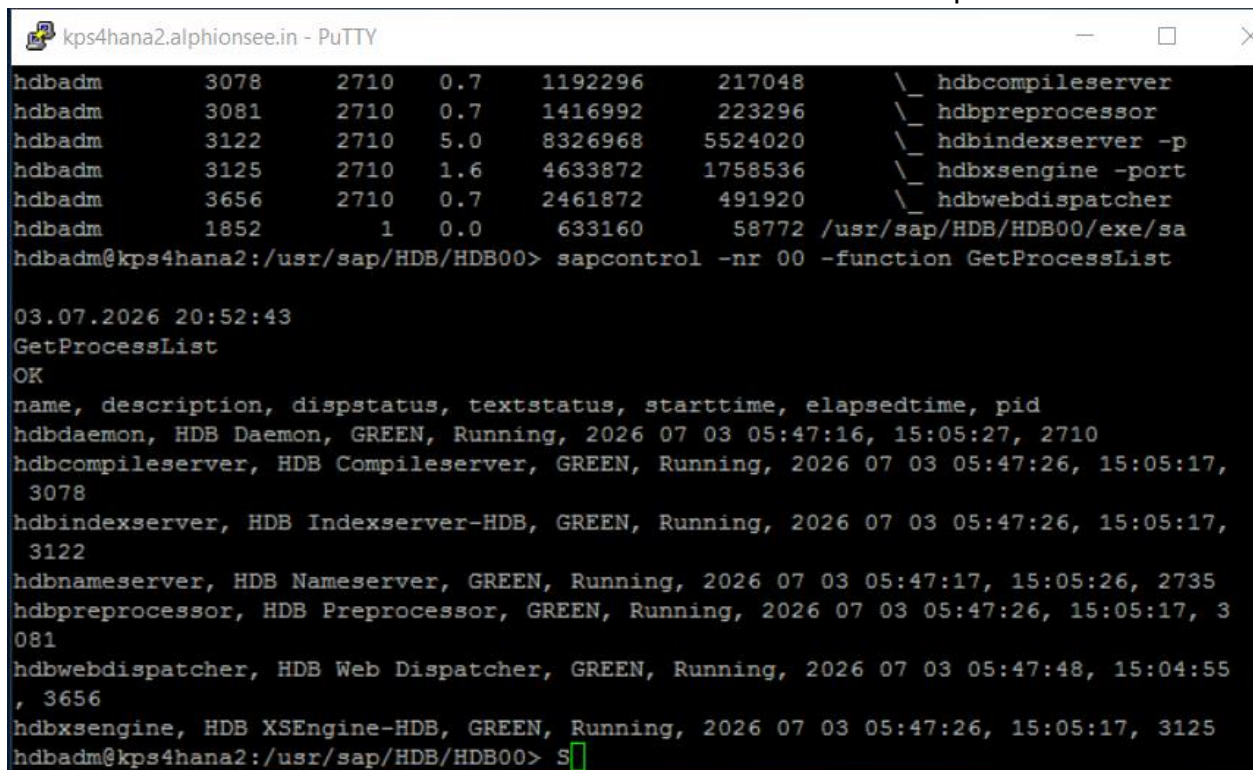
Both administrative tools reported consistent operational results, confirming that the SAP HANA instance and its critical services were running normally. Cross-validating service status using multiple administrative utilities is a common SAP Basis operational practice that helps verify system health before maintenance activities and supports more reliable troubleshooting.

Commands Executed

HDB info

sapcontrol -nr 00 -function GetProcessList

Screenshot 6 – Cross-Checked Instance Status via HDB info & sapcontrol

The screenshot shows a PuTTY terminal window titled 'kps4hana2.alphionsee.in - PuTTY'. The terminal displays the output of the 'HDB info' command, which lists various HDB services and their status. Below this, the output of the 'sapcontrol -nr 00 -function GetProcessList' command is shown, providing a detailed status report for each service, including its name, description, status (GREEN), and running state (Running). The terminal output is as follows:

```
hdbadm      3078      2710      0.7      1192296      217048      \_ hdbcompileserver
hdbadm      3081      2710      0.7      1416992      223296      \_ hdbpreprocessor
hdbadm      3122      2710      5.0      8326968      5524020     \_ hdbindexserver -p
hdbadm      3125      2710      1.6      4633872      1758536     \_ hdbxsengine -port
hdbadm      3656      2710      0.7      2461872      491920      \_ hdbwebdispatcher
hdbadm      1852           1      0.0      633160       58772 /usr/sap/HDB/HDB00/exe/sa
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> sapcontrol -nr 00 -function GetProcessList

03.07.2026 20:52:43
GetProcessList
OK
name, description, dispstatus, textstatus, starttime, elapsedtime, pid
hdbdaemon, HDB Daemon, GREEN, Running, 2026 07 03 05:47:16, 15:05:27, 2710
hdbcompileserver, HDB Compileserver, GREEN, Running, 2026 07 03 05:47:26, 15:05:17, 3078
hdbindexserver, HDB Indexserver-HDB, GREEN, Running, 2026 07 03 05:47:26, 15:05:17, 3122
hdbnameserver, HDB Nameserver, GREEN, Running, 2026 07 03 05:47:17, 15:05:26, 2735
hdbpreprocessor, HDB Preprocessor, GREEN, Running, 2026 07 03 05:47:26, 15:05:17, 3081
hdbwebdispatcher, HDB Web Dispatcher, GREEN, Running, 2026 07 03 05:47:48, 15:04:55, 3656
hdbxsengine, HDB XSEngine-HDB, GREEN, Running, 2026 07 03 05:47:26, 15:05:17, 3125
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> S
```

Filenamestep-6-cross-validation.png

Capture

- HDB info output
- sapcontrol output
- GREEN process status
- Running SAP HANA services
- Matching service information

Purpose

Provides evidence that SAP HANA service availability was independently validated using both **HDB info** and **sapcontrol**, confirming consistent operational status across two administrative utilities.

Technical Observation

Both administrative utilities returned consistent operational information.

The **HDB info** command confirmed that the SAP HANA service hierarchy was active, while **sapcontrol** independently reported all critical SAP HANA processes in **GREEN** and **Running** status.

No inconsistencies were identified between the operating system service information and the SAP instance status during the investigation.

Skills Demonstrated

- SAP HANA Administration
- SAP Basis Administration
- Service Monitoring
- Technical Operations

CASE STUDY 5

Filesystem Usage Investigation

Objective

Identify directories consuming significant storage space and investigate potential filesystem growth risks.

Operational Scenario

As part of routine SAP Basis operational monitoring, filesystem utilization was analyzed to identify directories contributing to storage growth and support proactive capacity management within the SAP HANA environment.

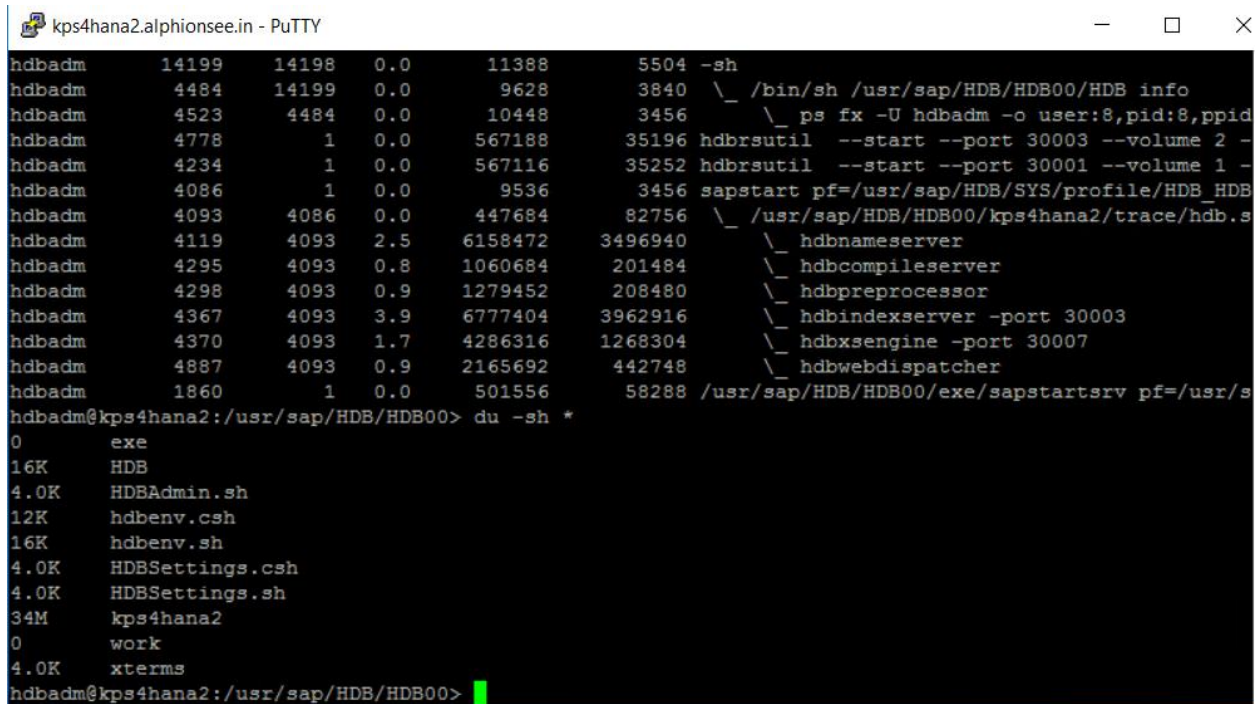
Investigation

The following command was executed to review directory sizes:

Command Executed:

```
du -sh *
```

Screenshot 7 – Filesystem Usage Analysis



```
kps4hana2.alphionsee.in - PuTTY
hdbadm 14199 14198 0.0 11388 5504 -sh
hdbadm 4484 14199 0.0 9628 3840 \_ /bin/sh /usr/sap/HDB/HDB00/HDB info
hdbadm 4523 4484 0.0 10448 3456 \_ ps fx -U hdbadm -o user:8,pid:8,ppid
hdbadm 4778 1 0.0 567188 35196 hdbrsutil --start --port 30003 --volume 2 -
hdbadm 4234 1 0.0 567116 35252 hdbrsutil --start --port 30001 --volume 1 -
hdbadm 4086 1 0.0 9536 3456 sapstart pf=/usr/sap/HDB/SYS/profile/HDB_HDB
hdbadm 4093 4086 0.0 447684 82756 \_ /usr/sap/HDB/HDB00/kps4hana2/trace/hdb.s
hdbadm 4119 4093 2.5 6158472 3496940 \_ hdbnameserver
hdbadm 4295 4093 0.8 1060684 201484 \_ hdbcompileserv
hdbadm 4298 4093 0.9 1279452 208480 \_ hdbpreprocessor
hdbadm 4367 4093 3.9 6777404 3962916 \_ hdbindexserver -port 30003
hdbadm 4370 4093 1.7 4286316 1268304 \_ hdbxsengine -port 30007
hdbadm 4887 4093 0.9 2165692 442748 \_ hdbwebdispatcher
hdbadm 1860 1 0.0 501556 58288 /usr/sap/HDB/HDB00/exe/sapstartsrv pf=/usr/s
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> du -sh *
0 exe
16K HDB
4.0K HDBAdmin.sh
12K hdbenv.csh
16K hdbenv.sh
4.0K HDBSettings.csh
4.0K HDBSettings.sh
34M kps4hana2
0 work
4.0K xterms
hdbadm@kps4hana2:/usr/sap/HDB/HDB00>
```

Filename: step-7-du-results.png

Capture:

- Directory sizes
- High-consumption folders
- Storage utilization breakdown
- SAP HANA-related directories

Purpose

Provides evidence of filesystem usage analysis and storage investigation activities.

Analysis

Directory utilization was reviewed to identify locations consuming significant storage resources.

Particular attention was given to SAP HANA directories, trace files, logs, configuration files, and operational folders because these areas can contribute to filesystem growth and capacity-related issues.

Findings

Filesystem consumption patterns were reviewed, and large directories were identified for ongoing monitoring.

The largest directory identified during the review was kps4hana2. No abnormal storage growth or immediate capacity concerns requiring corrective action were identified.

Business Impact

Understanding filesystem growth patterns support proactive capacity planning and help prevent storage-related service disruptions.

Routine storage analysis contributes to SAP system stability, operational reliability, and infrastructure health.

Skills Demonstrated

- Linux Administration
- SAP Basis Administration
- Storage Analysis
- Capacity Management
- Filesystem Monitoring
- Infrastructure Operations
- SAP HANA Support

CASE STUDY 6

SAP HANA Log Review & Troubleshooting

Objective

Review SAP HANA trace logs for warning, error, and informational messages to support operational monitoring and incident investigation.

Operational Scenario

As part of routine SAP Basis operational support, SAP HANA trace files were reviewed to identify potential warnings, errors, and abnormal system behavior that could affect database availability or performance.

Investigation

Command Executed:

```
tail -100 nameserver_alert_kps4hana2.trc
```

Screenshot 8 – SAP HANA Log Review

```
kps4hana2.alphionsee.in - PuTTY
4.0K xterms
hdbadm@kps4hana2:/usr/sap/HDB/HDB00> cd /usr/sap/HDB/HDB00/kps4hana2/trace
hdbadm@kps4hana2:/usr/sap/HDB/HDB00/kps4hana2/trace> ls -ltr | grep nameserver
-rw-r----- 1 hdbadm sapsys 51826 Jun 24 08:39 nameserver_kps4hana2.00000.000.trc
-rw-r--r-- 1 hdbadm sapsys 8179 Jun 24 10:30 nameserver_topology_kps4hana2.json.new_kps4hana2_36
62_11040
-rw-r----- 1 hdbadm sapsys 2382 Jun 24 10:45 nameserver_kps4hana2.30001.table_consistency_check.
000.trc
-rw-r----- 1 hdbadm sapsys 15681 Jun 24 10:45 nameserver_alert_kps4hana2.trc
-rw-r----- 1 hdbadm sapsys 22125 Jun 24 10:45 nameserver_kps4hana2.30001.component_history.000.cs
v
-rw-r----- 1 hdbadm sapsys 5315637 Jun 24 22:40 nameserver_kps4hana2.30001.executed_statements.000.
trc
-rw-r----- 1 hdbadm sapsys 1332822 Jun 24 22:55 nameserver_kps4hana2.30001.000.trc
-rw-r----- 1 hdbadm sapsys 115199 Jun 24 22:58 nameserver_kps4hana2.30001.loads.000.trc
-rw-r----- 1 hdbadm sapsys 42228 Jun 24 22:58 nameserver_kps4hana2.30001.unloads.000.trc
-rw-r--r-- 1 hdbadm sapsys 8179 Jun 24 22:58 nameserver_topology_kps4hana2.json
-rw-r--r-- 1 hdbadm sapsys 2233411 Jun 24 22:58 nameserver_history.trc
hdbadm@kps4hana2:/usr/sap/HDB/HDB00/kps4hana2/trace> tail -100 nameserver_alert_kps4hana2.trc
[2857]{-1}[-1/-1] 2026-06-24 08:38:53.224510 i Crypto RootKeyStoreAccessor.cpp(00820) : C
reated new root key /hana/shared/HDB/global/hdb/security/ssfs:HDB_SERVER/3/DPAPI (hash: 1b03e61a3c1
1ea27a5872a0d90de9fcea64e64cfcbf3277f248f11d392f08c41)
[2857]{-1}[-1/-1] 2026-06-24 08:38:55.634717 i Crypto RootKeyStoreAccessor.cpp(00820) : C
reated new root key /hana/shared/HDB/global/hdb/security/ssfs:HDB_SERVER/3/LOG (hash: 6967008968665
986b1ba4579e14f55ce3edf26e2863e35297a13b9056d19808d)
[2857]{-1}[-1/-1] 2026-06-24 08:38:58.058404 i Crypto RootKeyStoreAccessor.cpp(00820) : C
reated new root key /hana/shared/HDB/global/hdb/security/ssfs:HDB_SERVER/3/BACKUP (hash: 9e64423d72
4daf547986f266b14265b1b35925e543f65ee21a0b66abba35f492)
[2857]{-1}[-1/-1] 2026-06-24 08:38:58.085066 e TNS TNSInfo.cpp(00670) : sendRequest ge
tvalue to kps4hana2:30001 failed with HanaNet::RuntimeError. data=(S)path=/databases/3/name|
[2857]{-1}[-1/-1] 2026-06-24 08:38:58.085080 e TNS TNSInfo.cpp(00487) : nameserver kps
4hana2:30001 not responding.
[3257]{-1}[-1/-1] 2026-06-24 08:39:18.759045 e OSMemory mmSharedMemoryProxy.cpp(00576) : sh
mget(10001, 0, 384) failed2 (No such file or directory)
[3310]{-1}[-1/-1] 2026-06-24 08:39:30.516983 e TidCidTable TidCidGarbageCollector.cpp(00172) :
TidCidGarbageCollector::getMinPrecommitTS: nameserver is not responding
[3331]{-1}[-1/-1] 2026-06-24 08:39:40.517212 e TidCidTable TidCidGarbageCollector.cpp(00172) :
TidCidGarbageCollector::getMinPrecommitTS: nameserver is not responding
```

Filename: step-8-log-review.png

Capture:

- nameserver_alert.trc
- Recent log entries
- Warning messages
- Error messages
- Timestamps
- Operational events

Purpose

Provides evidence of SAP HANA log analysis and troubleshooting activities.

Analysis

The SAP HANA nameserver trace file was reviewed to identify warnings, errors, and operational messages.

Particular attention was given to alert entries, service-related events, and abnormal system behavior because these records can provide early indication of issues affecting database operations.

Findings

The SAP HANA trace directory was reviewed to identify relevant nameserver log files. The nameserver alert trace was analyzed using the tail command to examine recent operational events, warnings, and error messages.

The review confirmed active logging and identified routine system events. No critical issues requiring immediate escalation were observed during the review period.

Business Impact

Routine trace file analysis supports proactive monitoring, early issue detection, and operational stability within SAP HANA environments.

Routine validation of SAP services helps identify potential issues before they impact system availability and business processes.

Skills Demonstrated

- SAP Basis Administration
- SAP HANA Administration
- Troubleshooting
- Log Analysis
- Incident Investigation
- System Monitoring

Summary of Skills Demonstrated:

Linux Administration, SAP Basis Administration, SAP HANA Administration, Filesystem Monitoring, Capacity Management, Service Monitoring, Process Validation, System Health Checks, Log Analysis, Troubleshooting, Incident Investigation, Technical Operations, Infrastructure Monitoring.