

# Oracle Grid Infrastructure 18c újdonosságok, upgrade projekt kapcsán

**Balogh Zoltán**

Senior DBA

**Kóródi Ferenc**

Senior adatbázis konzultáns

K&H Bank

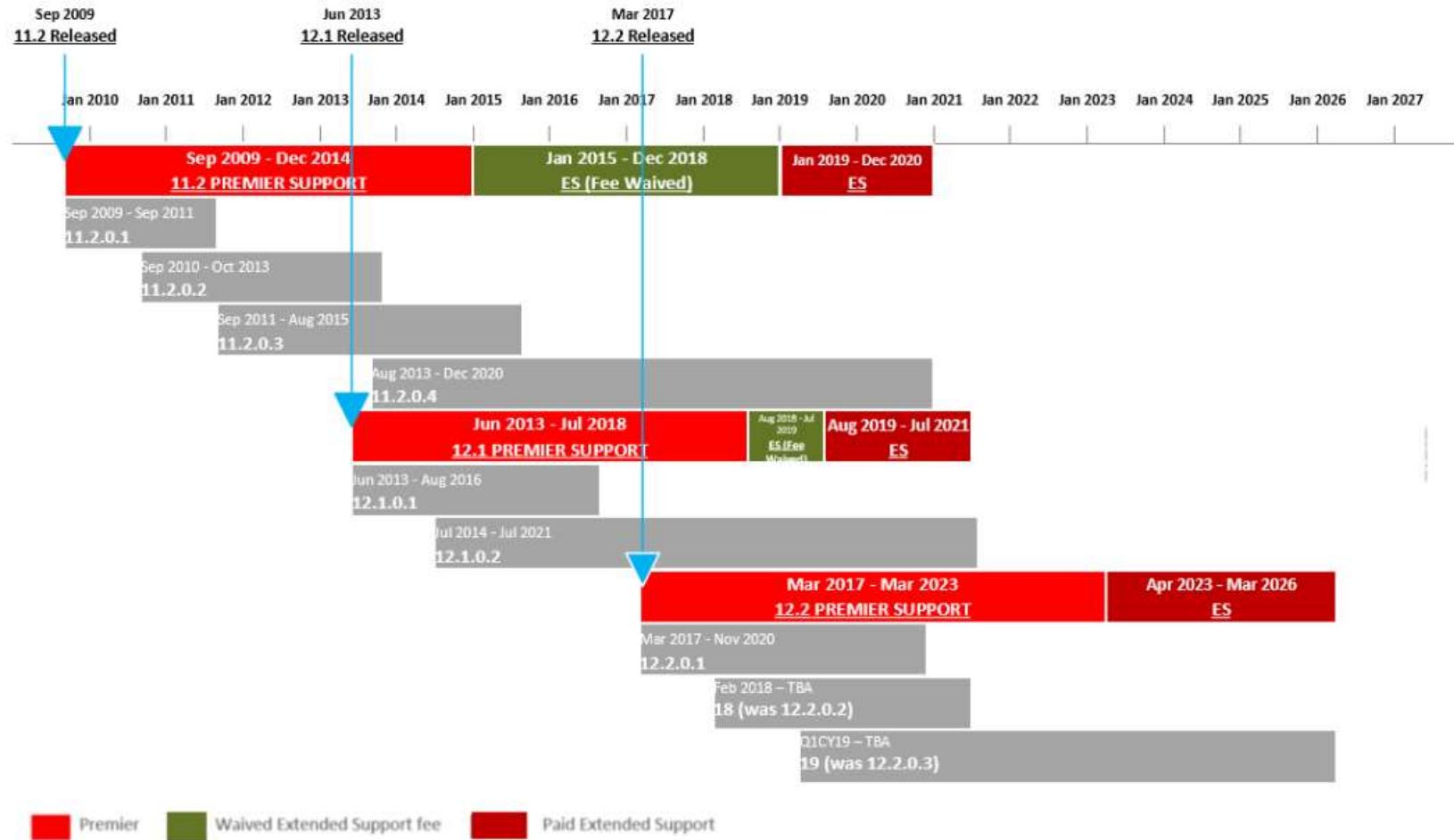
Siófok, 2019-04-10



# Tartalomjegyzék

- Roadmap
- 12.2 előtti újdonságok
- 18c upgrade tapasztalatok
- 12.2 és 18c újdonságok
- Teszt DB frissítés ASM és storage technológiai alapokon

# Roadmap



„Oracle Database 19c is the *Long Term Support Release* or “Terminal Patch Set” for Oracle Database 12.2 Release.”

**Release Schedule of Current Database Releases (Doc ID 742060.1)**

# 18c előtti újdonságok

- 12.1.0.2-től:
  - Cluster Health Monitor (CHM)
    - System Monitor Service
    - Cluster Logger Service
    - GIMR
    - TFA
  - Oracle Flex ASM
  - Oracle Flex Clusters
  - ASM Filter Driver

Do you want to create a separate Automatic Storage Management (ASM) disk group for the Grid Infrastructure Management Repository (GIMR) data?

Yes

No

Configure Oracle ASM Filter Driver

Select this option to configure ASM Filter Driver (AFD) to simplify configuration and management of disk devices by Oracle ASM.

# 18c előtti újdonságok

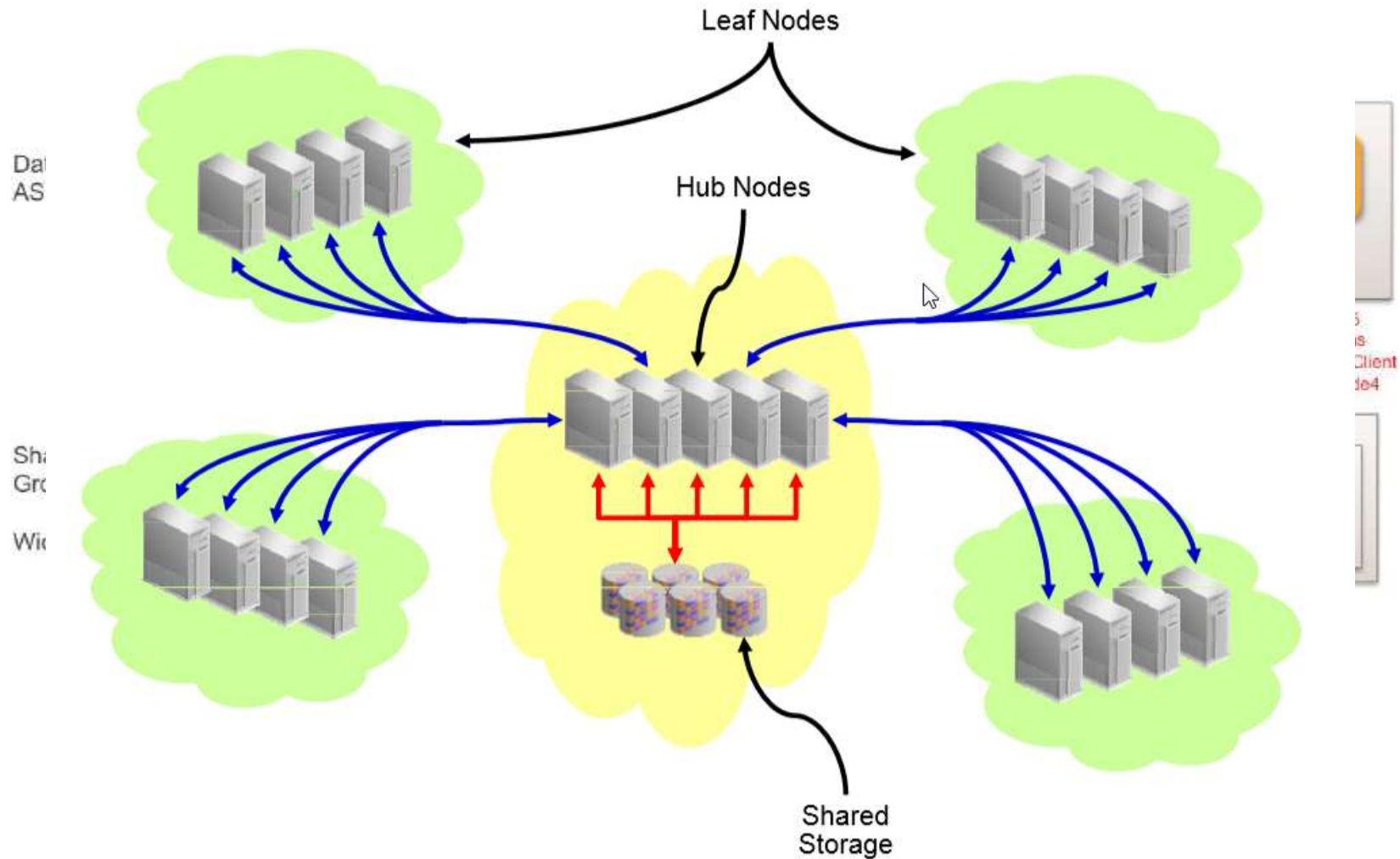
Private interfaces are used by Oracle Grid Infrastructure for internode traffic.

Interface Name	Subnet	Use for
enp0s3	10.0.2.0	Do Not Use
enp0s8	11.11.11.0	Public
enp0s9	11.11.21.0	ASM & Private

Provide the list of nodes to be managed by Oracle Grid Infrastructure with their Public Hostname and Virtual Hostname.

Public Hostname	Role	Virtual Hostname	Site
rac1	HUB	rac1-vip	SiteA
rac2	HUB	rac2-vip	SiteB

# 18c előtti újdonságok



# 18c előtti újdonságok

- 12.2.0.1-től:
  - Cluster Health Advisor
  - Zip Image based Grid Infrastructure Installation
  - Separation of Duty for Administering Oracle Real Application Clusters
  - Service-Oriented Buffer Cache Access (Smart Mastering)
  - RAC Reader Nodes
  - Support for Oracle Extended Clusters

# 18c tapasztalatok

- **ACFS** eltávolítás upgrade előtt:
  - Kernel vs PSU támogatottság
  - 12.2.0.1-re upgrade esetén hibát okozott
  - Upgrade során újra települ

```
$GI_HOME/bin/acfsdriverstate { installed | supported | loaded }
```

```
$GI_HOME/bin/acfsload { start | stop }
```

```
$GI_HOME/bin/acfsroot { install | uninstall }
```

- *ACFS Support On OS Platforms (Certification Matrix). (Doc ID 1369107.1)*



# 18c tapasztalatok

- **ACFS** kernel modulok SIHA esetén:

- SIHA esetén az *acfsload* utasítást manuálisan kell kiadni
- Nem megfelelő sorrend esetén az ACFS mount point-okat nem lehet csatolni

```
root@ ~> cat /etc/systemd/system/oracle-acfsload.service
#
# Oracle ACFS Drivers
#
[Unit]
Description=Load ACFS Drivers during boot
After=syslog.target
[Service]
ExecStart=/opt/ogrid/product/18.0.0.0/bin/acfsload start -s >/dev/null 2>&1 </dev/null
Type=simple
[Install]
WantedBy=multi-user.target
```

- *Unable To mount ACFS after Reboot On Standalone GI [SIHA] (Doc ID 2348133.1)*

# 18c tapasztalatok

- **gridSetup** alapú telepítés:

- 12.2-től

- Nincs runInstaller

- A kitömörített állomány lesz a GI\_HOME tartalma

- applyPSU / applyRU / applyOneOffs kapcsolókkal a GI\_HOME patch-elése telepítés előtt megoldott

- *12.2 gridSetup.sh: INS-42505 File missing  
GRID\_HOME/OPatch/opatchdiag (Doc ID 2321749.1)*

# 18c tapasztalatok

- **RU/RUR** alapú patch-elés:

- 12.2.0.1-től még hagyományos YYMMDD alapon, 18c-től számozás alapján is:

- 3 digit format – Year.Update.Revision
- Update tracks Release Update (RU)
- Revision tracks the associated RU Revision levels (0,1,2)

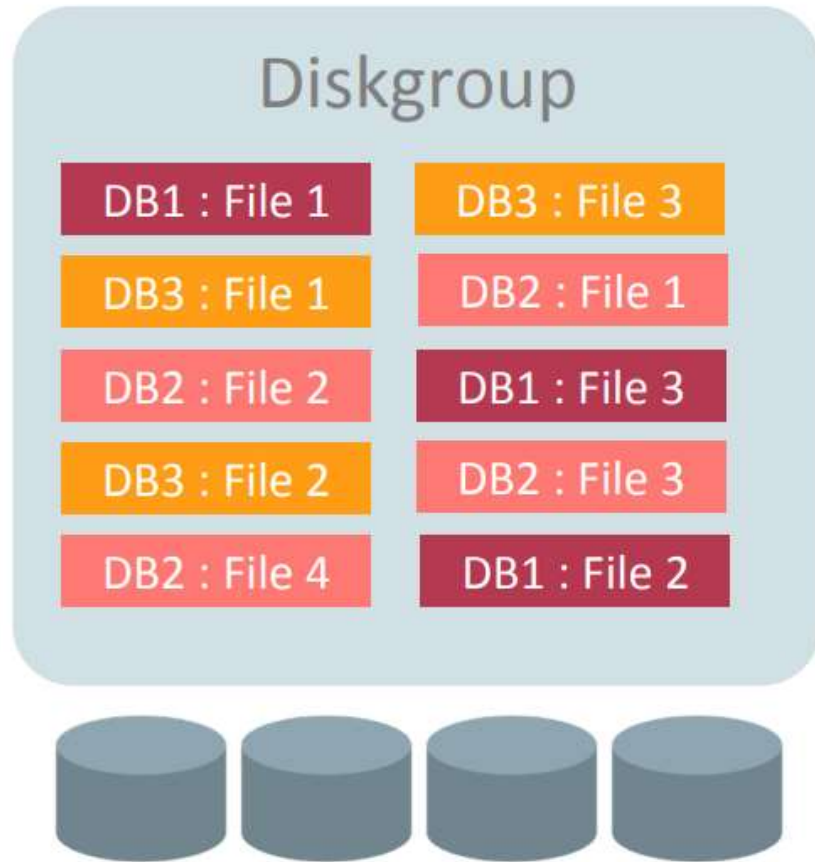
Production	18AP	19JUL
18.1.0	18.2	18.7.0 & 19.1.0?
		18.6.1
		18.5.2

```
ogrid@ ~ -> $ORACLE_HOME/OPatch/opatch lspatches
28864607;ACFS RELEASE UPDATE 18.5.0.0.0 (28864607)
28864593;OCW RELEASE UPDATE 18.5.0.0.0 (28864593)
28822489;Database Release Update : 18.5.0.0.190115 (28822489)
28435192;DBWLM RELEASE UPDATE 18.0.0.0.0 (28435192)
28547619;TOMCAT RELEASE UPDATE 18.0.0.0.0 (28547619)
27908644;UPDATE 18.3 DATABASE CLIENT JDK IN ORACLE HOME TO JDK8U171
27923415;OJVM RELEASE UPDATE: 18.3.0.0.180717 (27923415)

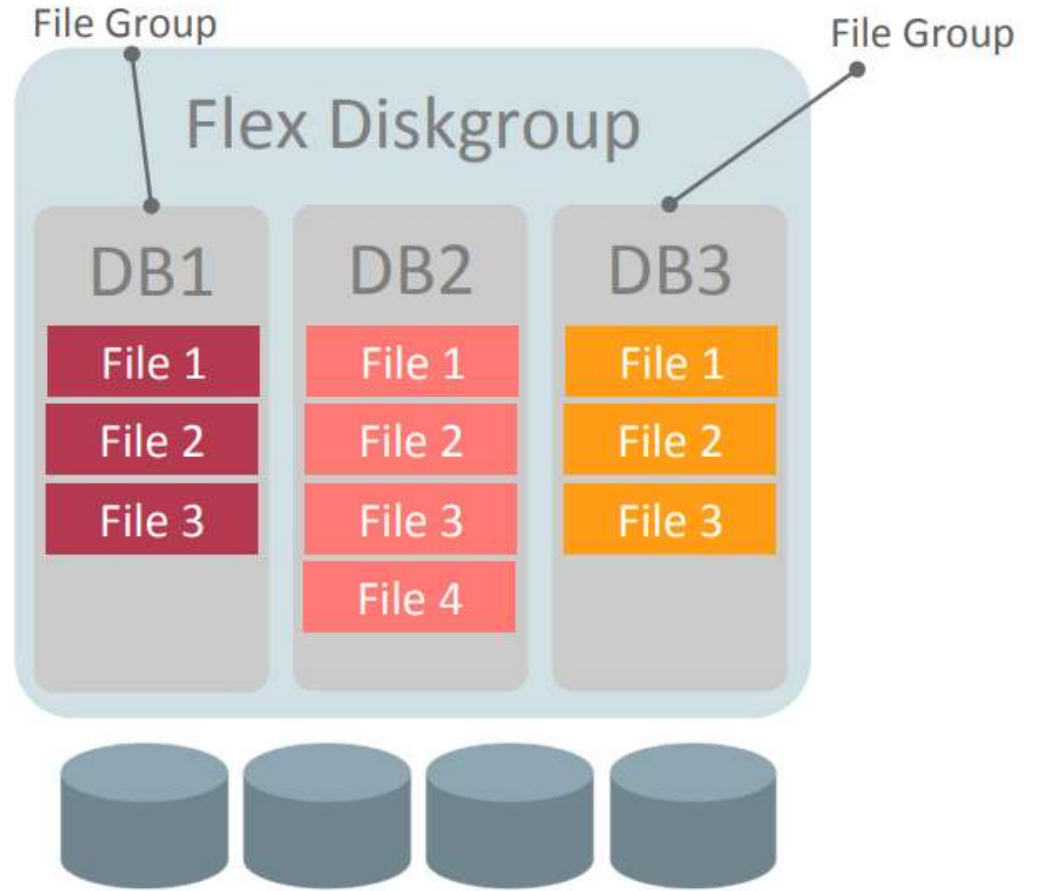
OPatch succeeded.
```

# 12.2 - Flex DG

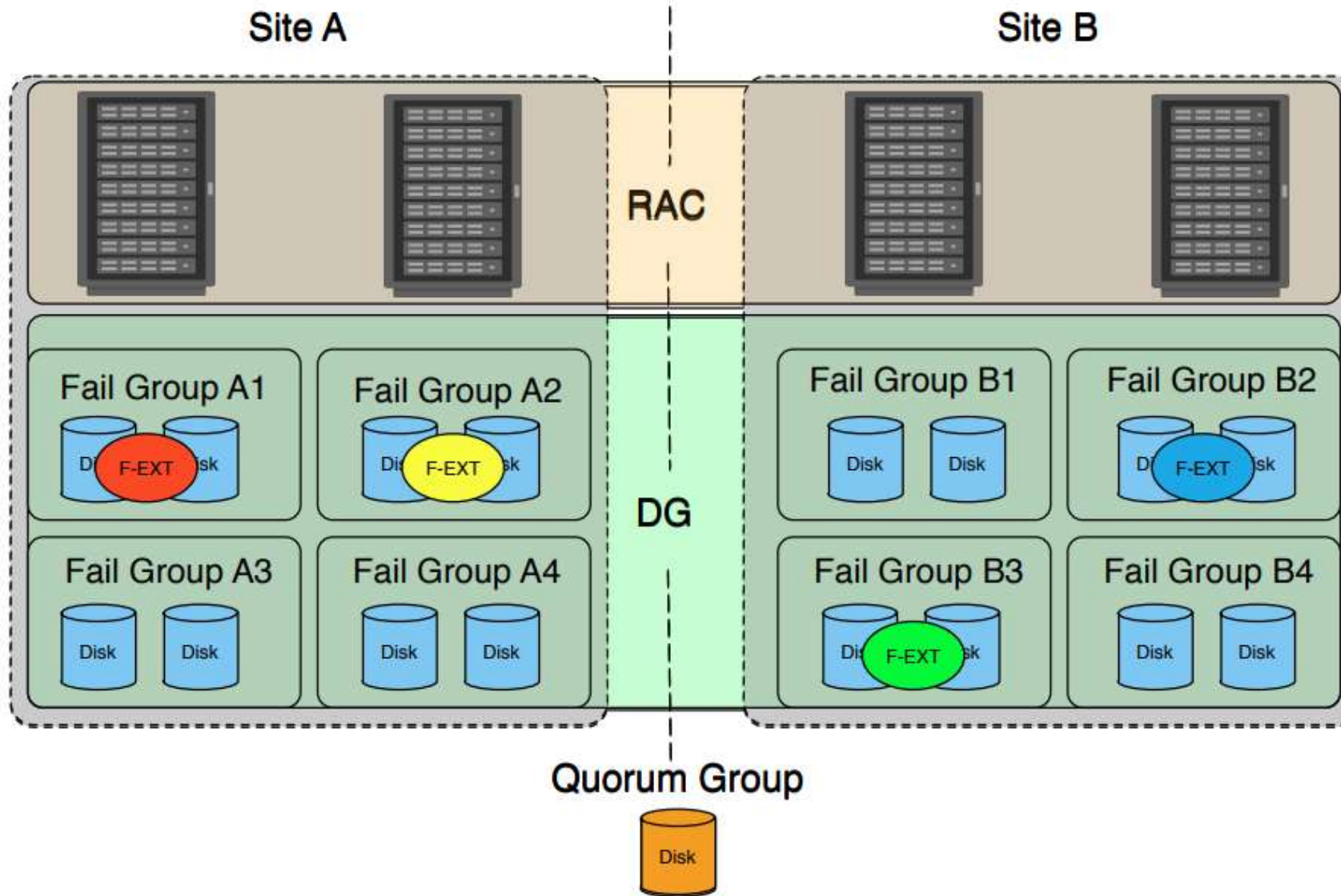
Pre-12.2 Diskgroup Organization



12.2 Flex Diskgroup Organization



# 12.2 - Extended Cluster



# 12.2 - Extended Cluster

Oracle Grid Infrastructure 12c Release 2 Installer - Step 7 of 15@rac1

### Create ASM Disk Group

OCR and Voting disk data will be stored in the following ASM Disk group. Select disks and characteristics of this Disk group.

Disk group name: DATA

Redundancy:  Extended  Flex  High  Normal

Allocation Unit Size: 1 MB

Select Disks: Show Candidate/Provisioned Disks

	Disk Path	Size (in MB)	Status	Failure Group
<input checked="" type="checkbox"/>	/dev/oracleasm/disks/DATA01	20480	Provisioned	FailGR_A
<input checked="" type="checkbox"/>	/dev/oracleasm/disks/DATA02	20480	Provisioned	FailGR_B

Buttons: Specify Failure Groups..., Change Discovery Path...

Configure Oracle ASM Filter Driver

Select this option to configure ASM Filter Driver (AFD) to simplify configuration and management of disk devices by Oracle ASM.

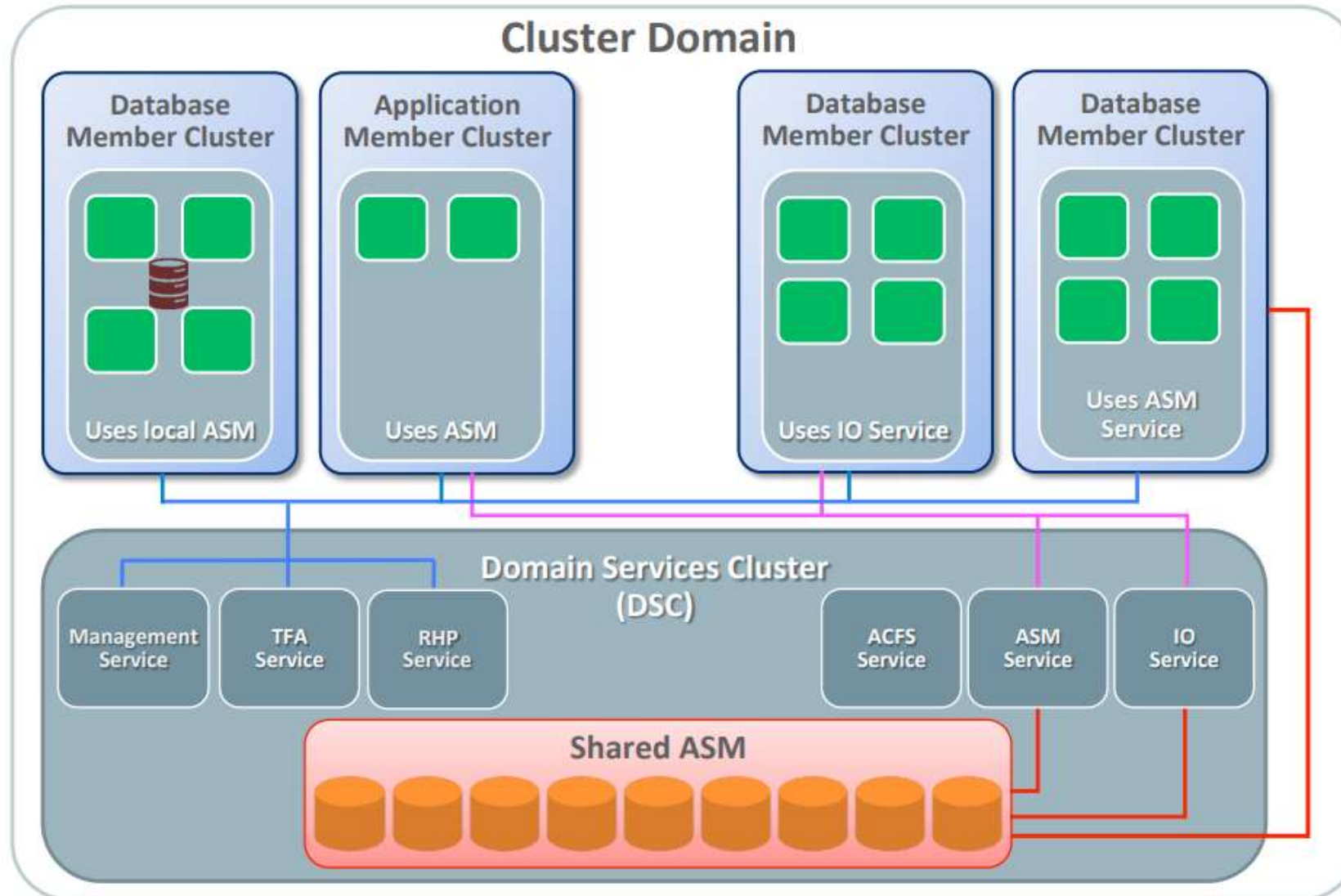
### Failure Groups@rac1

Specify the unique Failure Groups to be used for ASM Disks. Select Failure Groups that you want to mark as Quorum.

Failure Groups	Quorum	Site
FailGR_A	<input type="checkbox"/>	SiteA
FailGR_B	<input type="checkbox"/>	SiteB
QUORUM	<input checked="" type="checkbox"/>	SiteC

Buttons: OK, Cancel

# 12.2 - DSC and Member Clusters

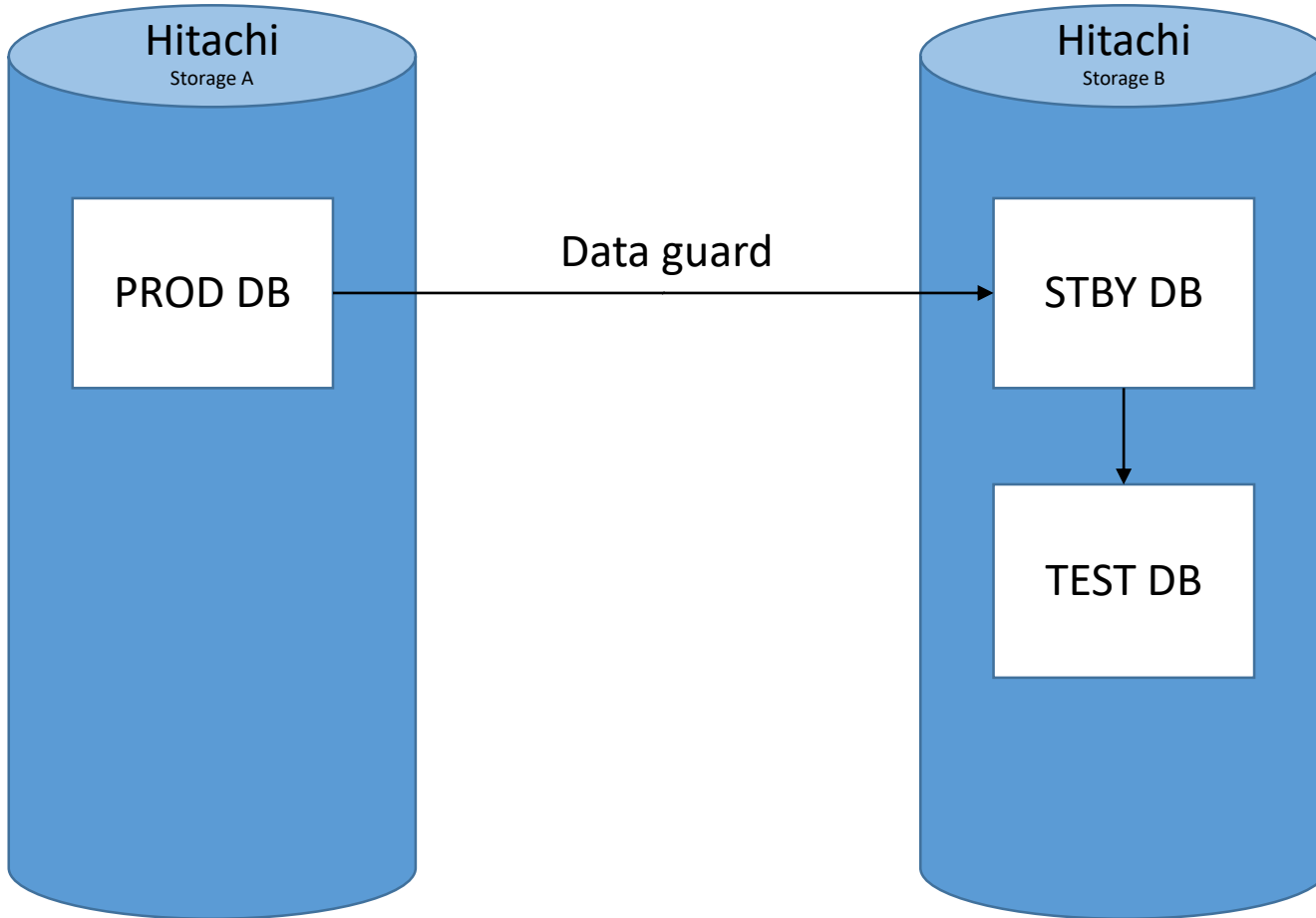


# 18c újdonságok

- Autonomous Health Framework
- Rapid Home Provisioning of Oracle Software
- Local Switch Home Command for Patching Oracle Grid Infrastructure
- Zero Impact Patching
- NodeVIP-Less Cluster
- Shared Single Client Access Name (SCAN)



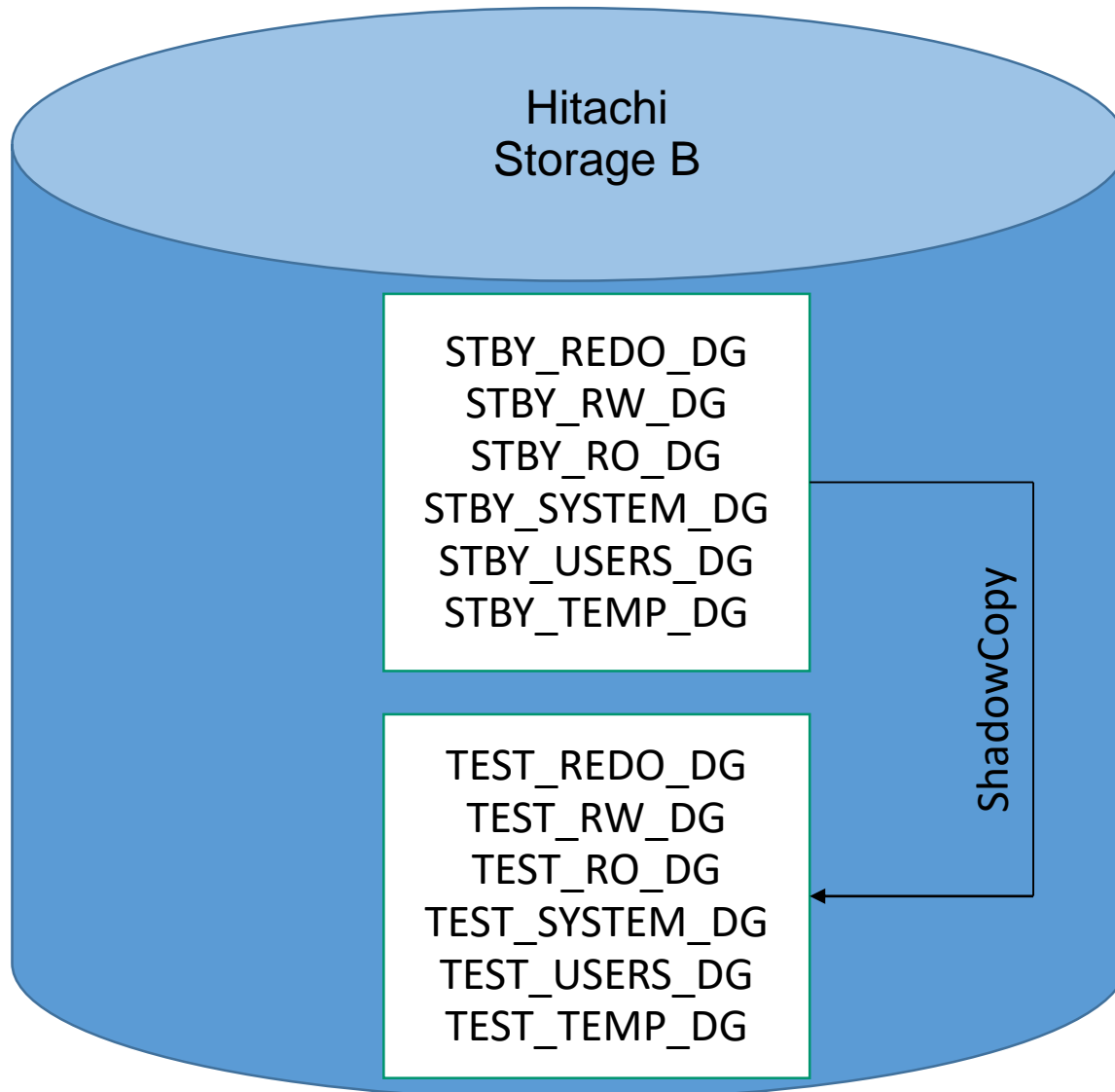
# 18c Test DB frissítés



Single Instance with Data Guard

Prod / Standby DB 12c  
Prod / Standby ASM 12c  
Test DB 12c  
Test ASM 18c

# 18c Test DB frissítés



## Klónozás lépései:

- Test oldali DG dismount
- Storage oldali másolás indítása (ShadowCopy)
- Copy stat 100%, Standby DB leállítása
- Split disks
- Scandisk
- Rename disk -f

```
oracleasm renamedisk -f /dev/mapper/<> TEST..
```

- Rename DG -f

```
renamedg dgname=STBY newdgname=TEST  
asm_diskstring='/dev/mapper/<>' verbose=true
```

- Scandisk
- Mount DG force

Köszönjük a figyelmet!

