

Extreem hoog beschikbaar

Het Oracle arsenaal



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Het Oracle arsenaal

| | |
|----------------------------------|--|
| Fast start fault recovery | Fast recovery area |
| Oracle restart | Recovery manager |
| Oracle real application clusters | Data recovery advisor |
| Clusterware | Oracle secure backup |
| Oracle data guard | Oracle security features |
| Online redefinition | Logminer |
| Oracle streams | Edition based redefinition |
| Oracle flashback technology | Oracle Exadata |
| Oracle automatic storage mngt | Client failover |
| Timely error detection | Fast application notification |
| Continuous operation | Fetch archive log |
| Failsafe automatic block repair | Corruption prevention/detection/repair |

Welk product/optie te kiezen?

Dit is afhankelijk van de beschikbaarheidseisen die aan het systeem worden gesteld en kan voor iedere organisatie anders zijn

Hoog beschikbaar \approx geen down tijd

■ Triple A bank

- Er mag geen dataverlies optreden
- Systeem moet altijd beschikbaar zijn

■ Bagageafhandelingsysteem

- Waar een koffer is in het systeem kan steeds opnieuw worden vastgesteld
- In geval van storing moet het systeem op tijd weer in de lucht zijn

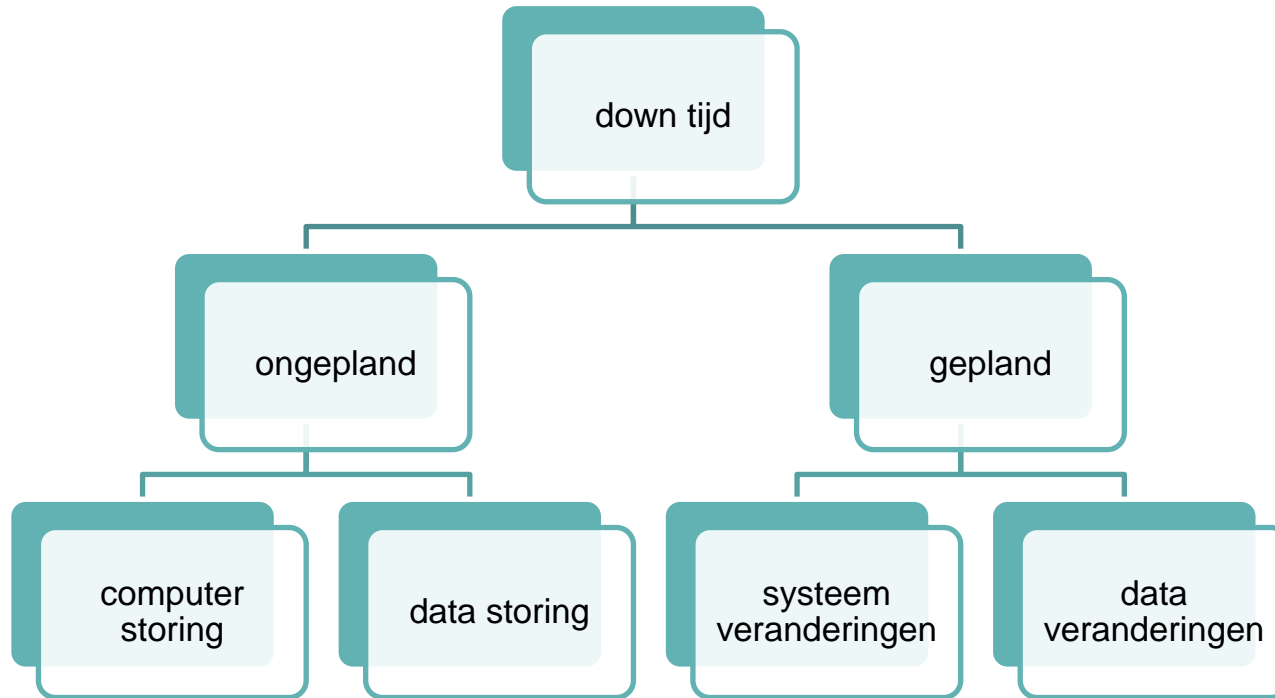
■ Textielverzorging

- Centralisatie / consolidatie

Geen downtijd

- Voorkomen
 - Dubbel uitvoeren
 - Serviceorganisatie
- Monitoren, (voor)tijdig detecteren
 - Enterprise manager, grid control
- Genezen
 - Snel herstel van service
 - Snelle restore / recovery van data

Downtijd



Computerstoring

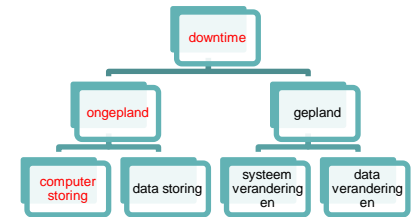
- Real Application Clusters

Twee of meer computers (nodes) in een cluster benaderen één enkele shared database.

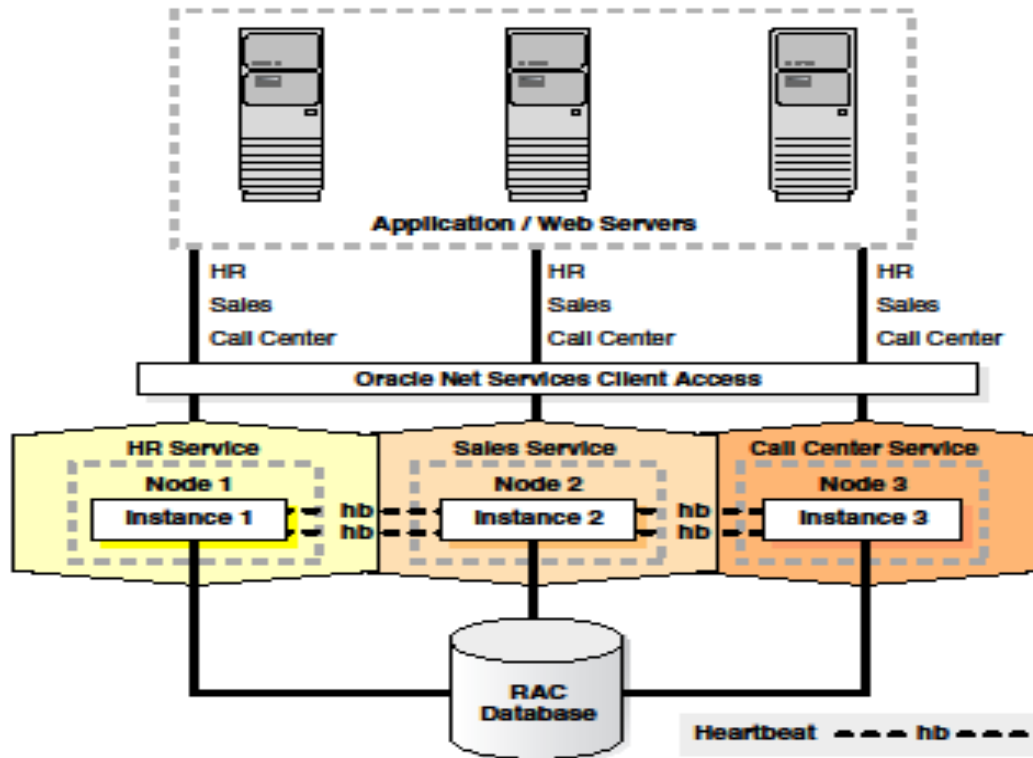
Indien één van de nodes uitvalt kunnen de andere de service overnemen.

- Fast start fault recovery

De uitgevallen computer kan snel weer actief worden gemaakt

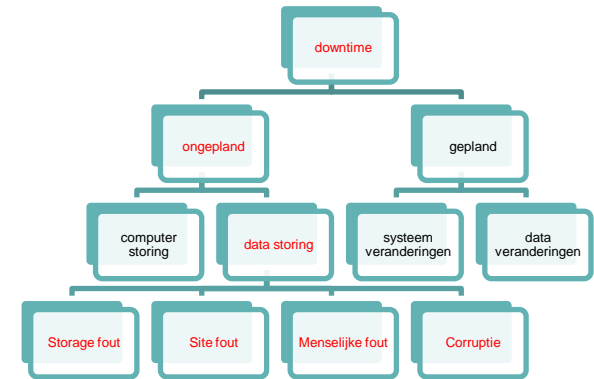


RAC + clusterware

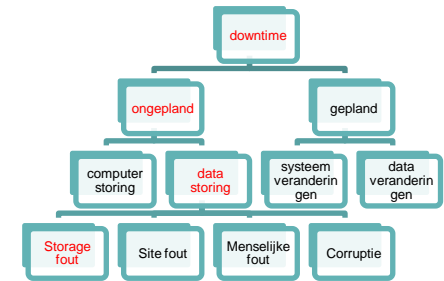


Datastoring

- Storage-fout
- Site-fout
- Menselijke fout
- Corruptie

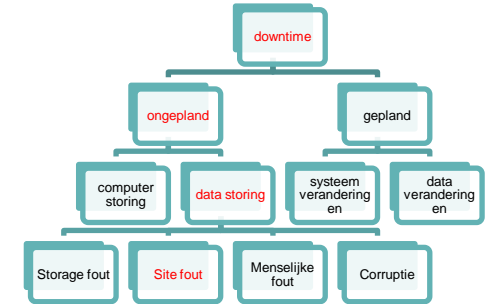


Datastoring : storage



- Automatic Storage Management
 - Mirror + stripe everything
 - Automatic rebalance
 - Block repair – automatic / on demand

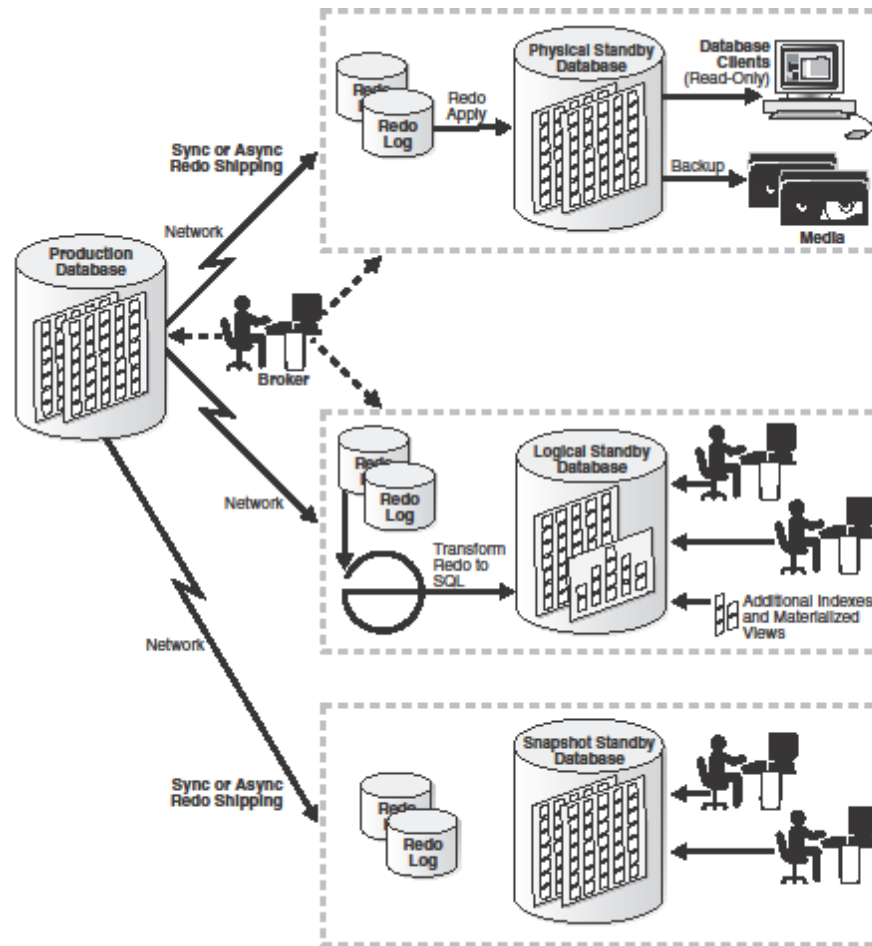
Datastoring : site fout



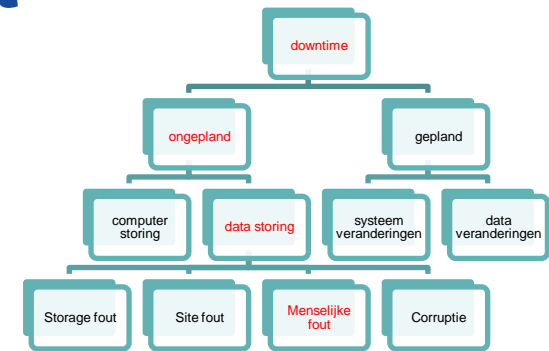
■ Data Guard

- Real time kopie van de database
 - Physical – redo apply
 - Logical – sql apply
- Fast start failover
 - Fast application notification
- Management via Broker + Enterprise manager

Data Guard configuratie(s)

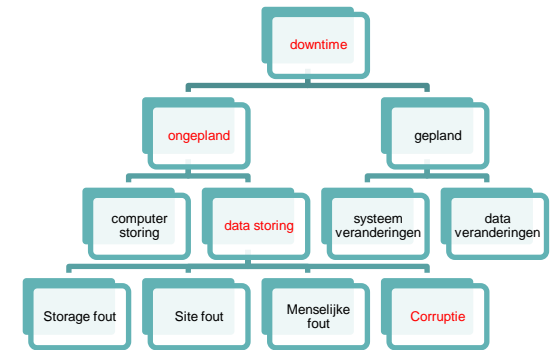


Datastoring : menselijke fout



- Per ongeluk delete / drop
 - Security – fine grained acces control
 - Flashback technology
 - Query
 - Transactie
 - Tabel
 - Data archive
 - Database

Datastoring : corruptie

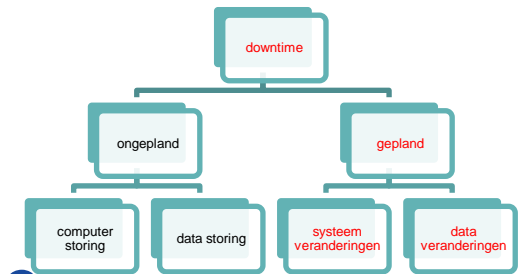


- Hardware Assisted Resilient Data (HARD)
- Backup + recovery RMAN
- Data recovery advisor
- Oracle secure backup

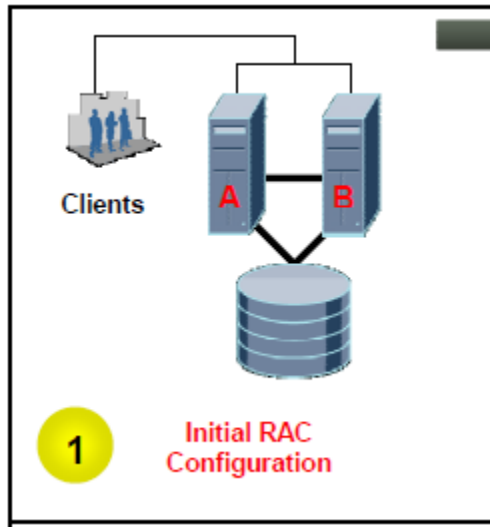


Geplande downtijd

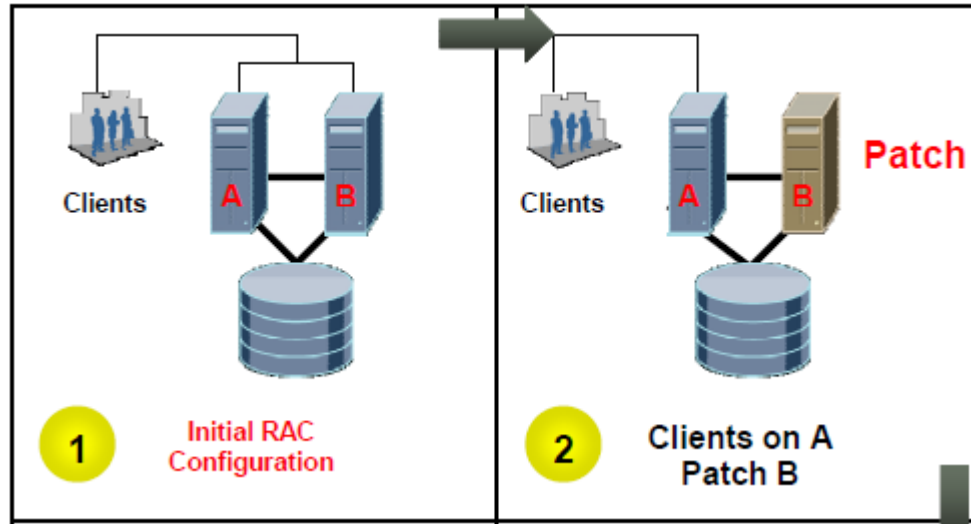
- Online systeem reconfiguratie
- Online / rolling patching en upgrades
- Online data en schema reorganisatie
- Applicatie-upgrades
 - DBMS_redefinition
 - Edition based redefinition



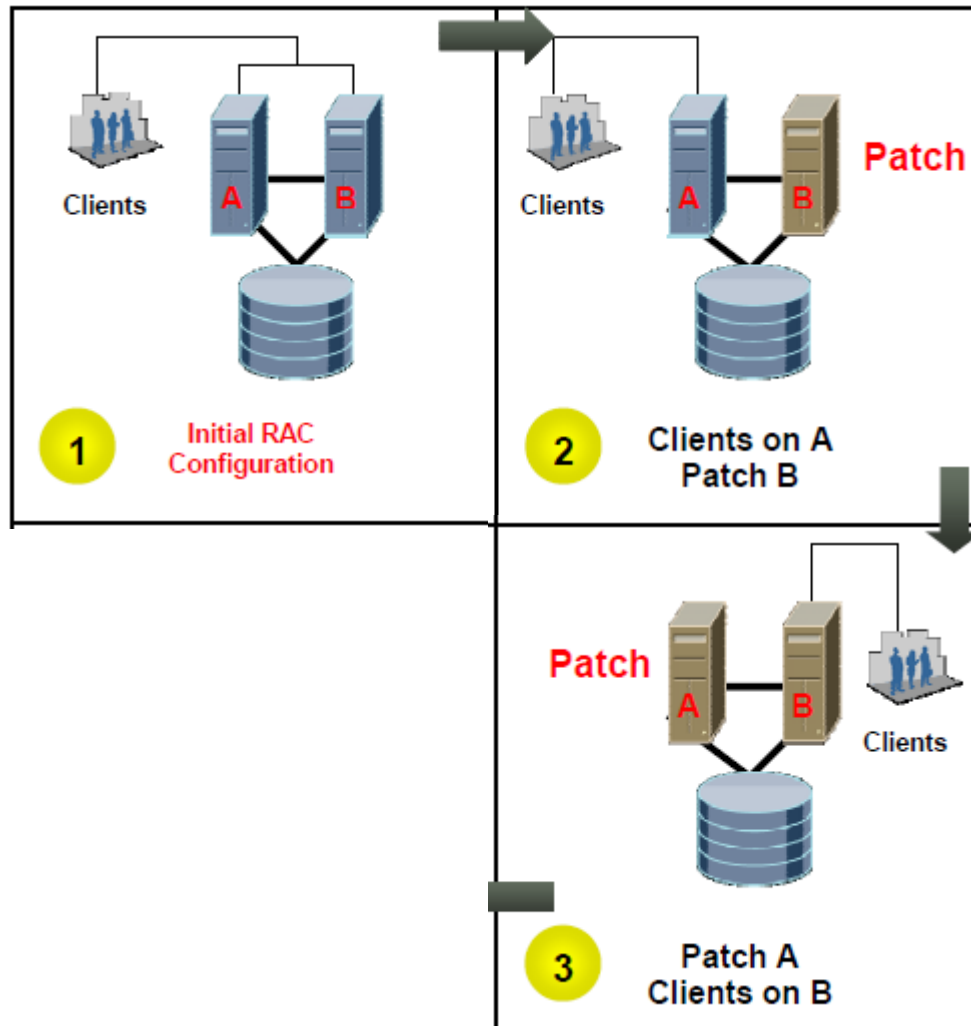
Online patch (1)



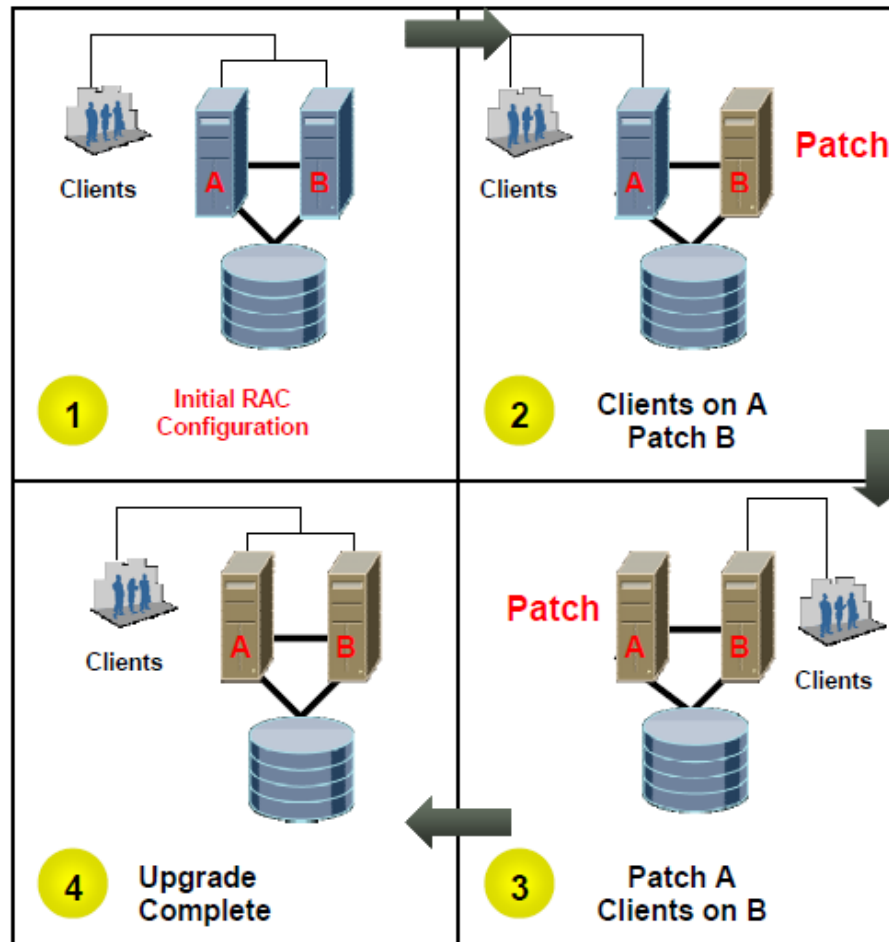
Online patch (2)



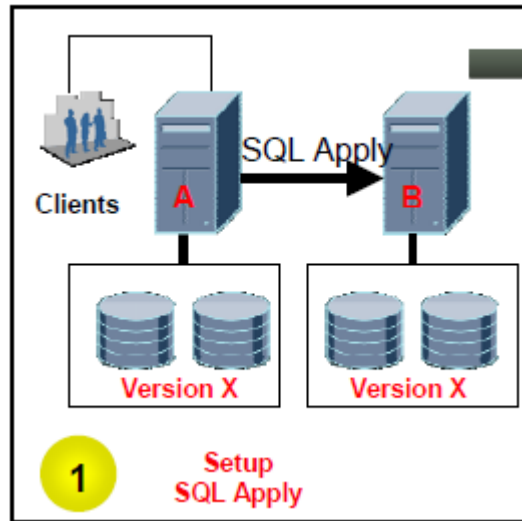
Online patch (3)



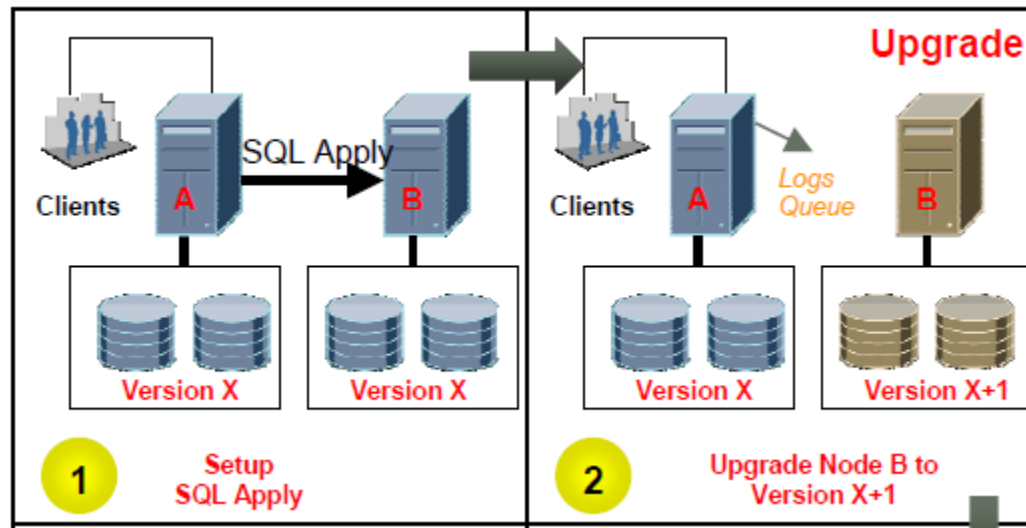
Online patch (4)



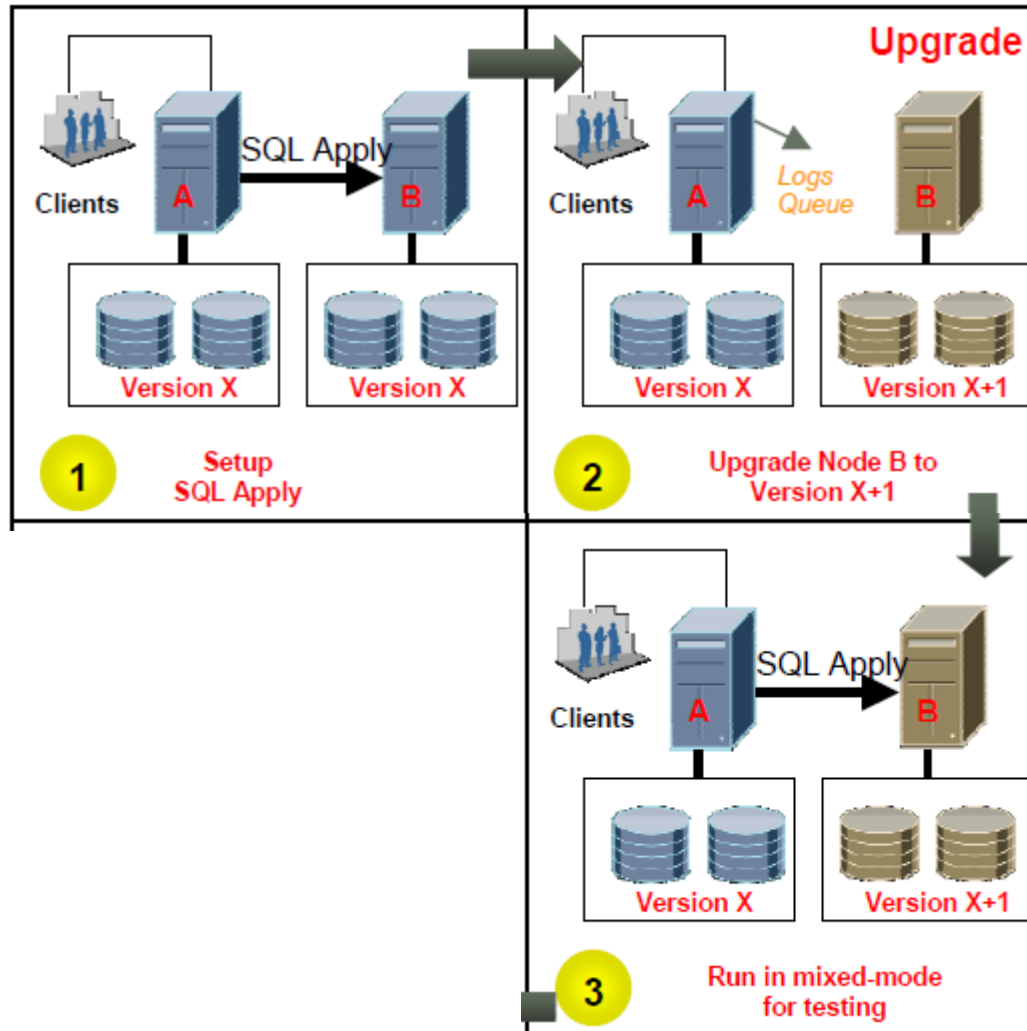
Rolling software upgrade (1)



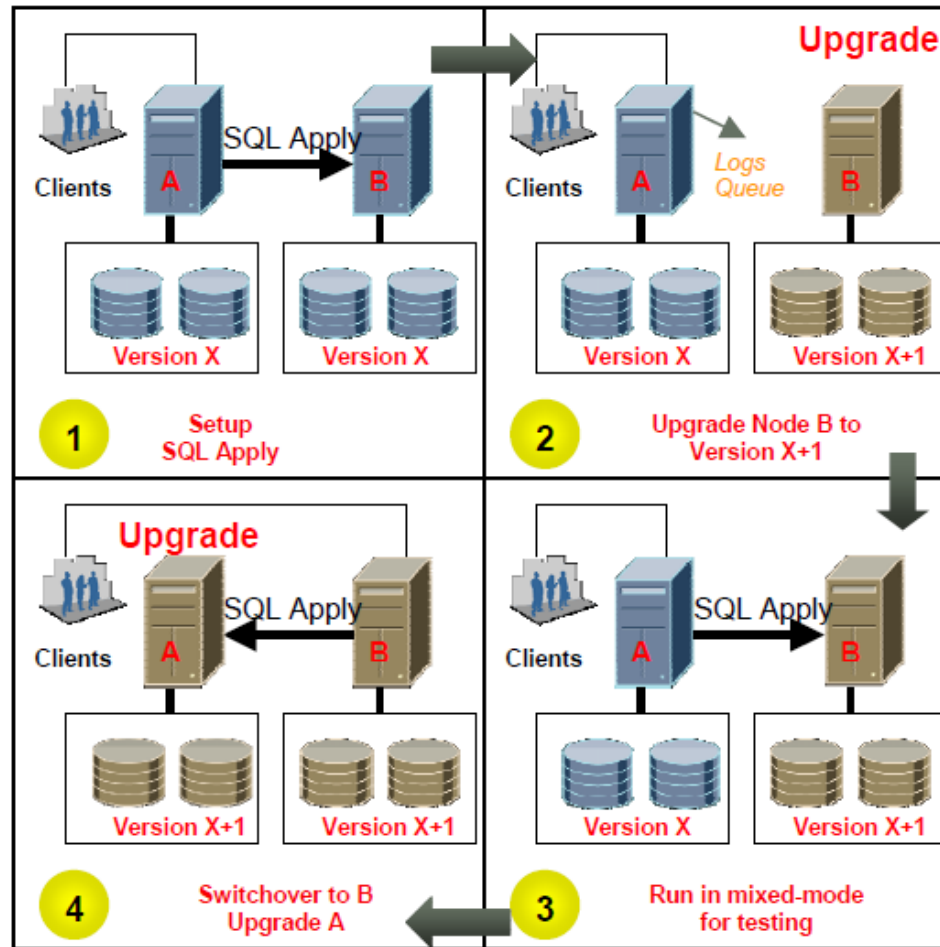
Rolling software upgrade (2)



Rolling software upgrade (3)



Rolling software upgrade (4)



Wrap up

| | | RAC | Data Guard | ASM | RMAN | Flash-back | Redefinition |
|-----------|-----------|-----|------------|-----|------|------------|--------------|
| ongepland | Computer | ++ | | | + | | |
| | Storage | | | ++ | + | | |
| | Site | | ++ | | + | | |
| | Mens | | | | + | ++ | |
| | Corruptie | | | ++ | + | | |
| gepland | Systeem | ++ | | | + | | |
| | Data | | ++ | | + | | ++ |



**Vragen
Antwoorden**

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