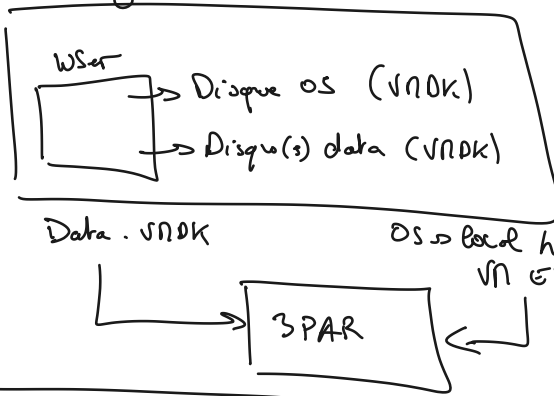
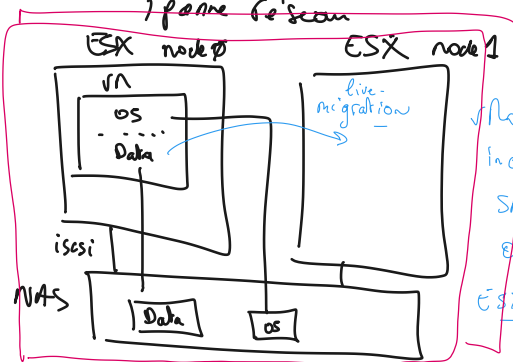
Bonjour tout le Monde

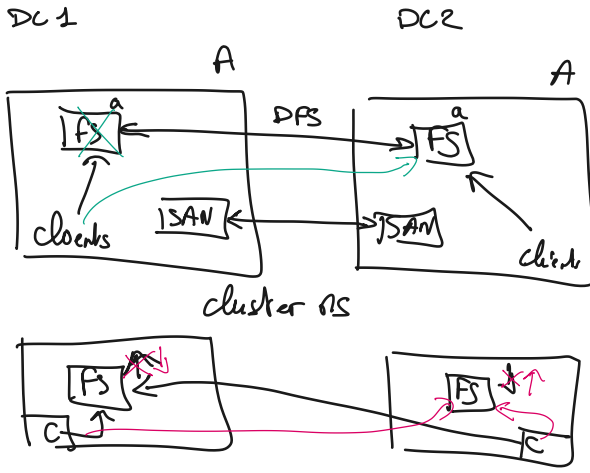


FS → autonome OK

→ rendre Tolérant vis à vis host ESX

~~1 panne réseau~~



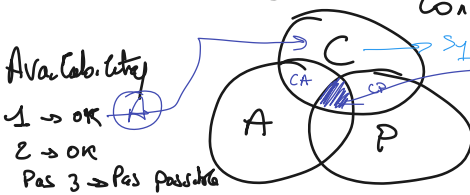


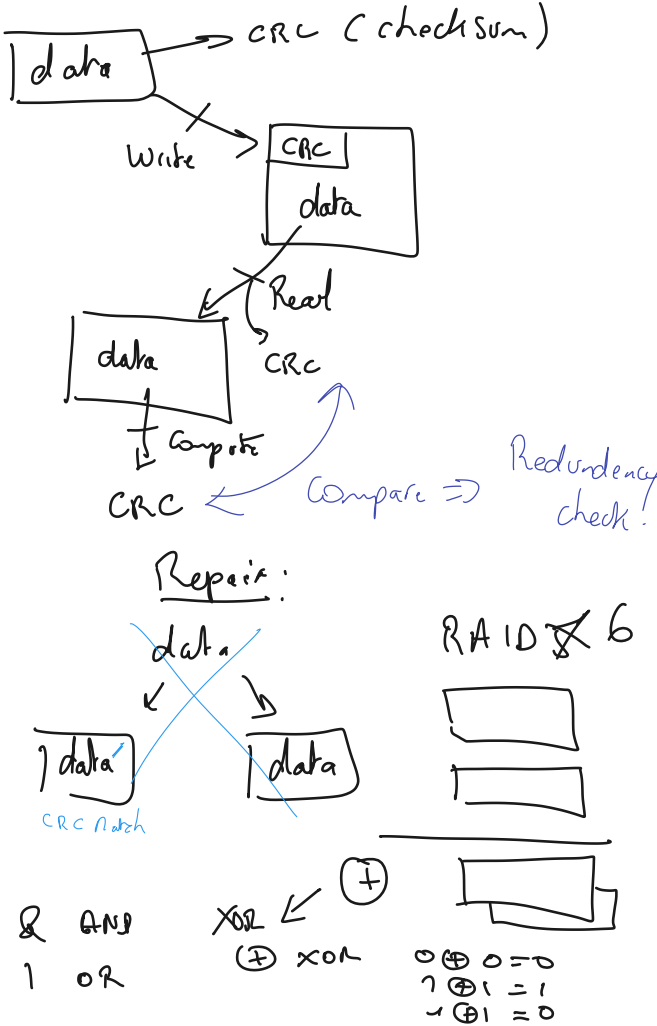
Cohérence ⟷ disponibilité

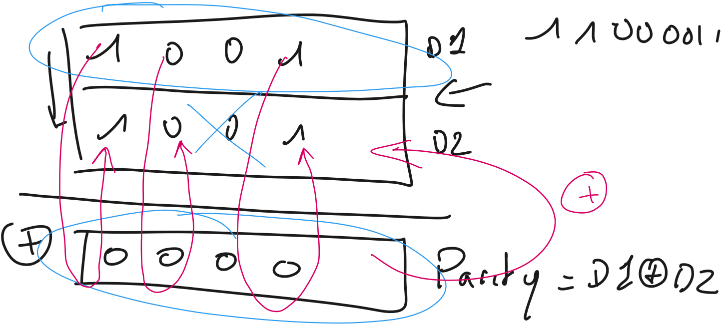
Synchrone ⟷ asynchrone

En Base de données

Théorème de CAP



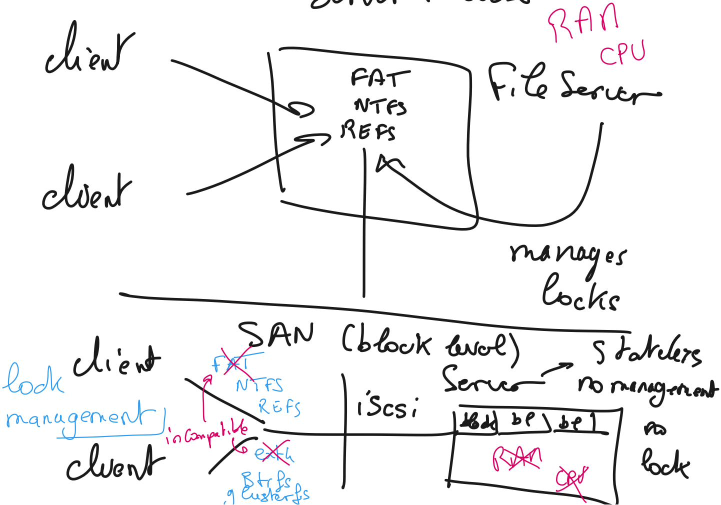

data
CRC (checksum)
Write
CRC
data
Read
data
CRC
Compute
CRC
Compare ⇒
Redundency check!
Repair:
data
data
data
CRC notch
RAID 6
& AND
| OR
XOR
⊕ XOR
0 ⊕ 0 = 0
1 ⊕ 1 = 1
1 ⊕ 1 = 0

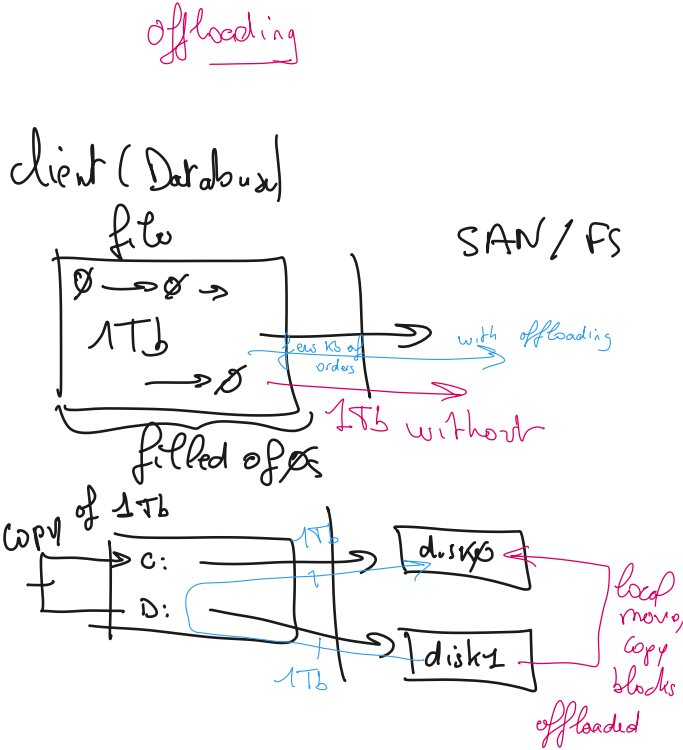


SMB/NFS

Client / Server

Server Process





ESXi VSphere :

Chaque node du cluster Windows (WSFC) doit être sur un host unique du cluster VMWare. **only one windows cluster node per vSphere cluster host !**

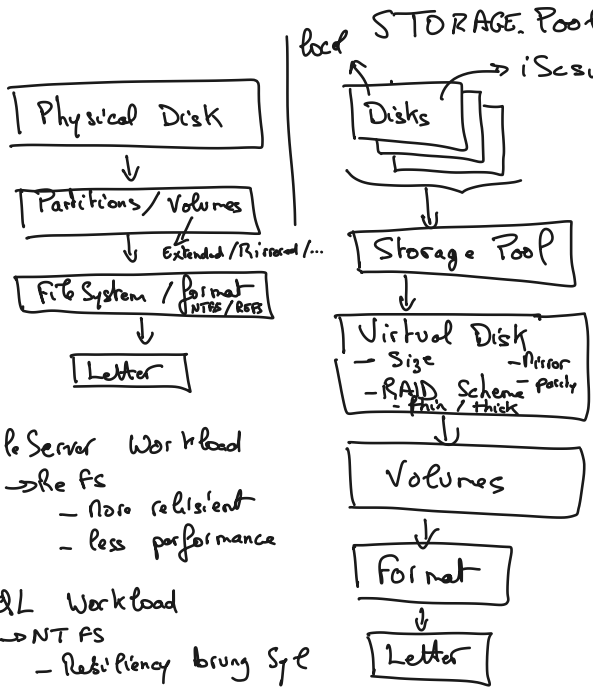
NOT Supported by vSphere with WSFC :

Live Storage vMotion support

Fault Tolerance

N-Port ID Virtualization (NPIV)

Mixed versions of ESXi hosts in a vSphere cluster



File Server Workload
→ ReFS
- more resilient
- less performance

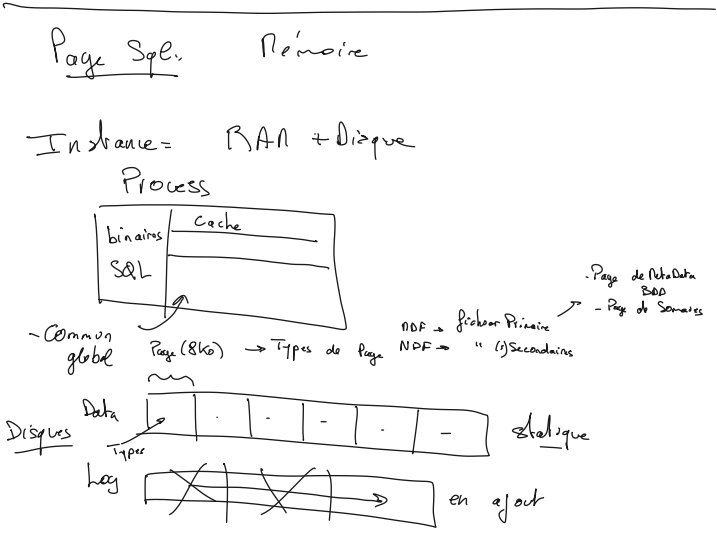
SQL Workload
→ NTFS
- Resiliency during Sys
- performant.

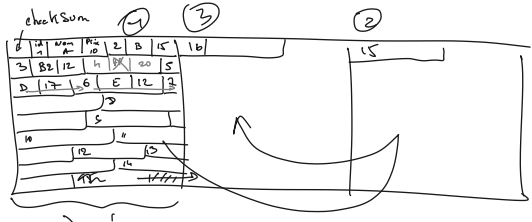
Mise à jour de la conf pour être compatible avec VMWAre are les cluster FCI :

Lecteurs de DVD en IDE
Ne mettre que des disques SATA sur les bandes :
SRV1 : 0:0 0:1 0:2
SRV2 : 1:0 1:1 1:2
SRV3 : 2:0 2:1 2:2
SRV4: 3:0 3:1 3:2

Désactiver le firewall sur toutes les machines (pour SQL Plus tard)

Article gestion des tiers :
https://charbelnemnom.com/how-to-create-a-multi-resilient-volume-with-refs-on-standalone-server-in-windows-server-2016-ws2016-hyperv-storagespaces/

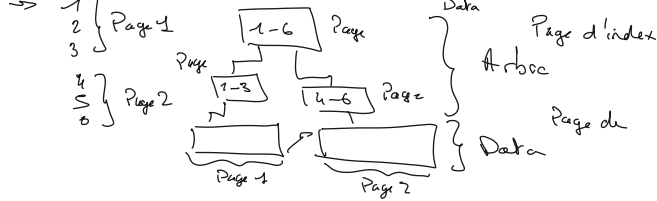




Primary Key ⇒ Index cluster ⇒ Index BTree +

feuille ⇒ Triées Physiquement

Data



Valeur d'index → N° de Page → d'index } Pointeurs

→ de donnée

Valeur clef primaire

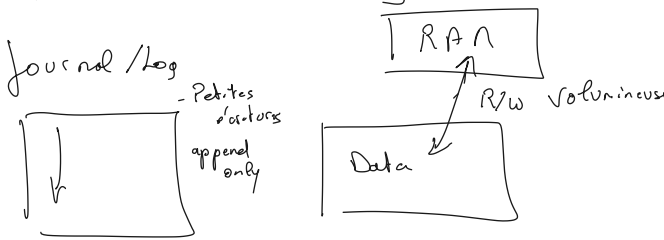
Index → Triés (donnée pas forcément)

ex: Prix de Produits

Objectifs : - limiter les IO

- Persister / Ne pas perdre de données.

→ Combinaison Data / Log



Atomicity → transaction

Consistency

Isolation

Durability

Disques locaux :

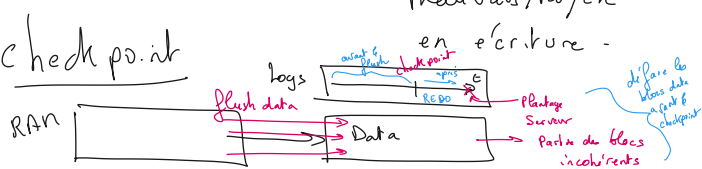
Log → HDD RAID 10

Data → SSD RAID 5/6

bon en lecture

mauvais/moyen en écriture

checkpoint



Importance de tempdb

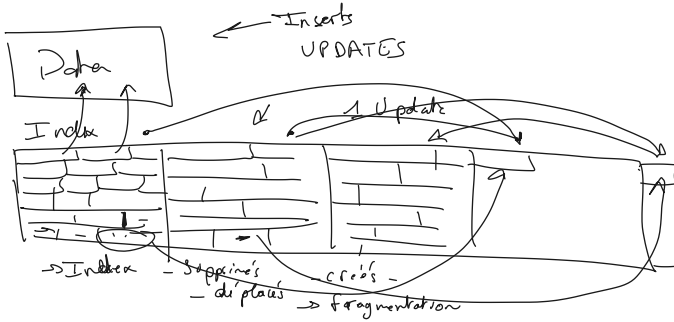
→ équivalent au "fichier de Pagination"
→ quand pas assez de RAM

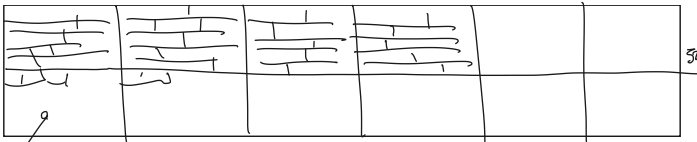
ex: - objets temporaires non partagés } en RAM
create table #ma table

Si Volume Temp > RAM → persiste dans tempdb

ex2:
Requête Tri sans Index sur Table de 100 Go

lecture → Tri → bufferisation → envoi des lignes
RAM sinon dans tempdb





80% = Conforme 2x plus de payo

33% = " 3x