

Twée remedies tegen systeemuitval en datacorruptie [RAC en Data Guard]



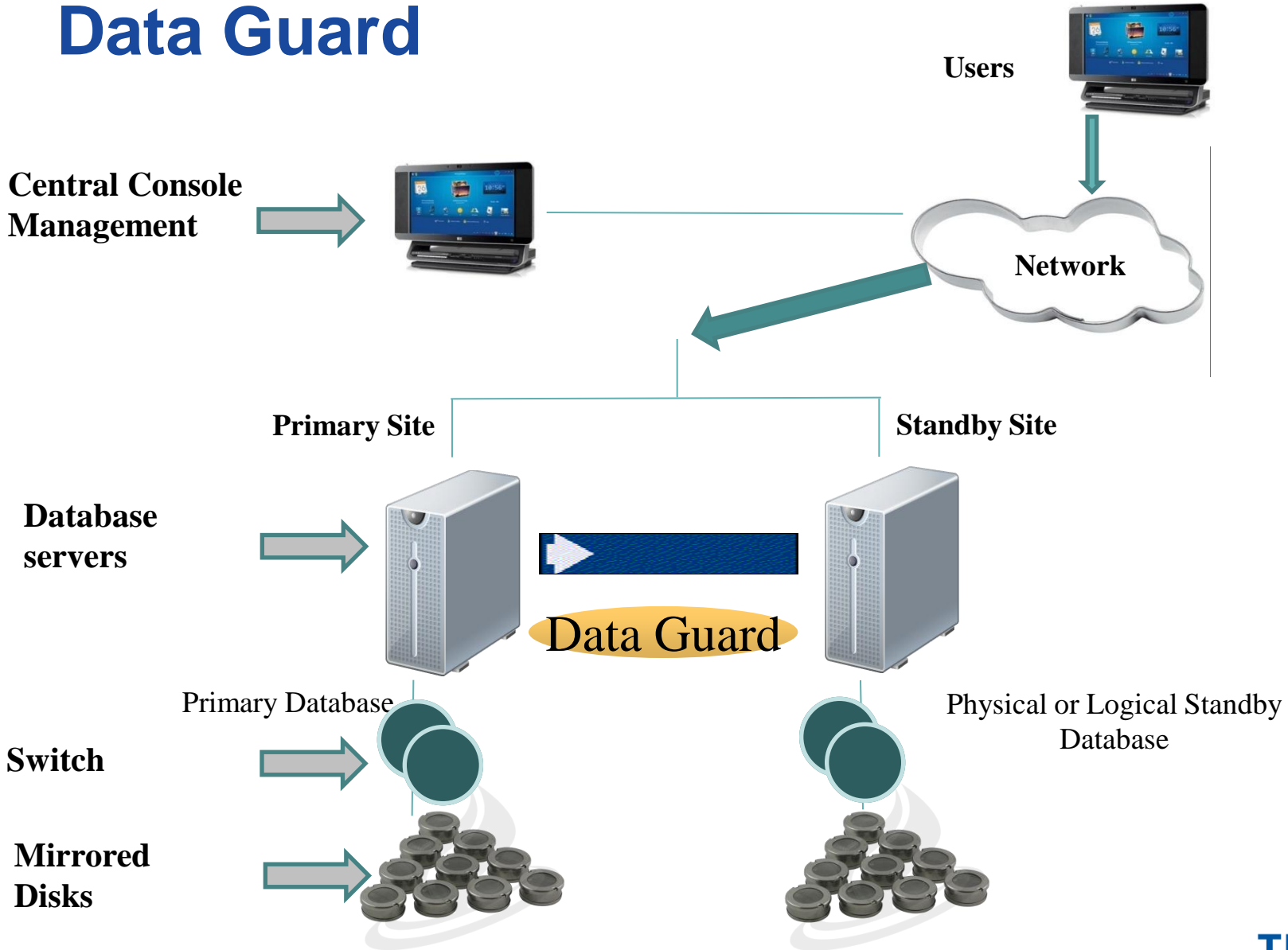
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DATUM : 14 oktober 2010

TRANSFER

Inleiding: Twee remedies tegen systeemuitval en datacorruptie

- Data Guard (DG)
 - DG Structuur
 - DG Proces Architectuur
 - DG Concept
- Real Application Clusters (RAC)
 - RAC Structuur
 - RAC Proces Architectuur
 - RAC Concept
- RAC en Data Guard Complementaire
- HA/DR overzicht

Data Guard



Data Guard

Database Disks (san nas)



Users



Central Console Management



Primary Site

Standby Site

Database servers



Data Guard

Primary Database

Physical or Logical Standby Database

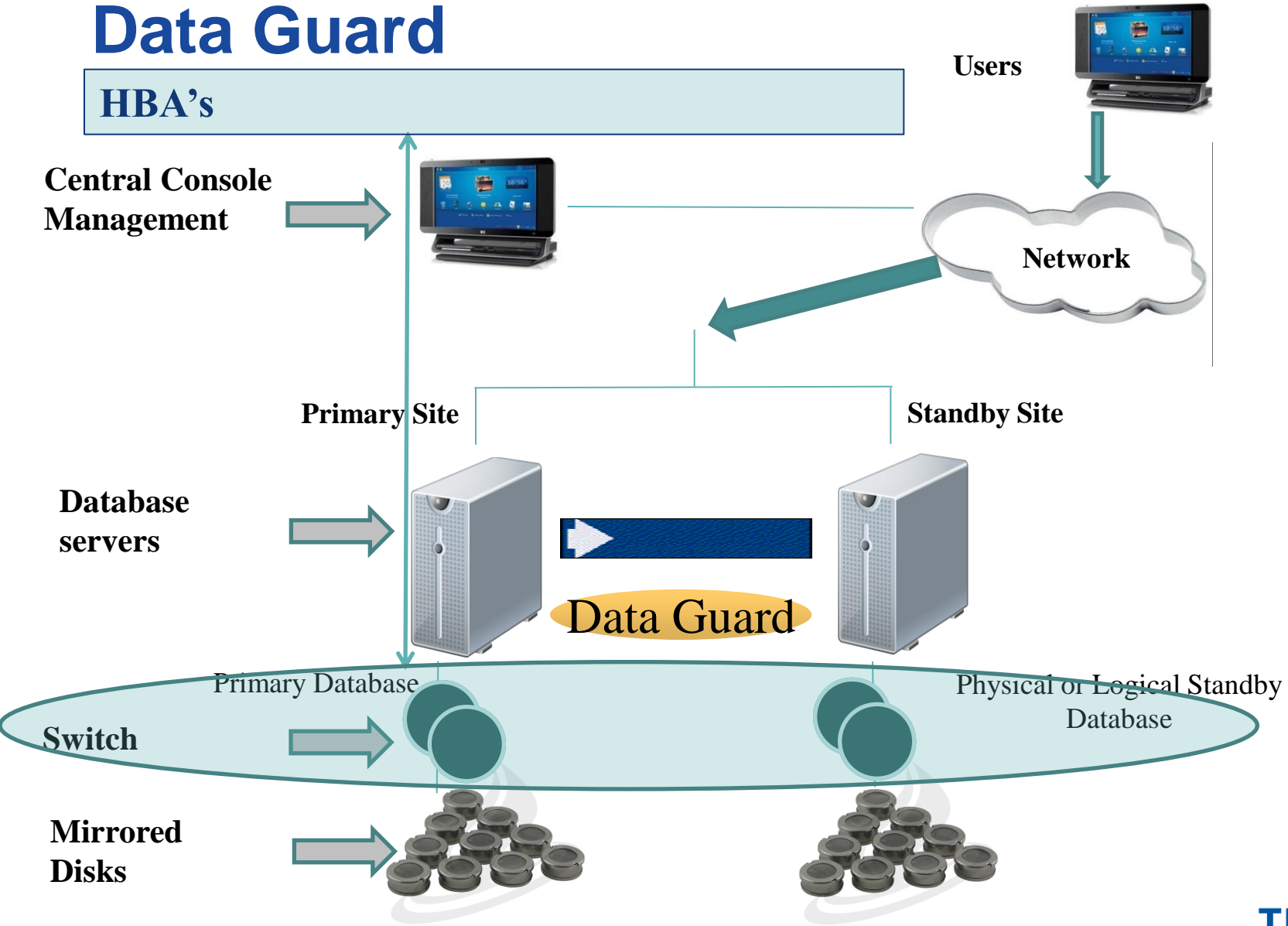
Switch



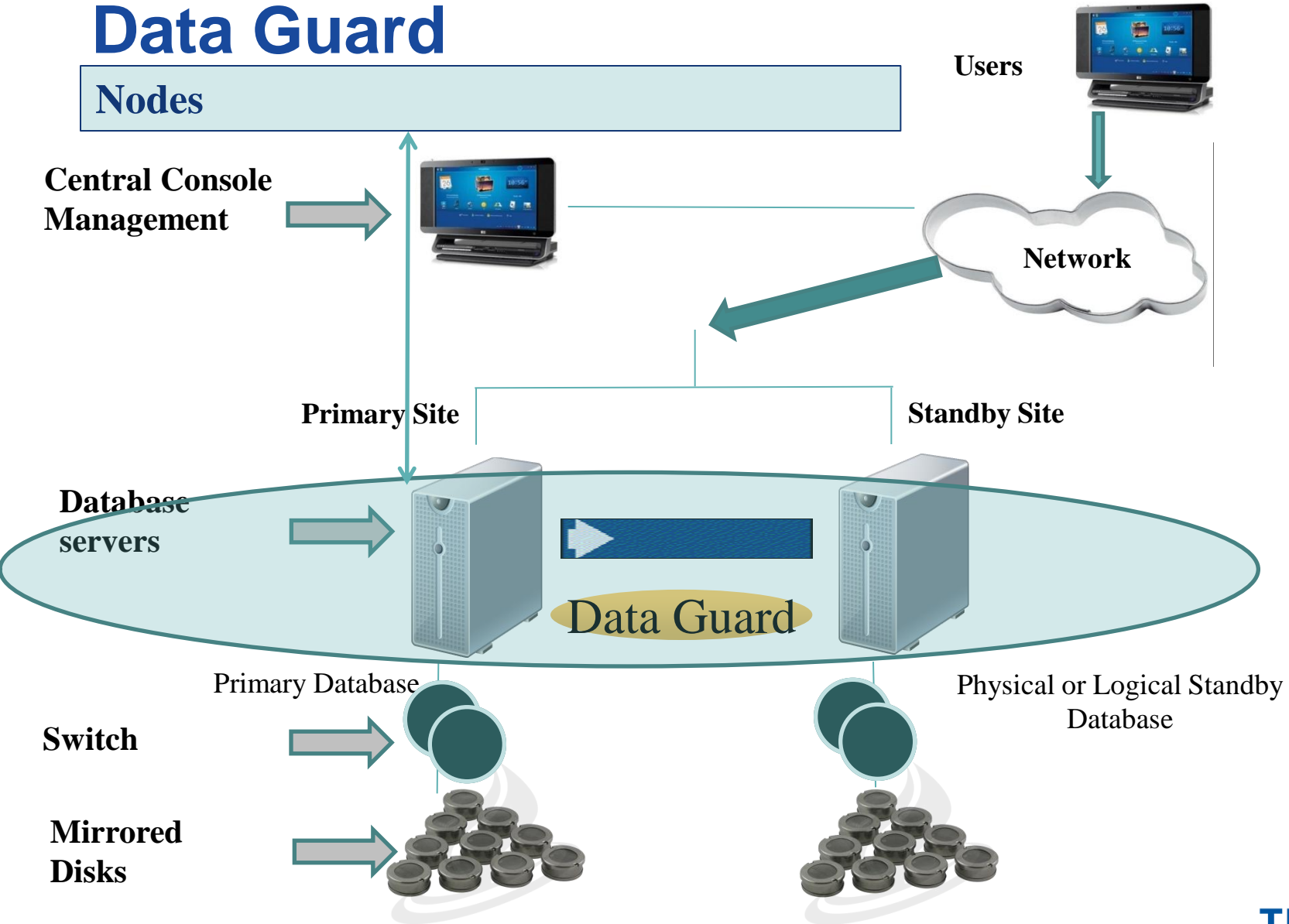
Mirrored Disks



Data Guard



Data Guard

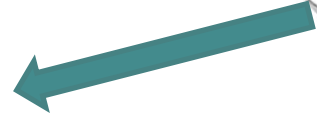


Data Guard

Redo Log Apply

Central Console Management

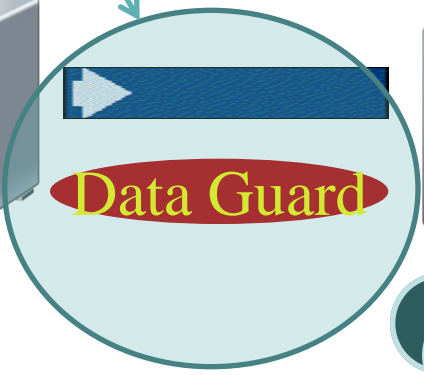
Users



Primary Site

Standby Site

Database servers



Primary Database

Physical or Logical Standby Database

Switch



Mirrored Disks



Data Guard

Monitor en Management

Central Console Management

Users

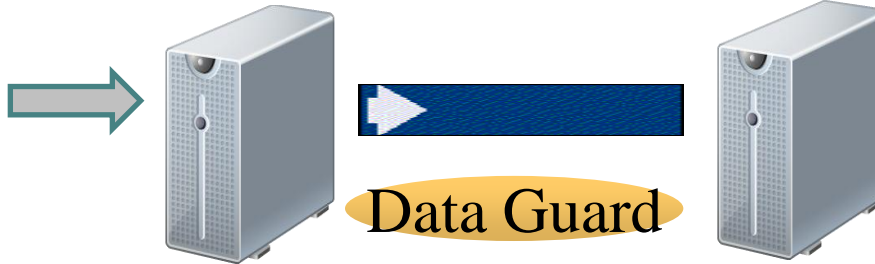


Network

Primary Site

Standby Site

Database servers



Data Guard

Primary Database

Physical or Logical Standby Database

Switch

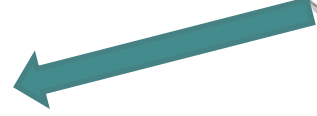
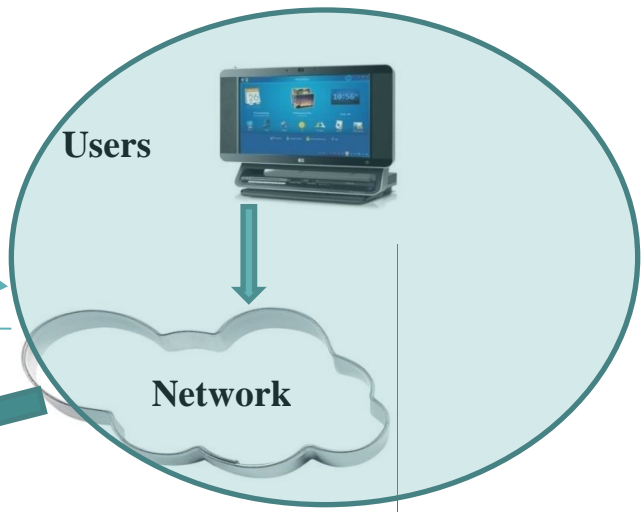


Mirrored Disks

Data Guard

Load Balance TAF - Database role

Central Console Management



Primary Site

Standby Site

Database servers



Data Guard



Primary Database

Physical or Logical Standby Database

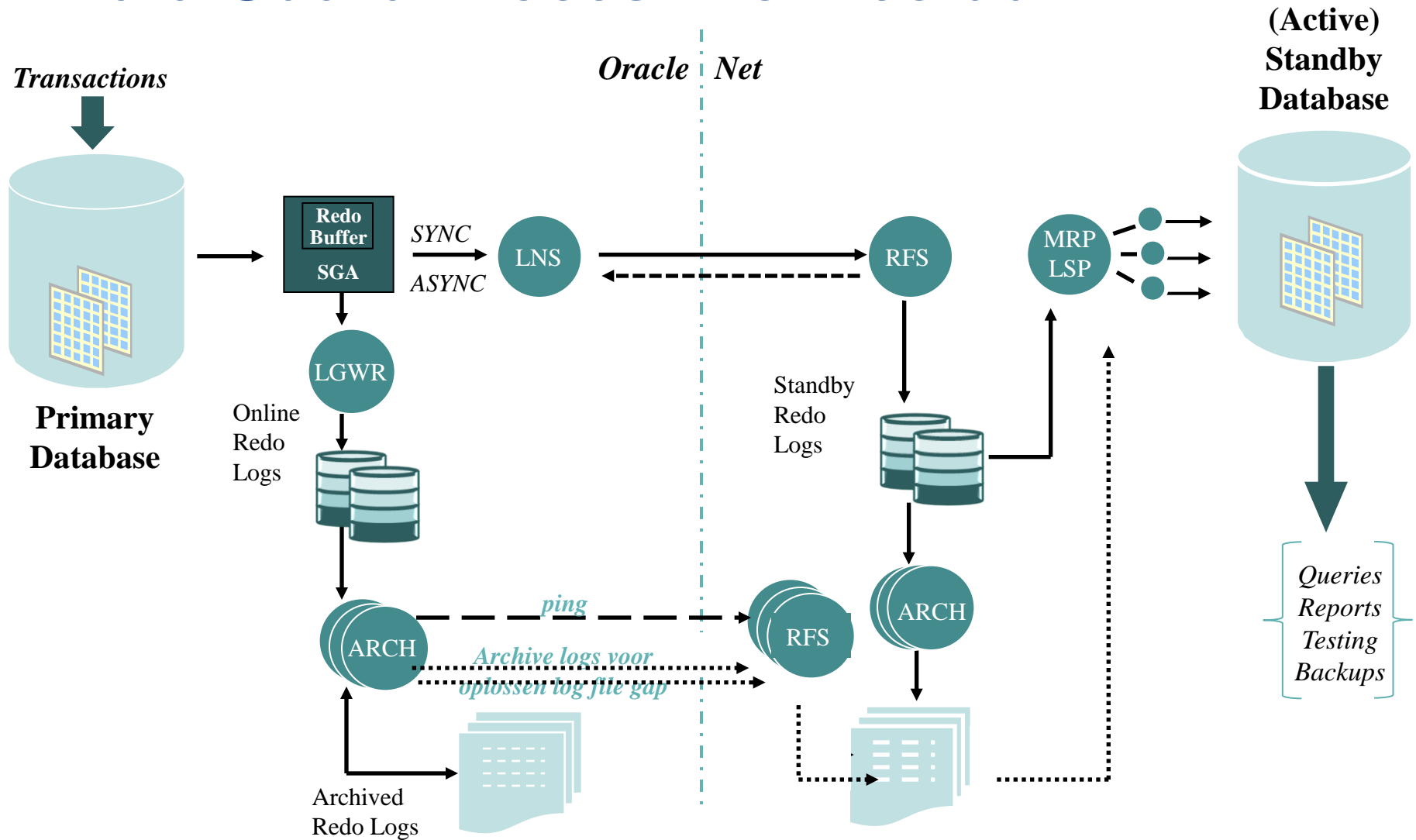
Switch



Mirrored Disks



Data Guard Proces Architectuur



Data Guard Concept

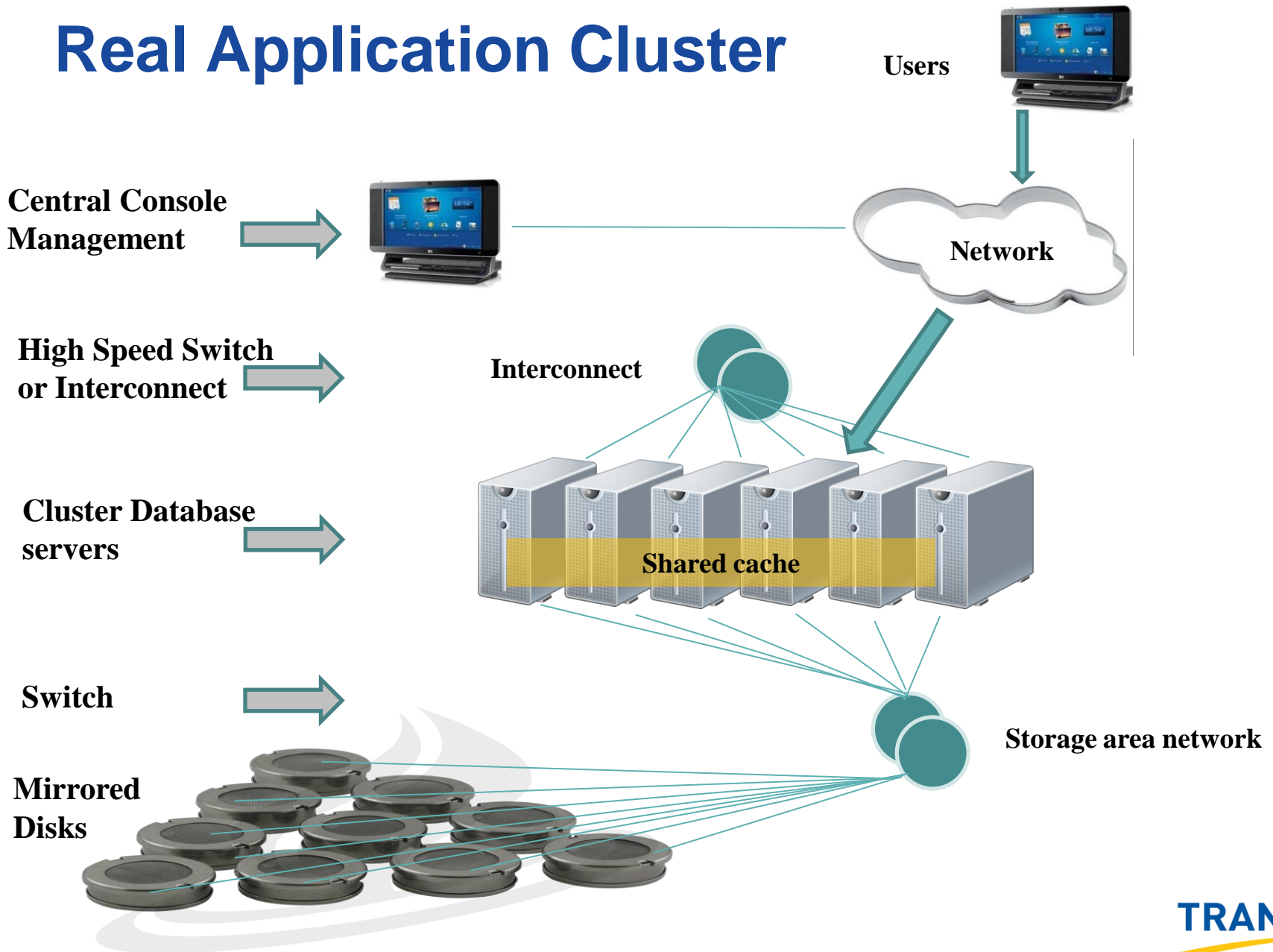
Redo transport – Protection mode Data Guard

Mode	Risk of data loss	Redo Transport	Bij geen bevestiging van de standby:
Maximum Performance	Potential for Minimal Data Loss	ASYNC	Primaire DB wacht nooit op een bevestiging van de standby.
Maximum Availability	Zero Data Loss Single Failure Protection	SYNC	Primaire DB wacht op bevestiging van de standby DB of op een gedefinieerde netwerk timeout
Maximum Protection	Zero Data Loss Double Failure Protection	SYNC	Primaire DB wacht op bevestiging van de standby DB.

Data Guard Concept

- Physical standby
- Logical Standby
- Active Data Guard (Read Farm)
- Data Guard Snapshot Standby
- Rolling Database Upgrades
- Switchover en Failover

Real Application Cluster



Real Application Cluster

Shared disks (san, nas)

Central Console Management

High Speed Switch of Interconnect

Cluster Database servers

Switch

Mirrored Disks

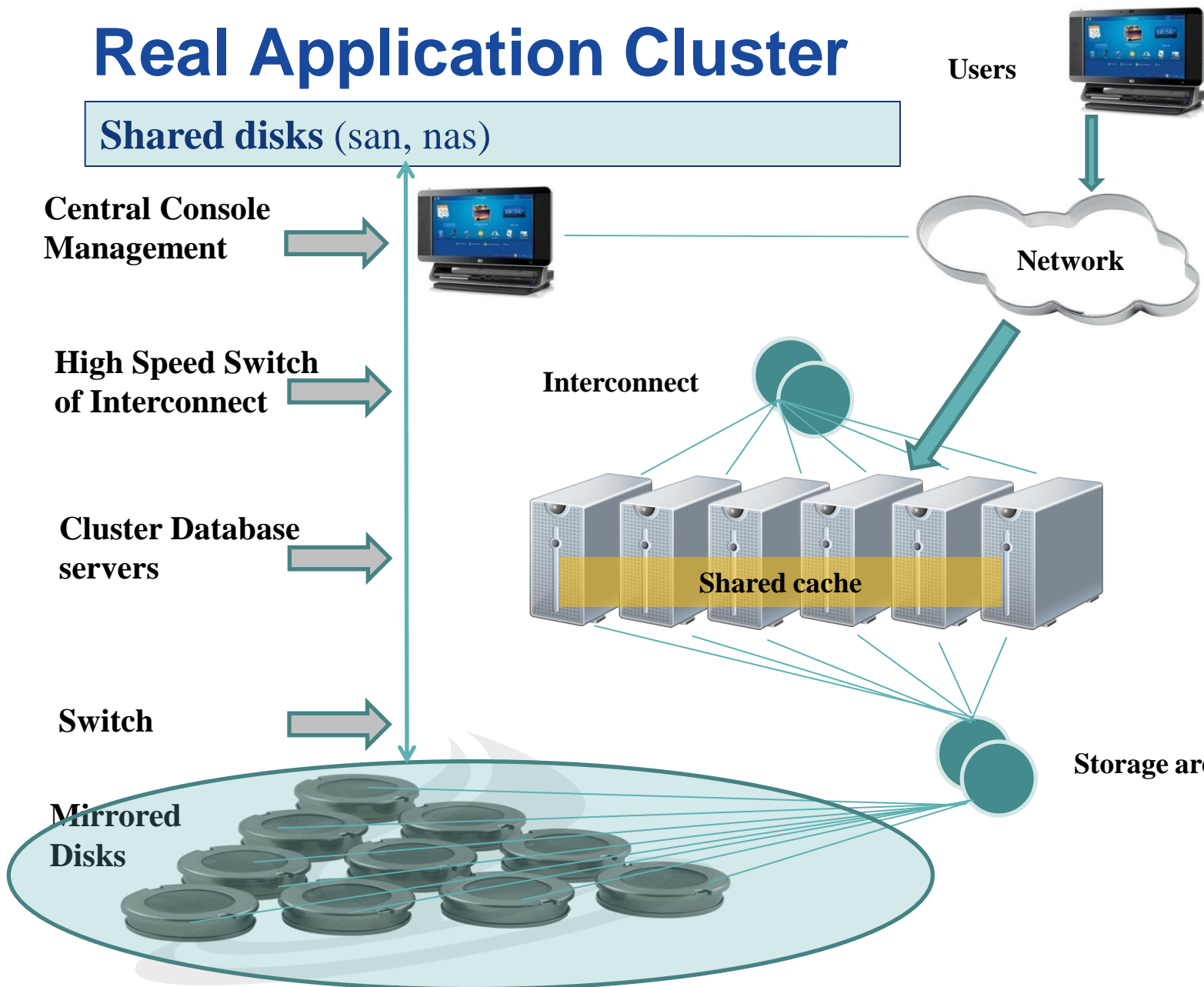
Users

Network

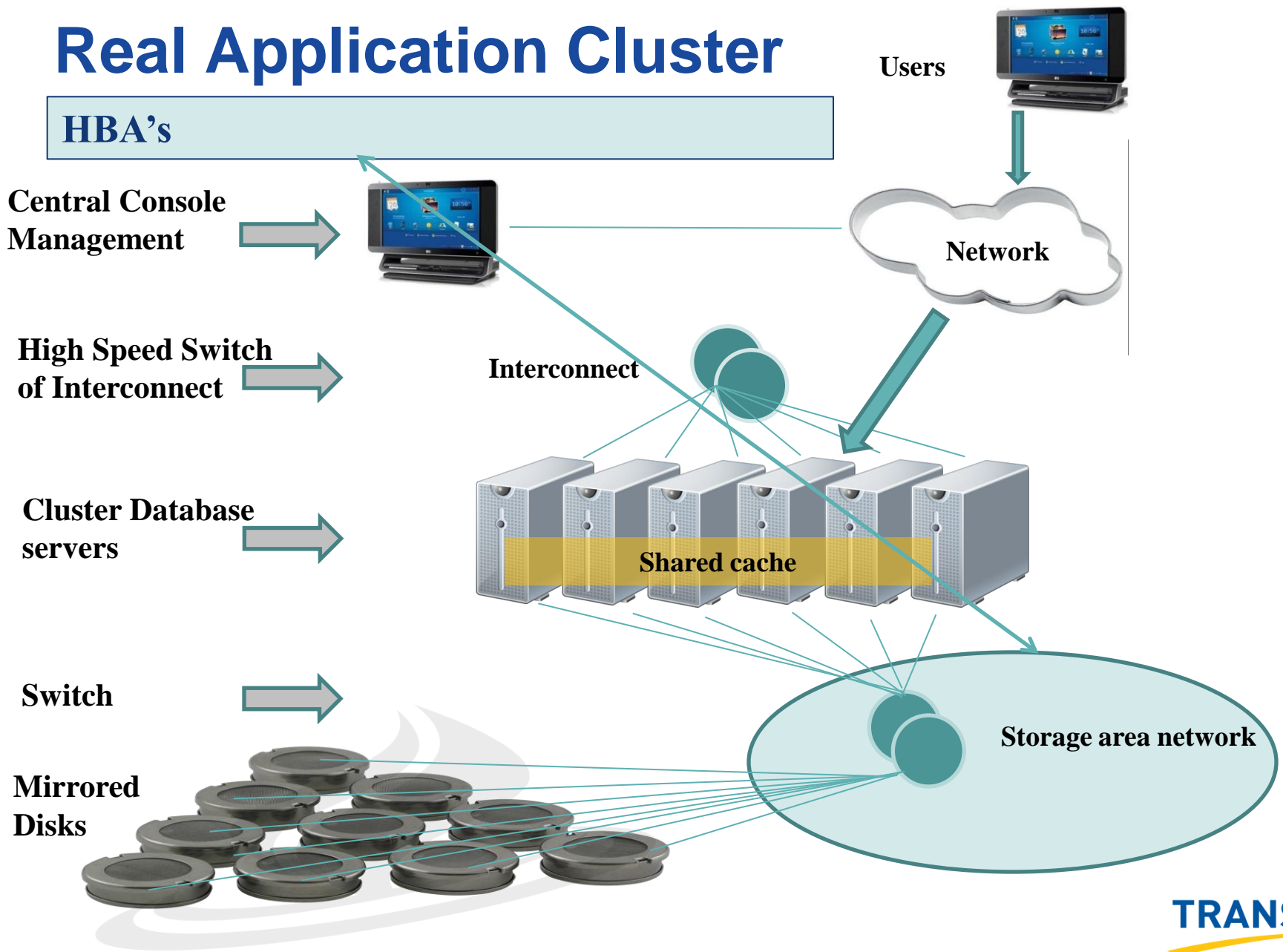
Interconnect

Shared cache

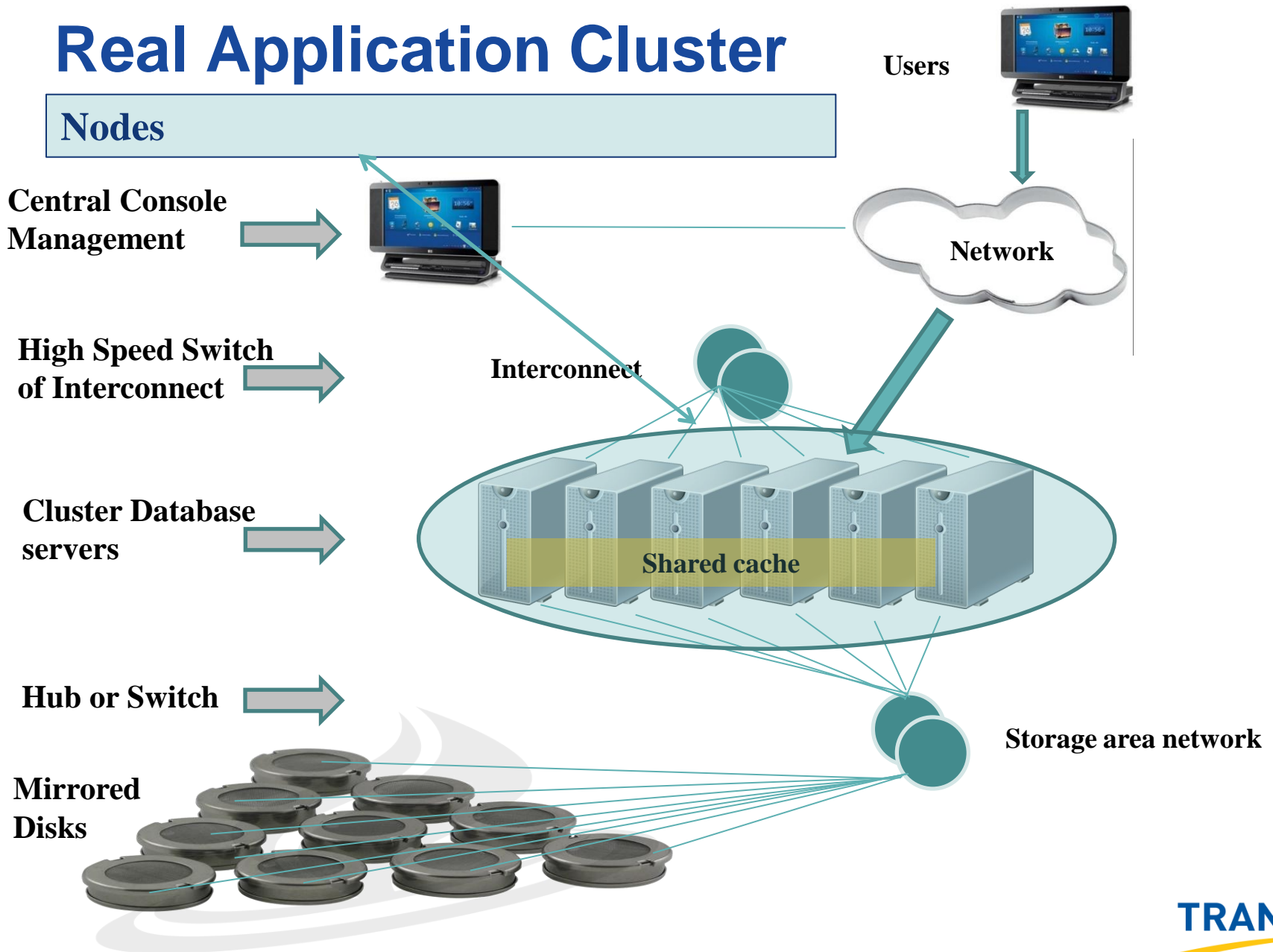
Storage area network



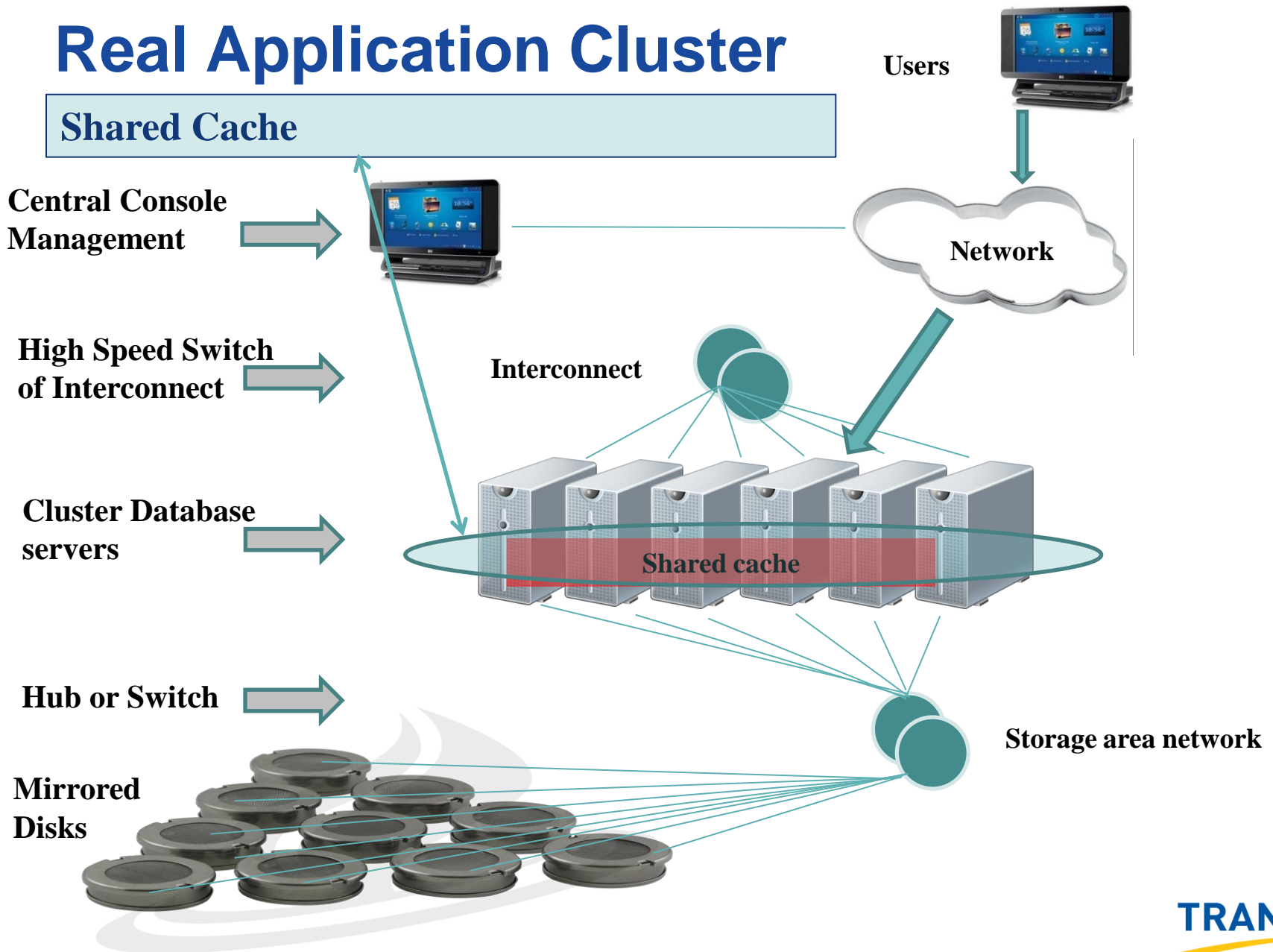
Real Application Cluster



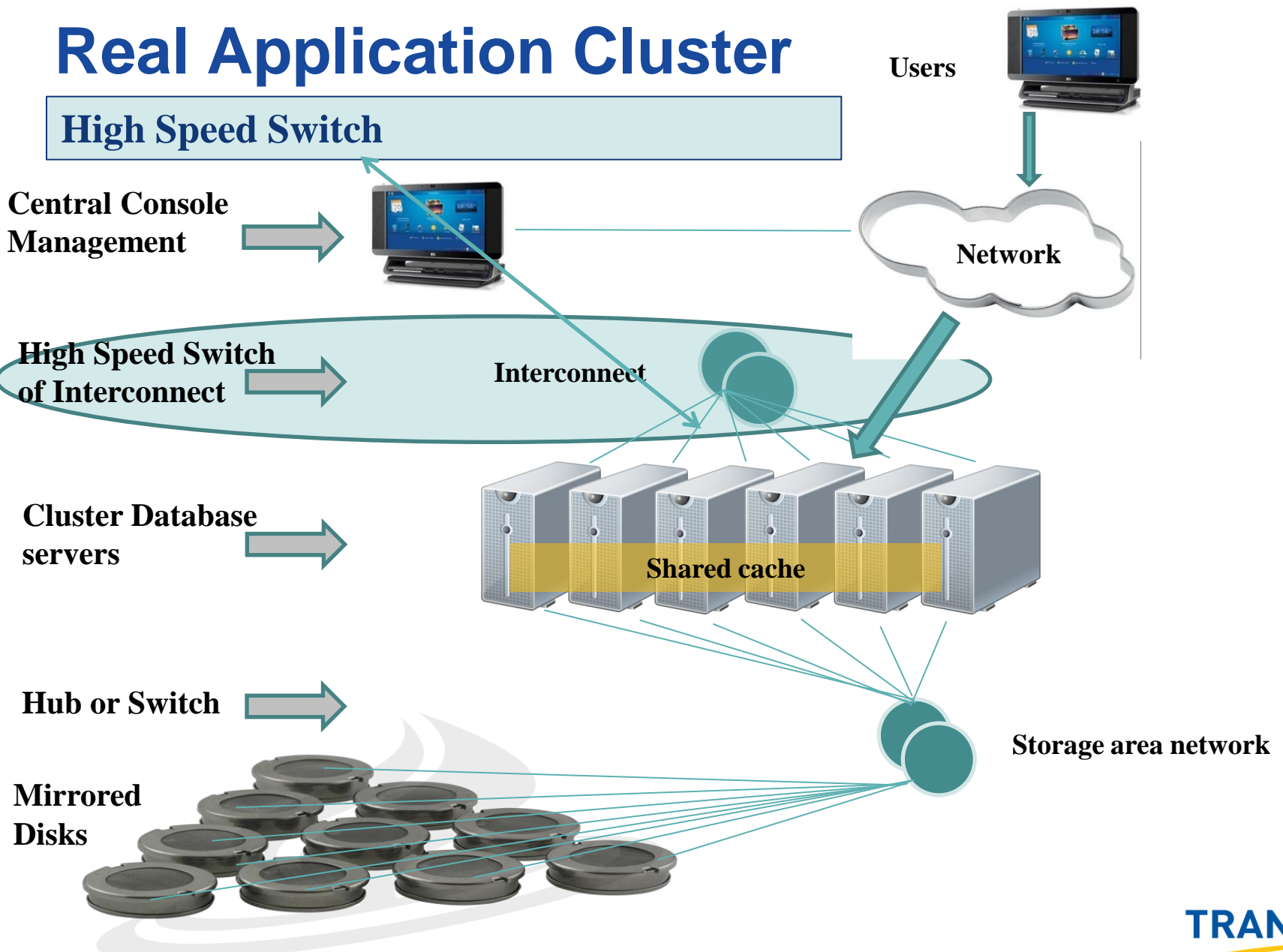
Real Application Cluster



Real Application Cluster



Real Application Cluster



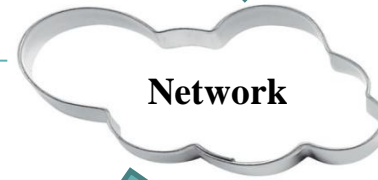
Real Application Cluster

Monitor en Management

Central Console Management



Users



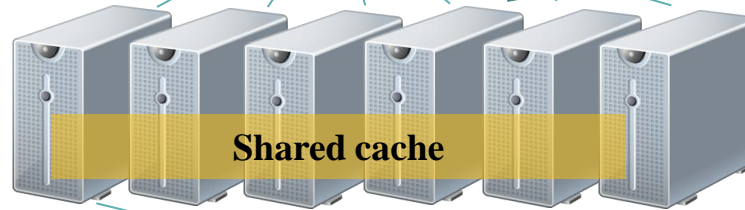
High Speed Switch of Interconnect



Interconnect



Cluster Database servers



Switch



Storage area network

Mirrored Disks



Real Application Cluster

Load balance TAF

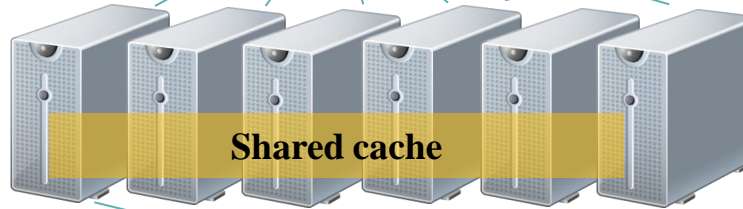
Central Console Management



High Speed Switch of Interconnect

Interconnect

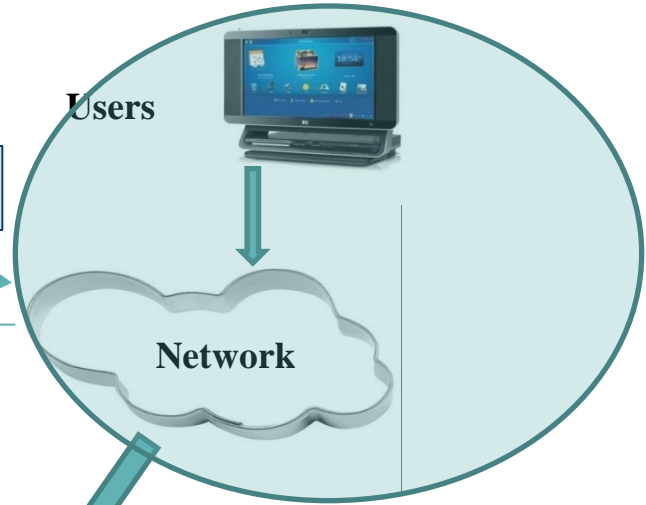
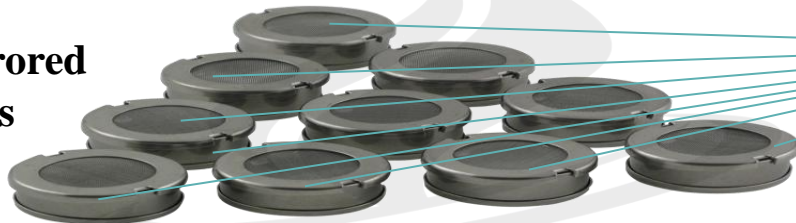
Cluster Database servers



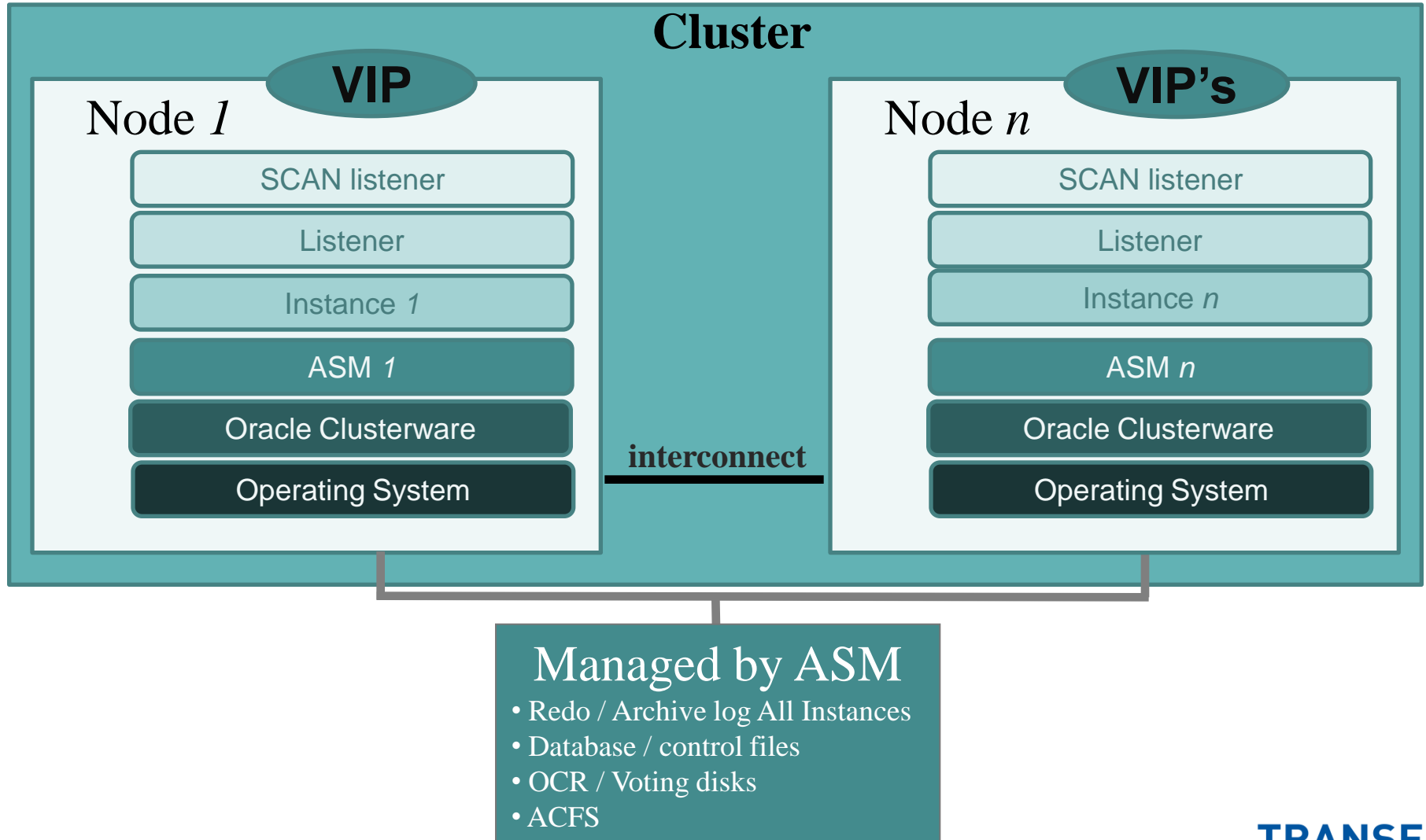
Hub or Switch

Storage area network

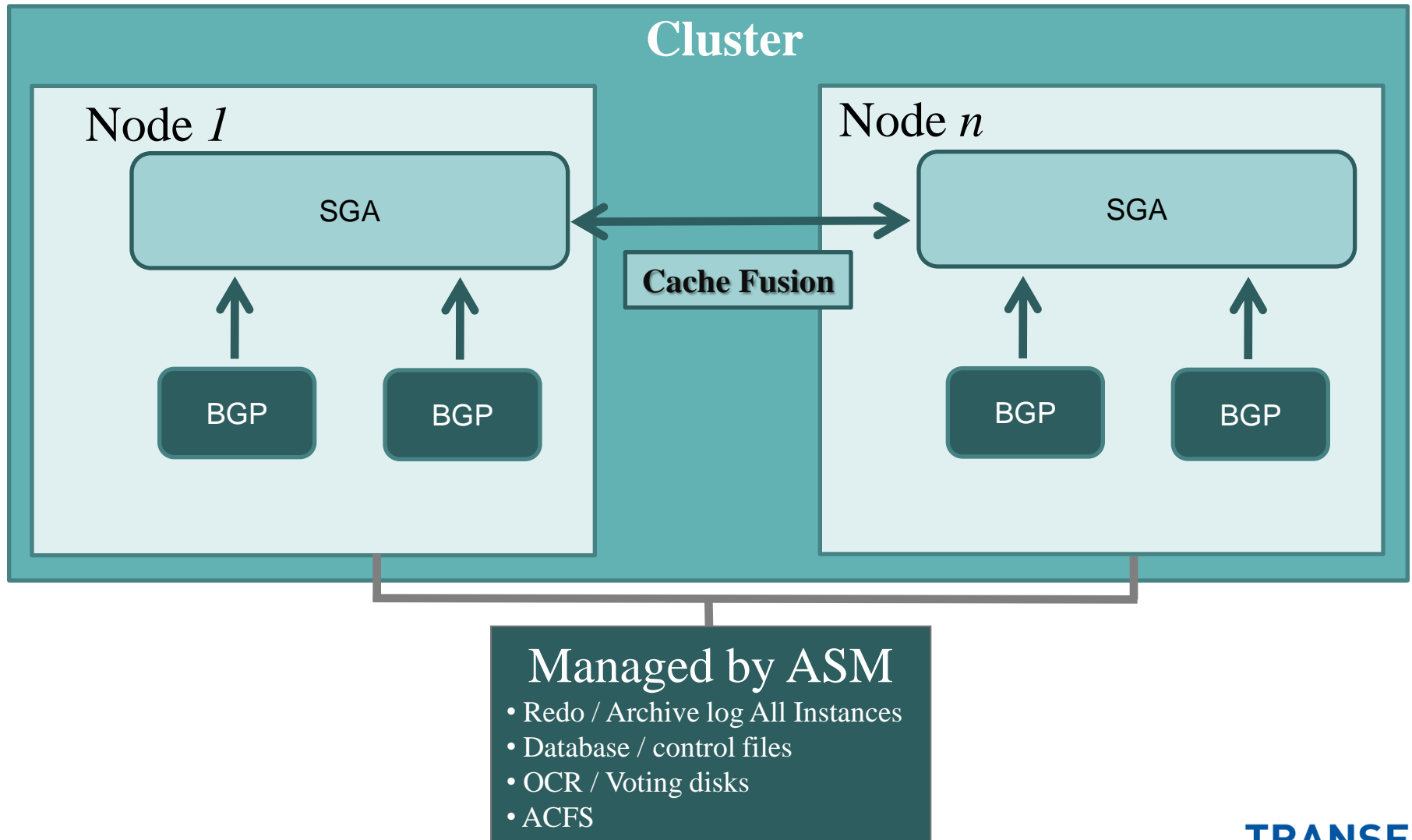
Mirrored Disks



RAC 11gR2 Proces Architectuur



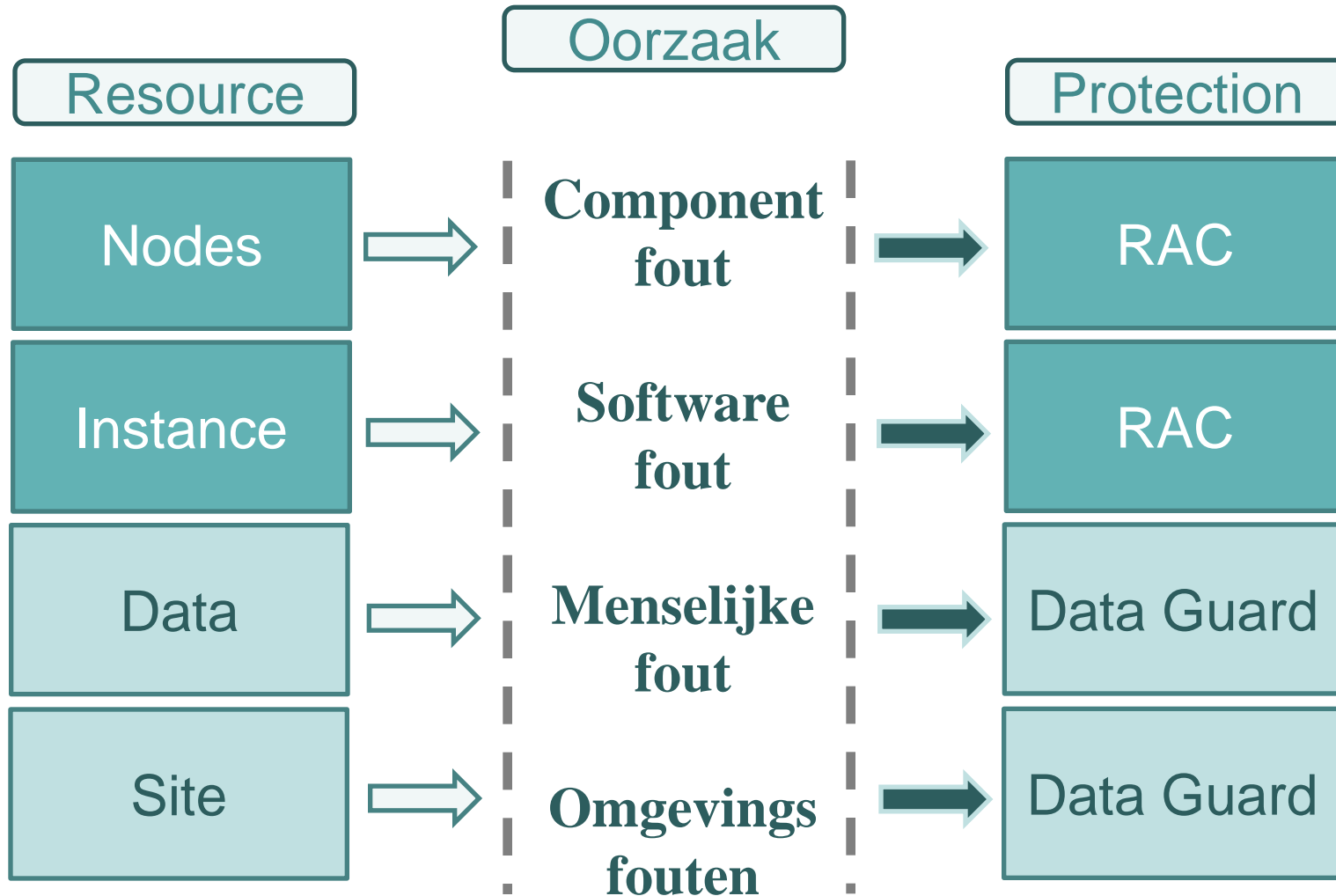
RAC 11gR2 Concept Schaalbaarheid



RAC 11g Concept

- Schaalbaarheid Nodes
- Load balancing
- Database Consolidatie

RAC en Data Guard Complementaire



HA/DR overzicht

Technologie	HA/Standby Toepassing	Installatie en Beheer Complexiteit	Nodes Activiteit	DR
Data Guard Physical Standby	<ul style="list-style-type: none"> • Site failover • Alleen lees acties en rapporten • QA testing • Backups • Data corruptie 	1	1	3
Data Guard Logical Standby	<ul style="list-style-type: none"> • Lees-schrijf acties voor rapporterende applicatie • Replicatie naast een bestaande schema In een database. • Data corruptie 	2	2	2
Real Application Cluster	<ul style="list-style-type: none"> • Load- Balancing Nodes • Schaalbaarheid Nodes • Node failover 	3	3	-



**Vragen
Antwoorden**

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