

Hyper-V 2.0

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Eenvoud in ICT

Agenda

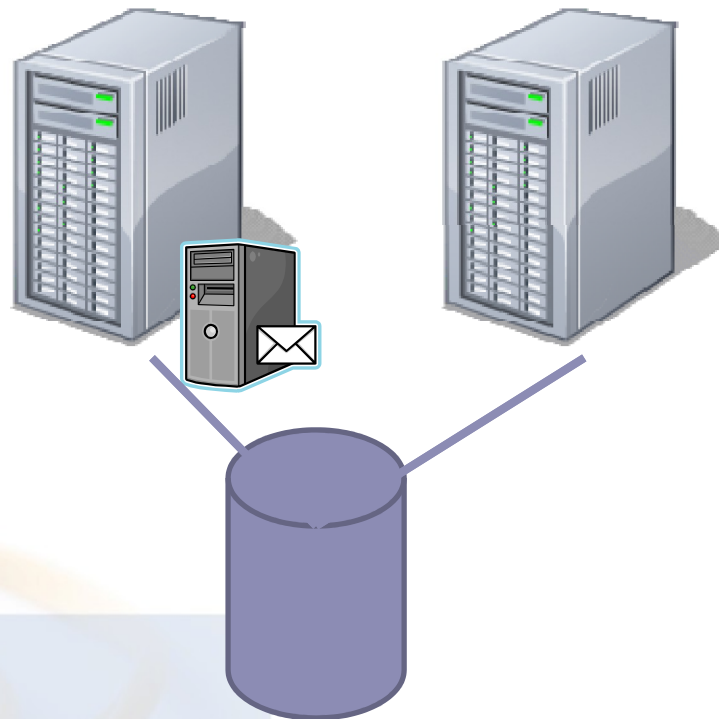
- Live migration
- Dynamic Virtual machine Storage
- Enhanced processor support
- Enhanced networking support



Live Migration

- Quick Migration Hyper-v 1.0

Enables movement of running virtual machines from one host to other host with minimal downtime



- Offline
- Unmounted
- Move
- Mounted
- Online

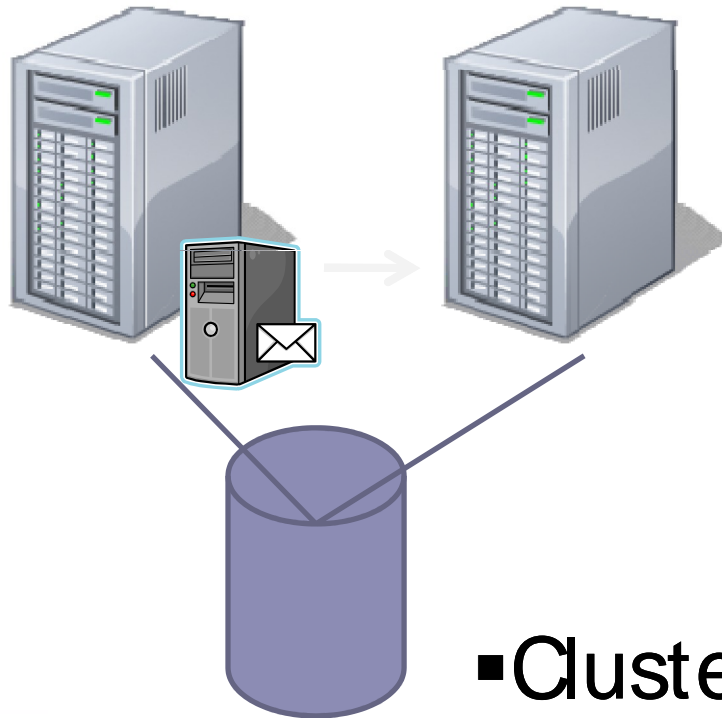
Live Migration

- Live Migration Hyper-v 2.0

Hyper-V live migration is integrated with Windows Server 2008 R2 Hyper-V and Microsoft Hyper-V Server 2008 R2. With it you can move running VMs from one Hyper-V physical host to another without any disruption of service or perceived downtime.



Live Migration



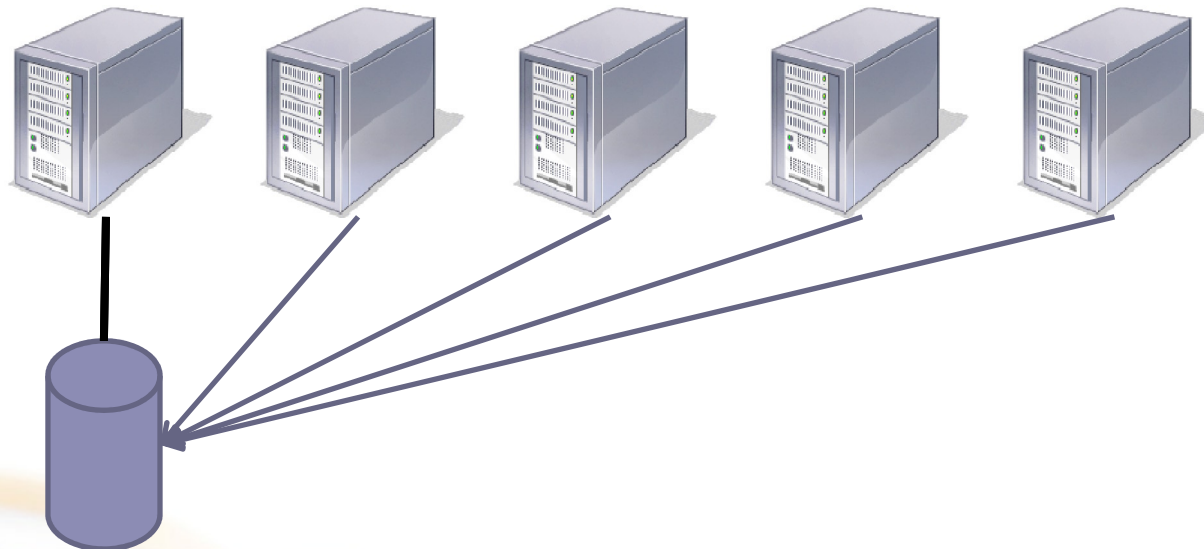
- Online
- Move memory
- Move VM + Delta memory
- Online

▪ Cluster Shared Volumes



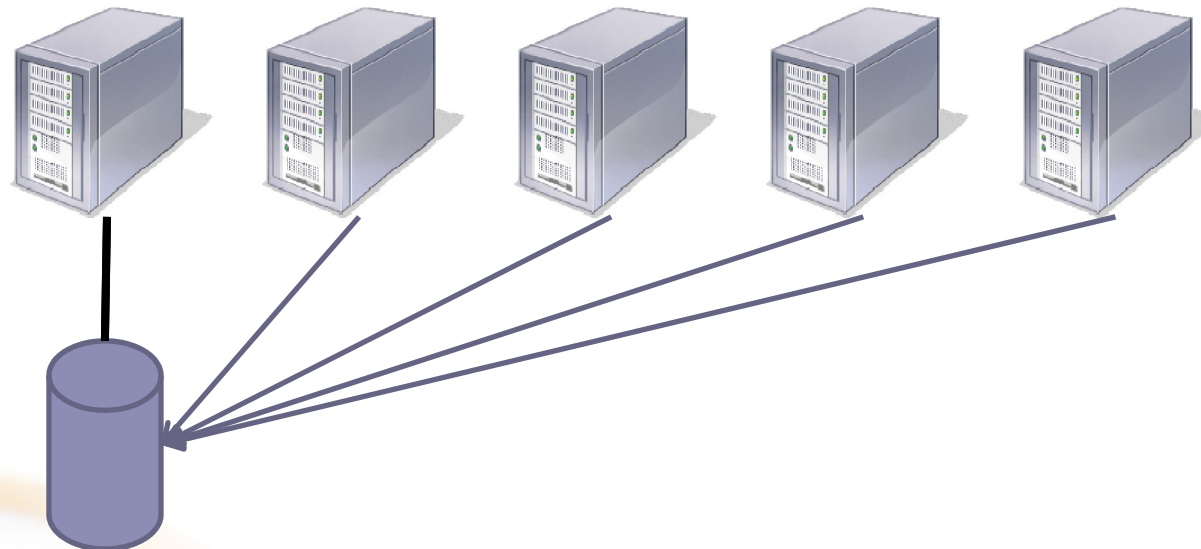
Live Migration

- Cluster Shared Volumes (Wat is het)
 - 1 lun voor meerdere node
 - Alle node hebben lees- en schrijfrechten



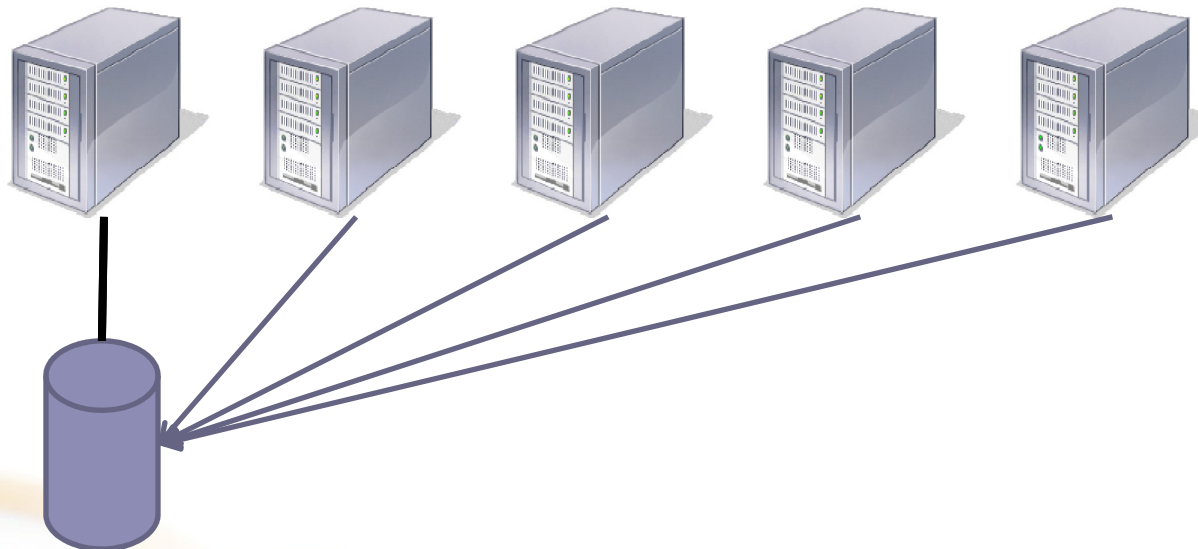
Live Migration

- Cluster Shared Volumes (Hoe werkt het)
 - Coordinator node is eigenaar van de disk resource
 - Iedere node kan de CSV disk benaderen
 - Coordinator failover naar andere node zonder downtime



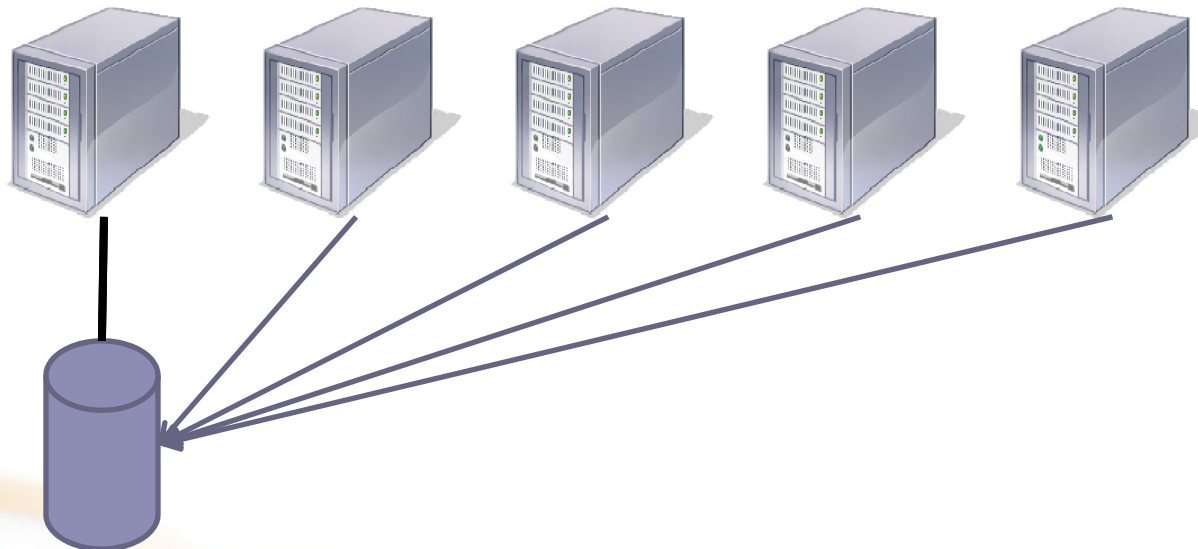
Live Migration

- Cluster Shared Volumes (Voorwaarde)
 - Alleen Hyper-V 2.0 heeft toegang
 - Admin mag NIKS er naar toe copieren
 - NTFS
 - Max 16 nodes
 - %SystemDrive% op alleen nodes gelijk
 - C:\ClusterStorage



Live Migration

- Cluster Shared Volumes (Voordelen)
 - Alle VHD op 1 LUN → Minder storage verlies
 - Minder LUNs
 - Vereenvoudig beheer en configuratie



Agenda

- Live migration
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- Enhanced networking support



Dynamic Virtual machine Storage

- Dynamisch disks toevoegen en verwijderen
 - VHD
 - Pass-through disks

Dynamic Virtual machine Storage

- Voorwaarde
 - SCSI controller
 - Geen Windows XP x86 of Windows 2000

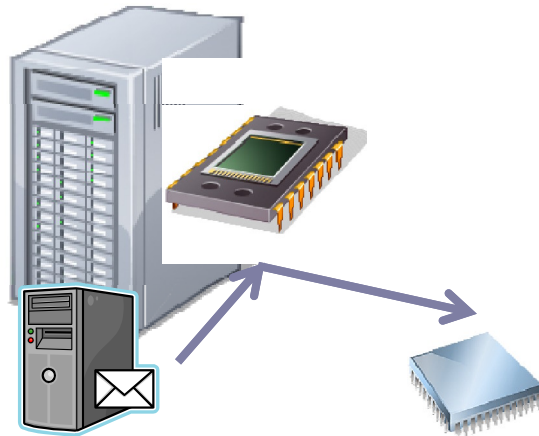
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Enhanced processor support

- Support voor Second-Level Address Translation (SLAT)
 - AMD → Rapid Virtualization Indexing
 - Intel → Extended Page Tables

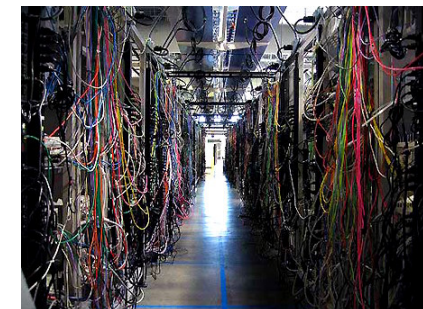


Enhanced processor support

- Energie verbruik datacenter

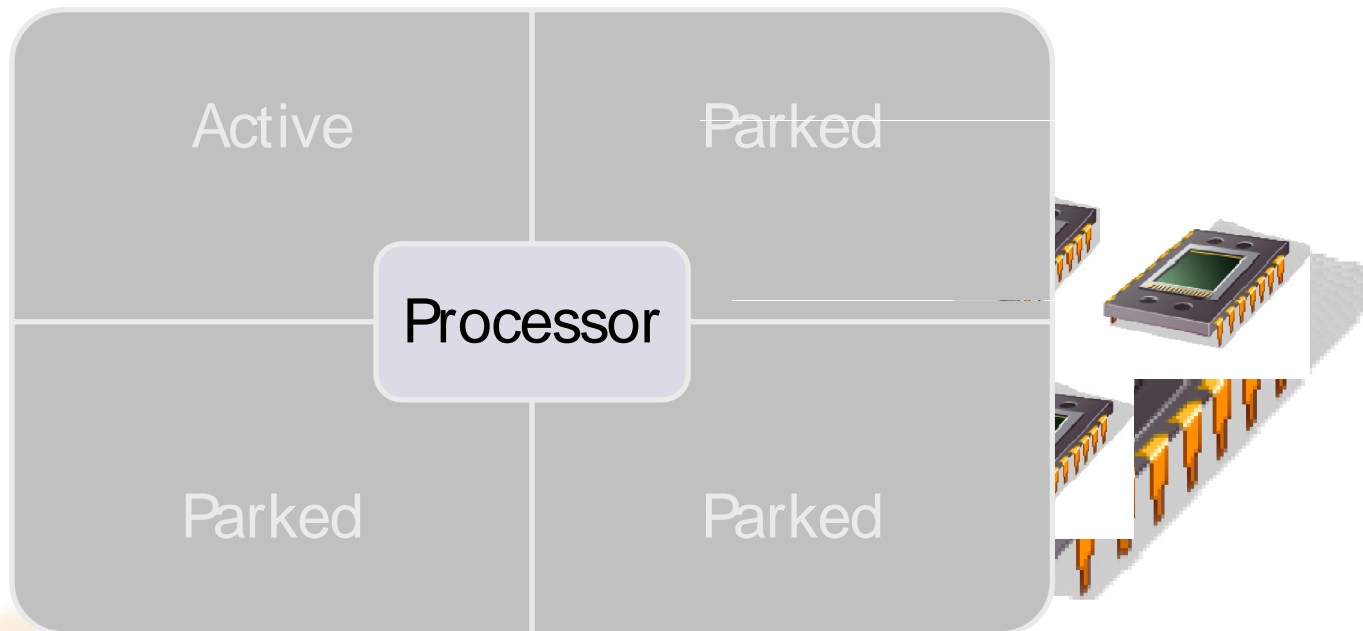
TCO Development, een Zweeds onderzoeksbureau, heeft becijferd dat het energieverbruik van ICT-middelen zoals pc's met 80 procent kan worden gereduceerd. Volgens de onderzoekers zijn een paar eenvoudige maatregelen voldoende.

- <http://www.automatiseringgids.nl/>



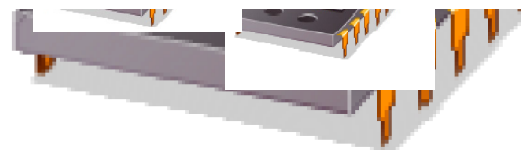
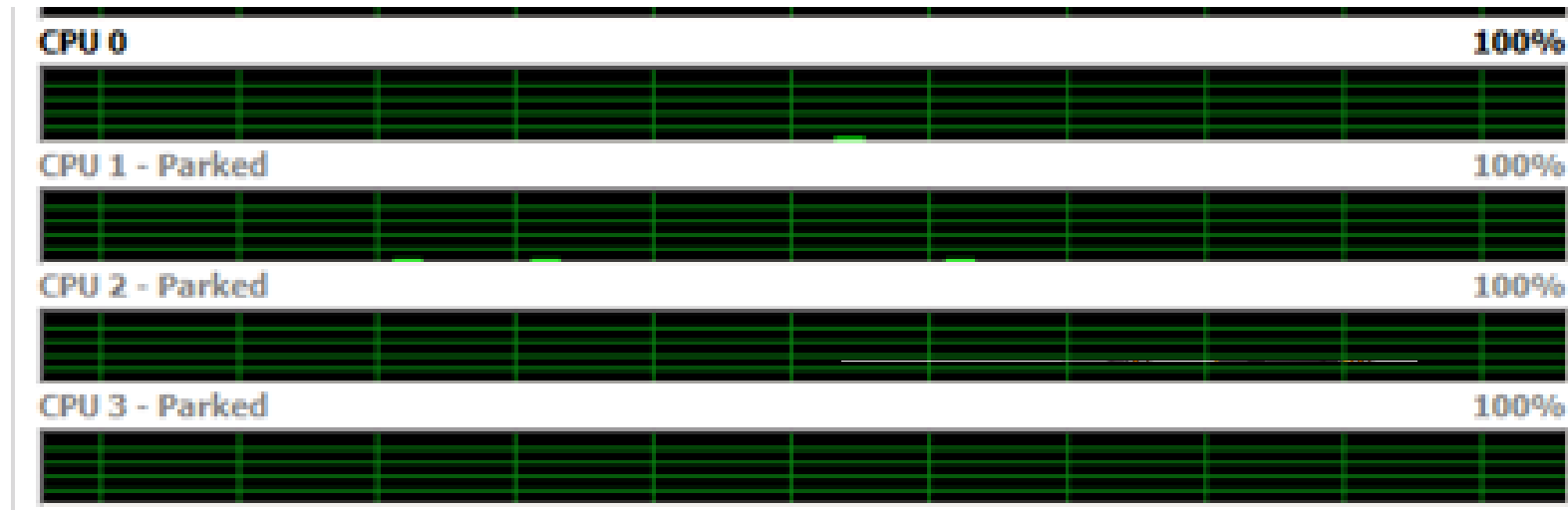
Enhanced processor support

- CPU Core Parking



Enhanced processor support

- CPU Core Parking



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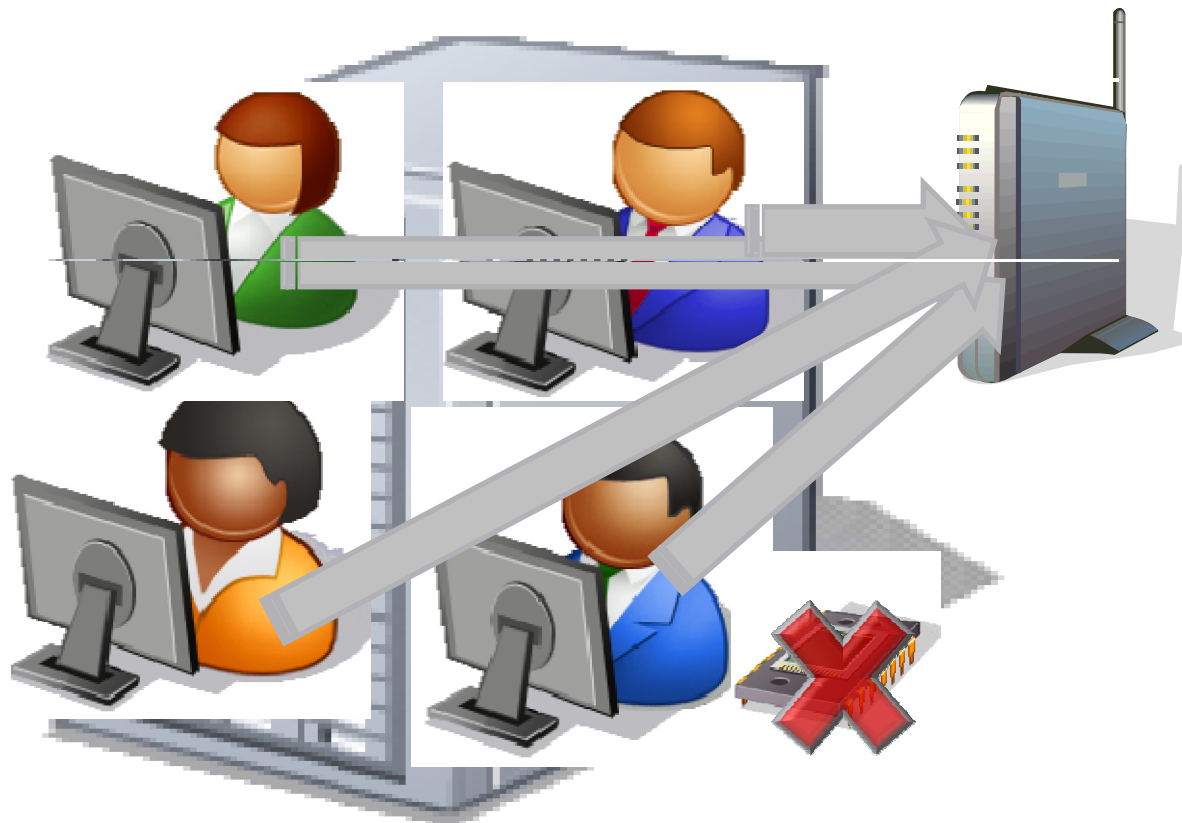
Enhanced networking support

- TCP/IP Offload
- Virtual Machine Queue (VMQ) Support
- Jumbo Frame Support



Enhanced networking support

- TCP/IP Offload



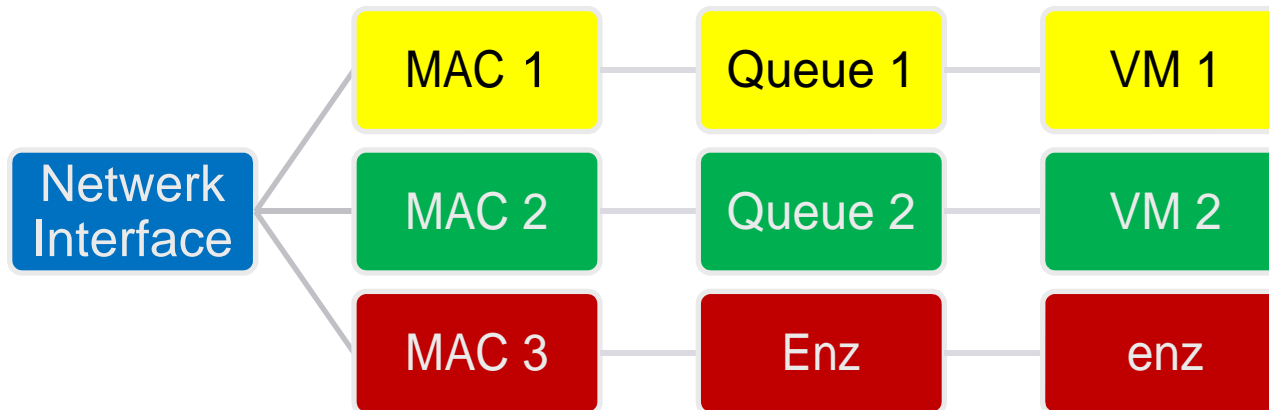
Enhanced networking support

- Virtual Machine Queue (VMQ) Support
 - NDIS 6.20
 - Netwerk verkeer direct naar Virtuele machines
 - Ondersteunt meerdere processoren



Enhanced networking support

- Virtual Machine Queue (VMQ) Support



Enhanced networking support



- Jumbo Frame Support

