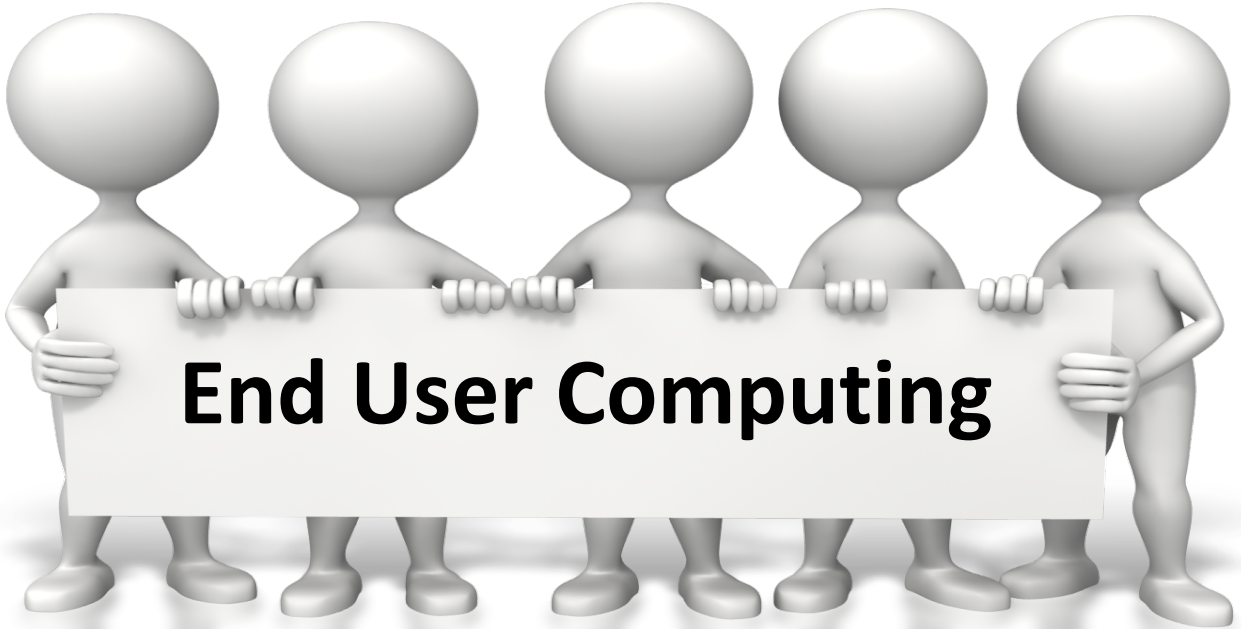

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Even voorstellen

Ben Pelzer

- Sinds 1995 in de ICT
- Bezig met SBC (EUC) sinds 1998
- Sinds 2002 werkzaam bij Open Line

Agenda

- Algemene inleiding
- Remote Desktop Services (Microsoft)
  - Uitleg
  - Demo

- XenApp / XenDesktop 7.x (Citrix)
  - Uitleg
  - Demo

- Voorbeeld EUC adhv Modulair Concept Open Line
- Kijkje in de “echte wereld” (Open Line klant omgeving)

- VMware View / Horizon (VMware)

- ~~VMware View / Horizon (VMware)~~

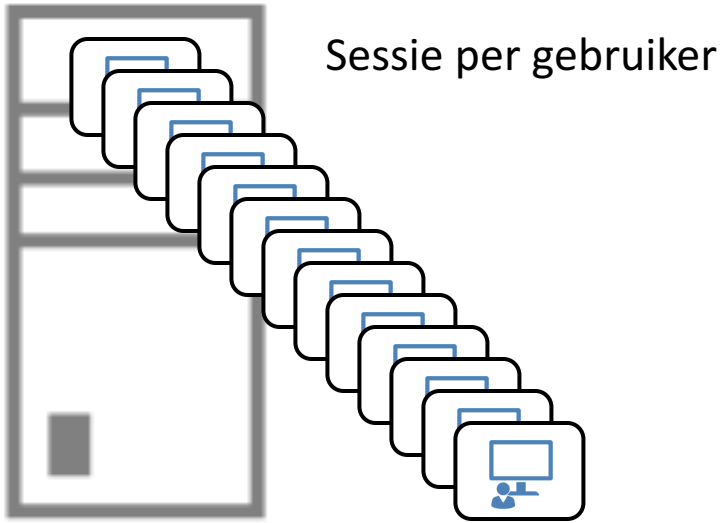
Algemene uitleg

- Server Based Computing
  “Server-based computing (SBC) is an over-arching term refering to the technology by which applications are implemented, controlled, supported and functioned on the server instead of the client.”

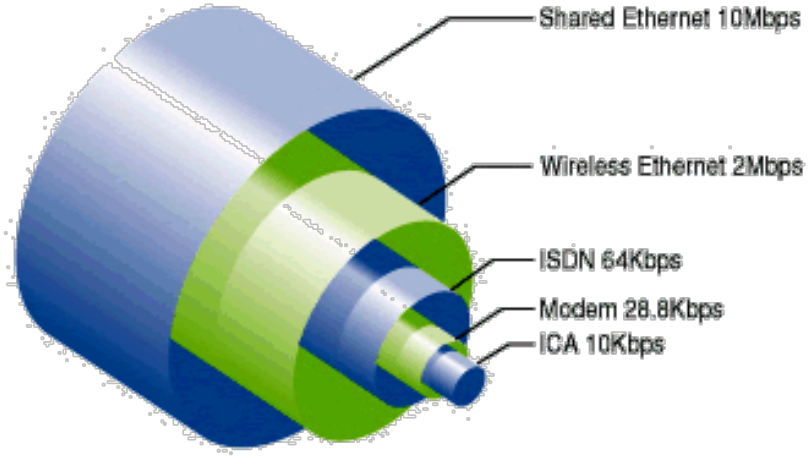
- Server Based Computing “uitgevonden” door Citrix
  - Multi User OS/2 (IBM)
  - Multi User Win NT 3.51 (Multi Win; apart OS van Citrix: WinFrame)
  - Multi User NT 4 (Terminal Server, aparte OS versie van Microsoft; Citrix als “add-on”)

- Server Based Computing
  - Multi User Windows 2000-2003 (Terminal Services; Citrix als “add-on”)
  - Multi User Windows 2008 R2 en hoger (Remote Desktop Services; Citrix als “add-on”)

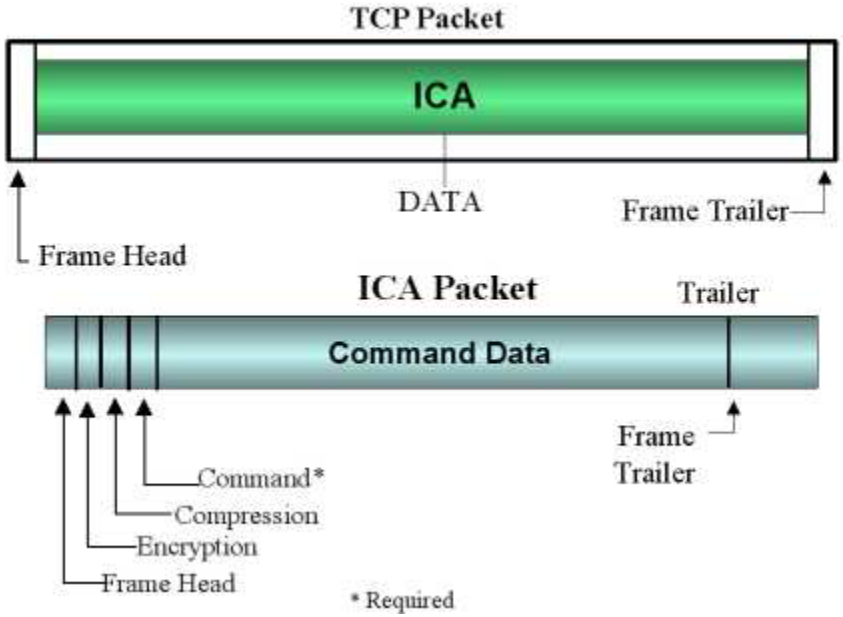
- Server Based Computing:

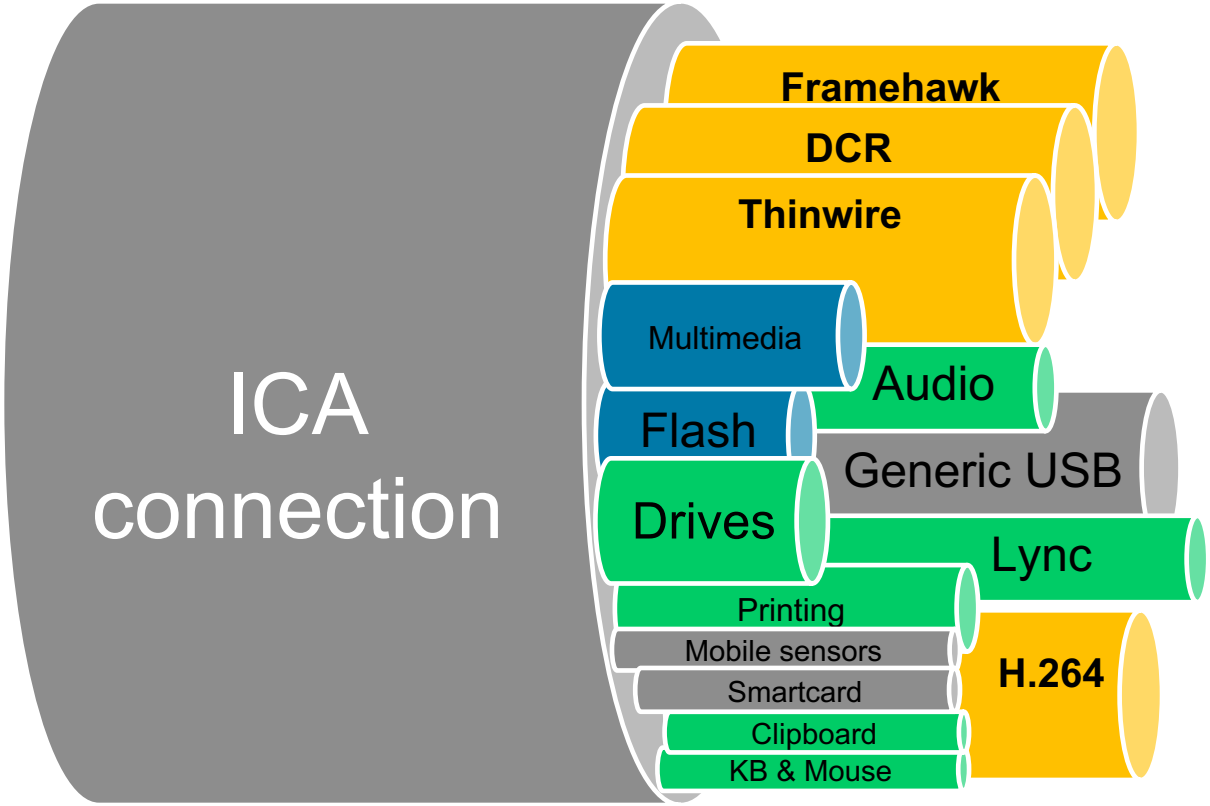


- Nodig voor Server Based Computing (onder anderen)
  - Multi User OS
  - Protocol om:
    - toetsenbord en muis van client naar server te krijgen
    - Beeld van server naar client te krijgen (resultaat van de input)



ICA is optimized for connections as low as 14.4 Kbps. Only mouse clicks, keystrokes and screen updates travel the network to generate exceptional performance.




ICA
connection
Framehawk
DCR
Thinwire
Multimedia
Audio
Flash
Generic USB
Drives
Lync
Printing
Mobile sensors
Smartcard
Clipboard
KB & Mouse
H.264

High Definition Experience

HDX Broadcast
ICA and RDP protocol support for access from any device, anywhere

HDX MediaStream
Video and audio playback

HDX RealTime
Voice and video for real-time collaboration

HDX Mobile
Touch navigation for Windows apps; local device features

HDX Plug-n-Play
Access to local resources and peripherals, including USB devices and printers

HDX RichGraphics
2D/3D graphics incl. Adaptive Display, HDX 3D Pro and Microsoft RemoteFX

HDX WAN Optimization
Performance and bandwidth optimizations for branch offices with Citrix CloudBridge

HDX Adaptive Orchestration
Best user experience based on server, network connection and user device

- Voordeel SBC
  “Upgrading hardware, application deployment, backing up of data and technical support are simplified in a server-based environment.”
  -> want uitvoeren op de *Server*

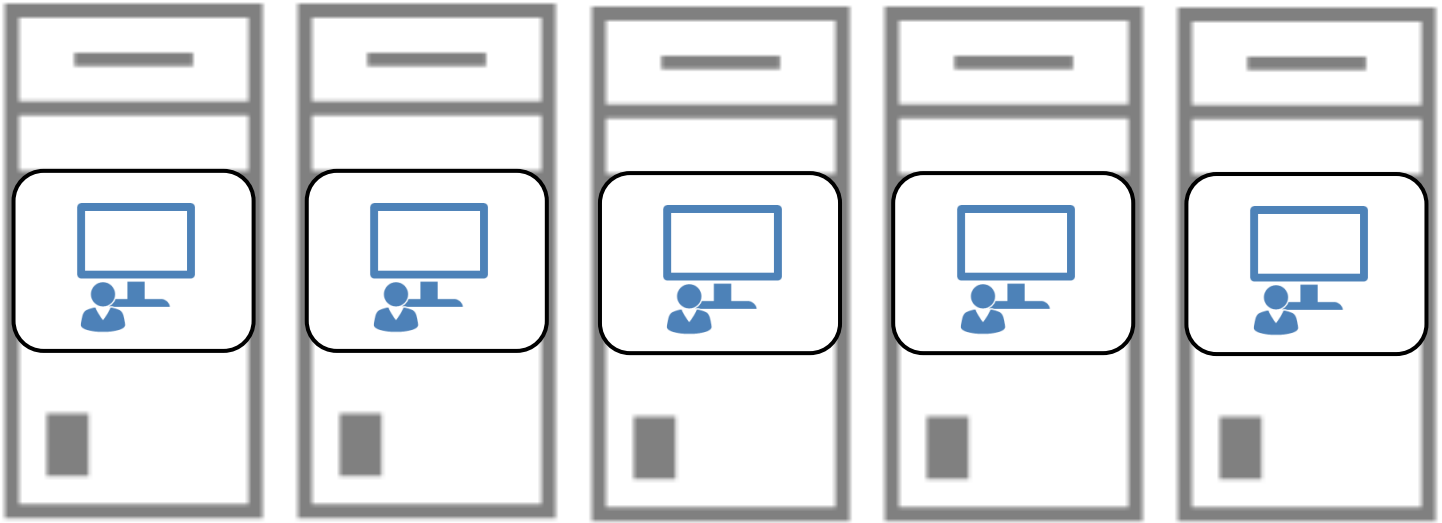
- Voordeel SBC
  “As PCs turn into terminals and may get replaced by much simpler, more cost-effective and more convenient-to-manage devices known as thin clients.”
  -> PC (*client*) niet meer belangrijk

- Nadeel SBC
  Als alles wordt uitgevoed op de server en er gaat iets mis met de server…

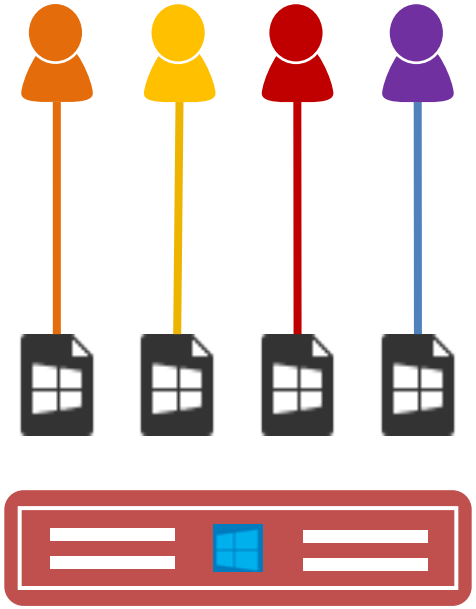
- Door succes SBC:
  - Uitbreiding naar desktop virtualizatie: **VDI**
    - Citrix XenDesktop
    - VMware View

- VDI:

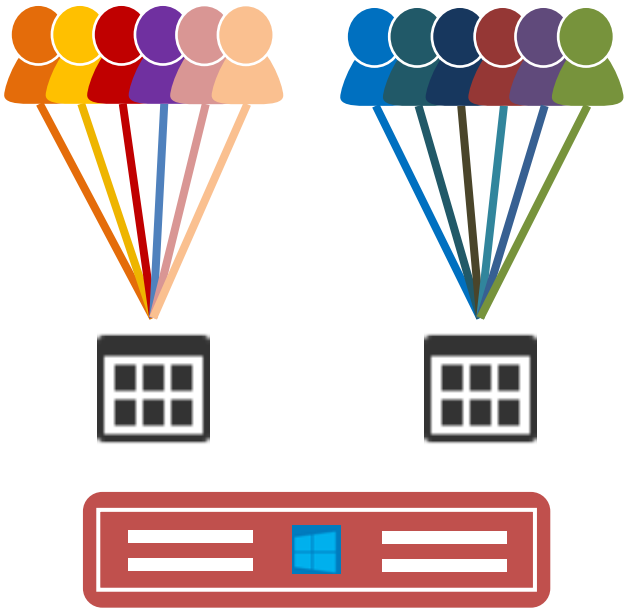
Desktop per gebruiker



Desktop Virtualization



Session Virtualization



- Diversiteit aan SBC en VDI oplossingen -> EUC

Ontwerpen, inrichten en beheren van onder andere oplossingen op het gebied van:

- private, hybride en full cloud workspaces;
- dynamische en klassieke desktop;
- bring-your-own-device en/of choose-your-own-device;
- application security en smart access;
- platform en applicatie lifecycle management;
- terminal server, VDI en thin client-oplossingen;
- applicatie- en desktopvirtualisatie.

EUC techniek

Remote Desktop Services

- Windows 2012 R2
- Advanced RDS deployment
- Remote Desktop (RDSH en VDI)
- RemoteApps

RD Gateway

RD Web Access

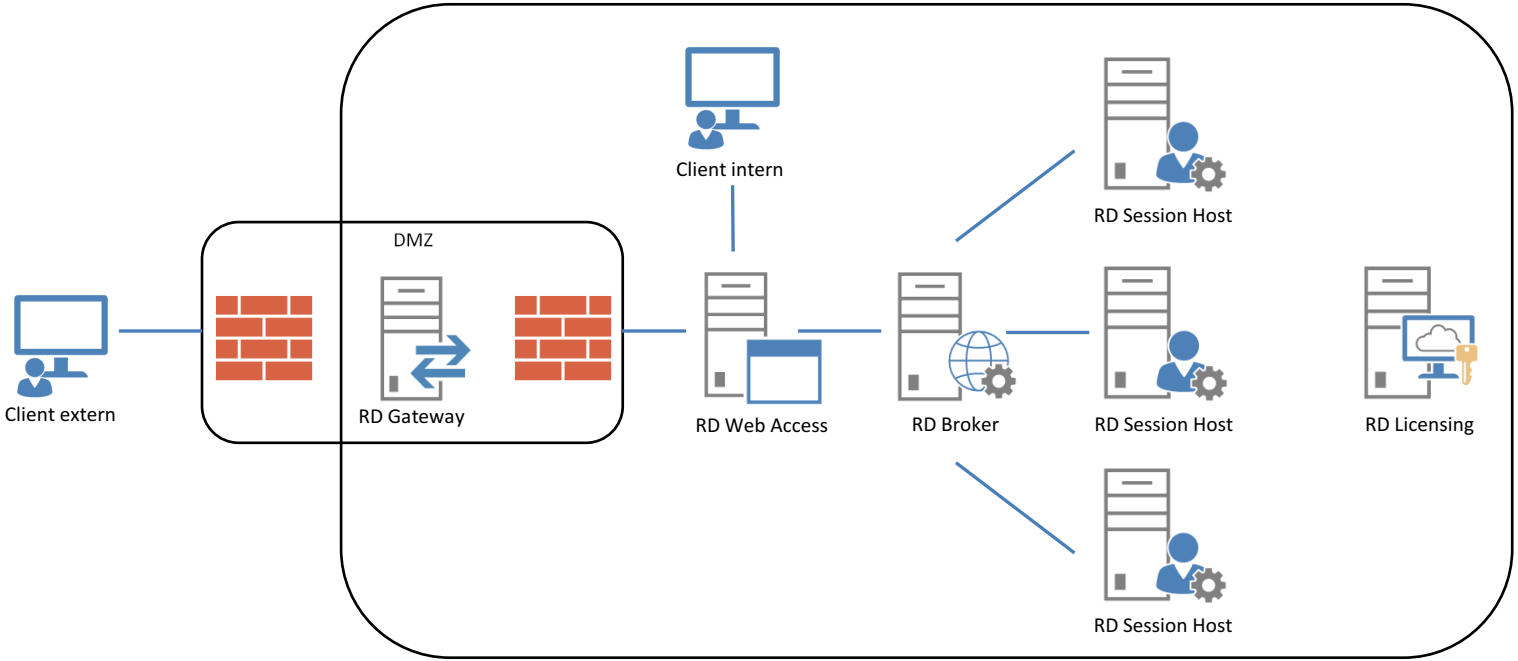
RD Broker

RD Session Host

RD Licensing

Remote Desktop Services

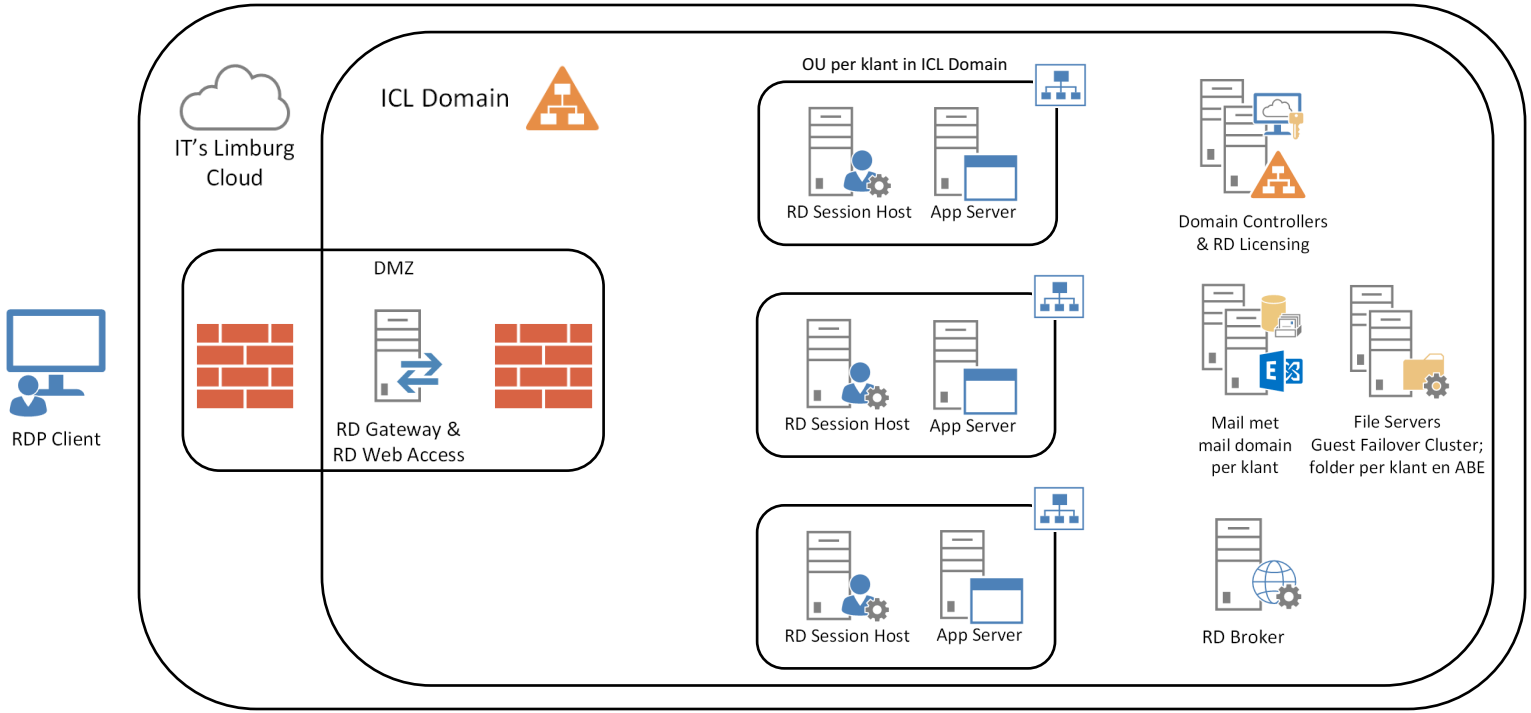
Voorbeeld

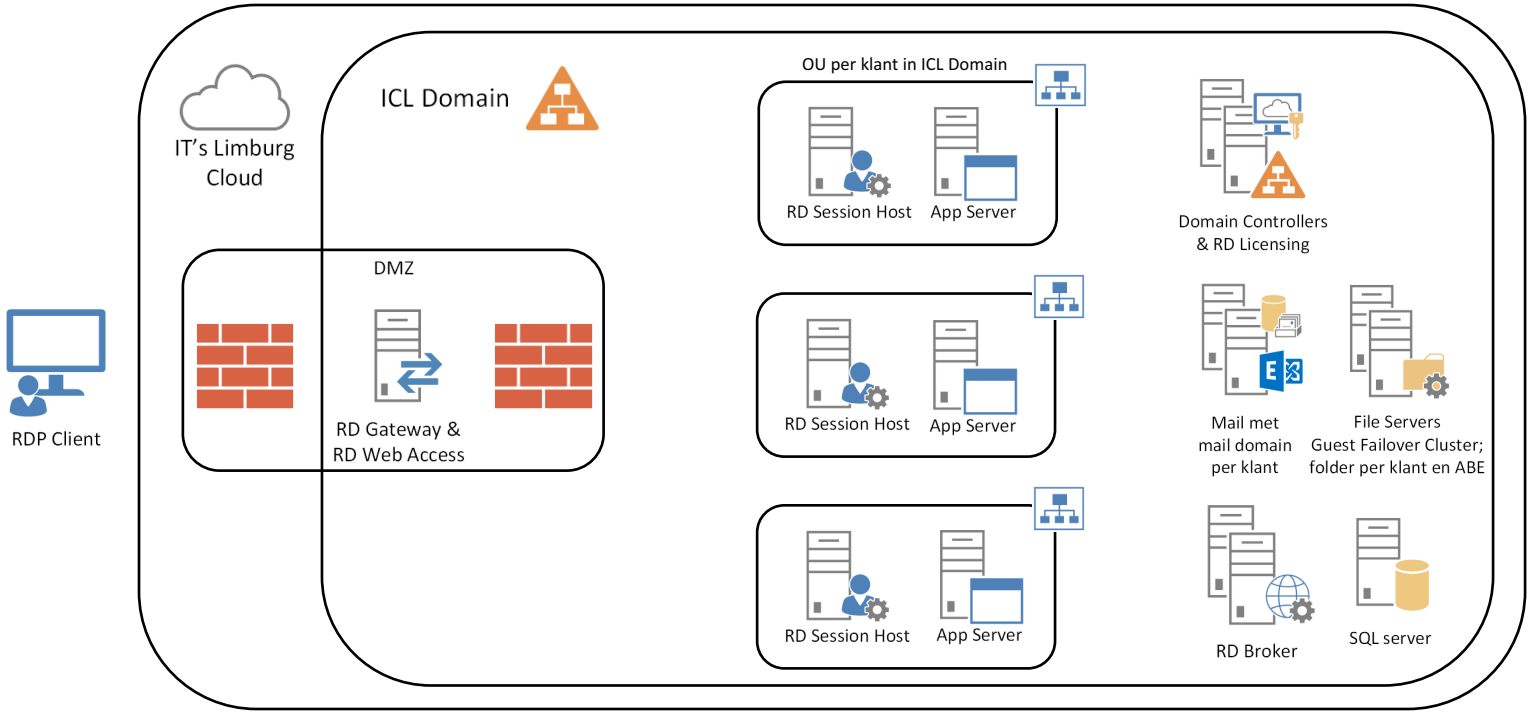

Client intern
RD Session Host
DMZ
Client extern
RD Gateway
RD Web Access
RD Broker
RD Session Host
RD Licensing
RD Session Host

Remote Desktop Services

Voorbeeld Open Line

(IT's Limburg Cloud)


IT's Limburg Cloud
ICL Domain
OU per klant in ICL Domain
RD Session Host
App Server
Domain Controllers & RD Licensing
DMZ
RD Gateway & RD Web Access
RDP Client
RD Session Host
App Server
Mail met mail domain per klant
File Servers Guest Failover Cluster; folder per klant en ABE
RD Session Host
App Server
RD Broker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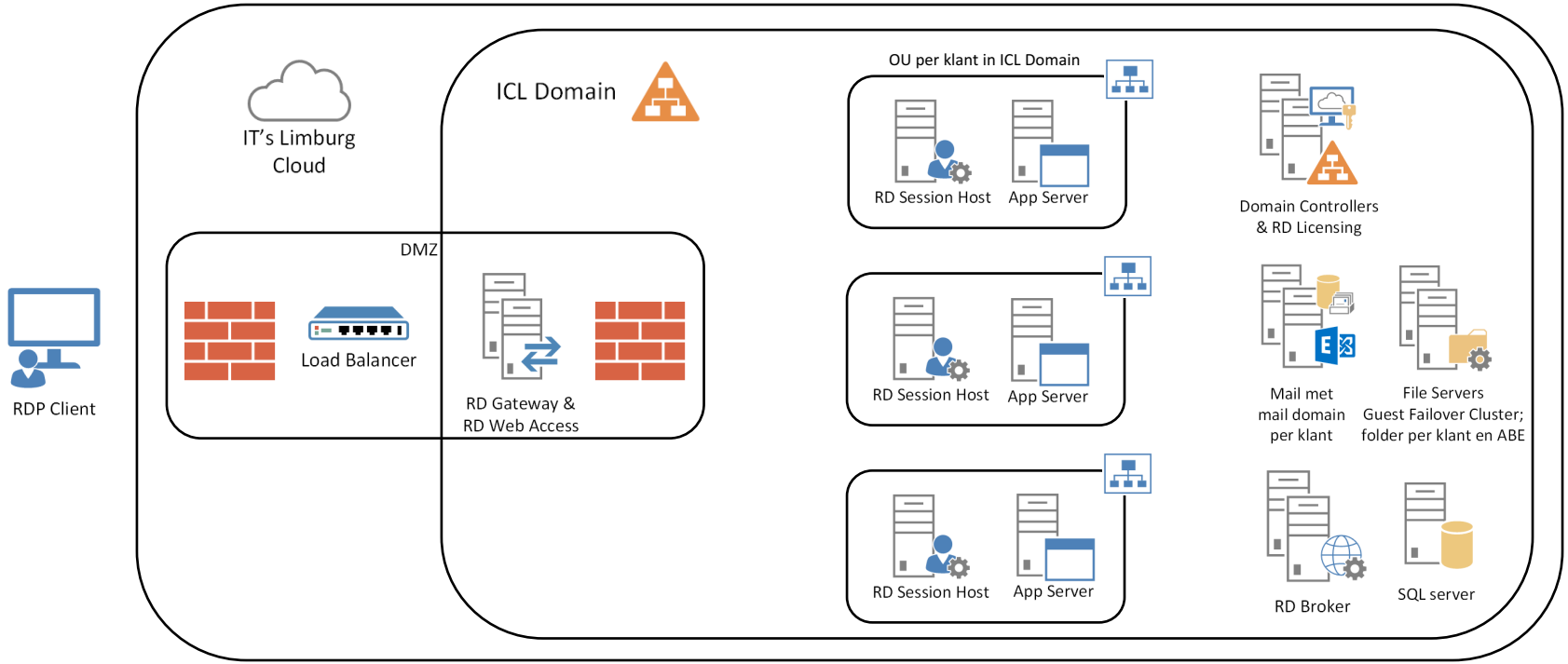
ICL Domain
OU per klant in ICL Domain
RD Session Host
App Server
Domain Controllers & RD Licensing
DMZ
RD Gateway & RD Web Access
RDP Client
RD Session Host
App Server
Mail met mail domain per klant
File Servers Guest Failover Cluster; folder per klant en ABE
RD Session Host
App Server
RD Broker
SQL server


IT's Limburg Cloud
ICL Domain
OU per klant in ICL Domain
RD Session Host
App Server
Domain Controllers & RD Licensing
DMZ
Load Balancer
RD Gateway & RD Web Access
RD Session Host
App Server
Mail met mail domain per klant
File Servers Guest Failover Cluster; folder per klant en ABE
RDP Client
RD Session Host
App Server
RD Broker
SQL server

DEMO

EUC techniek

Citrix XenApp / XenDesktop

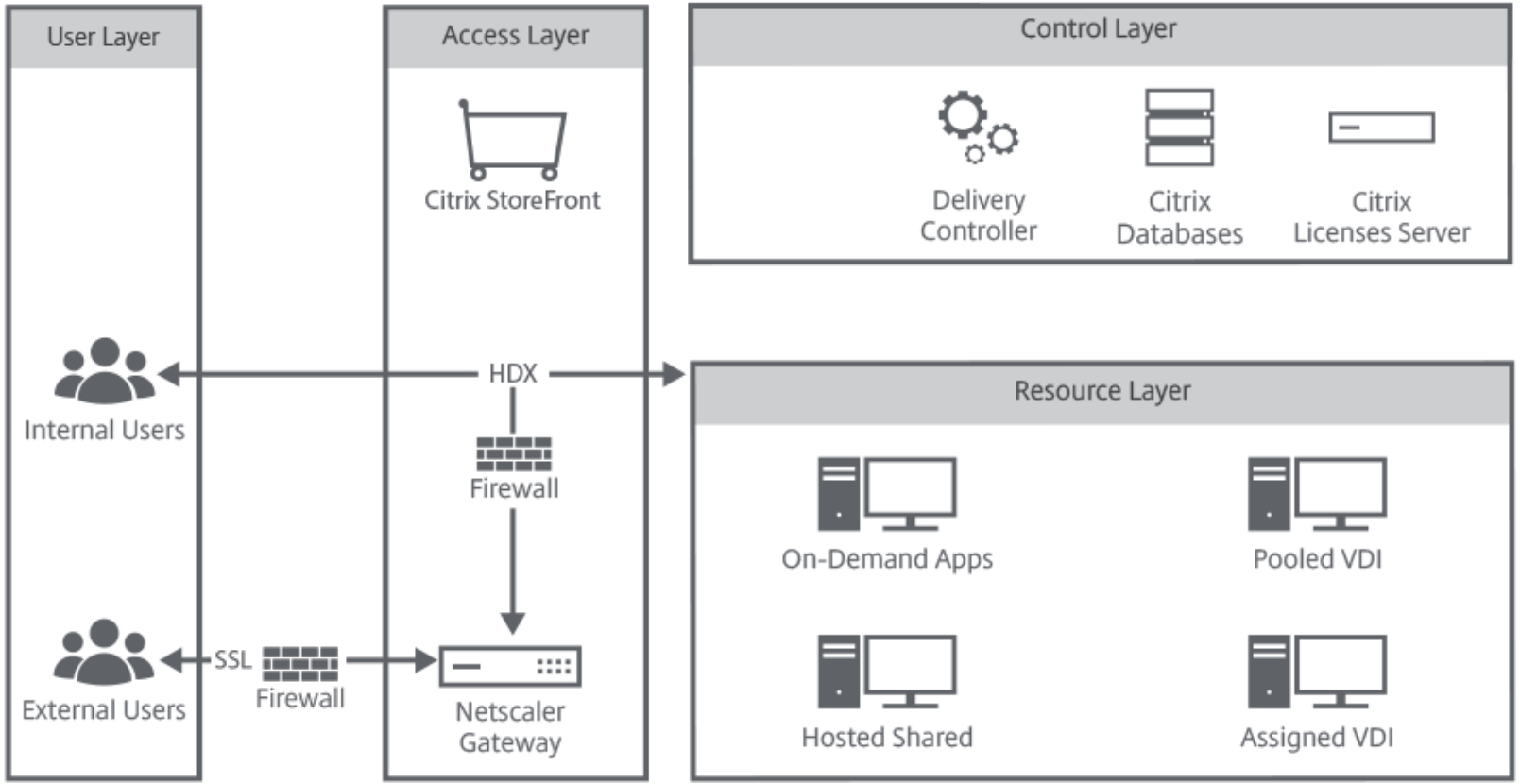
RD Gateway
NetScaler

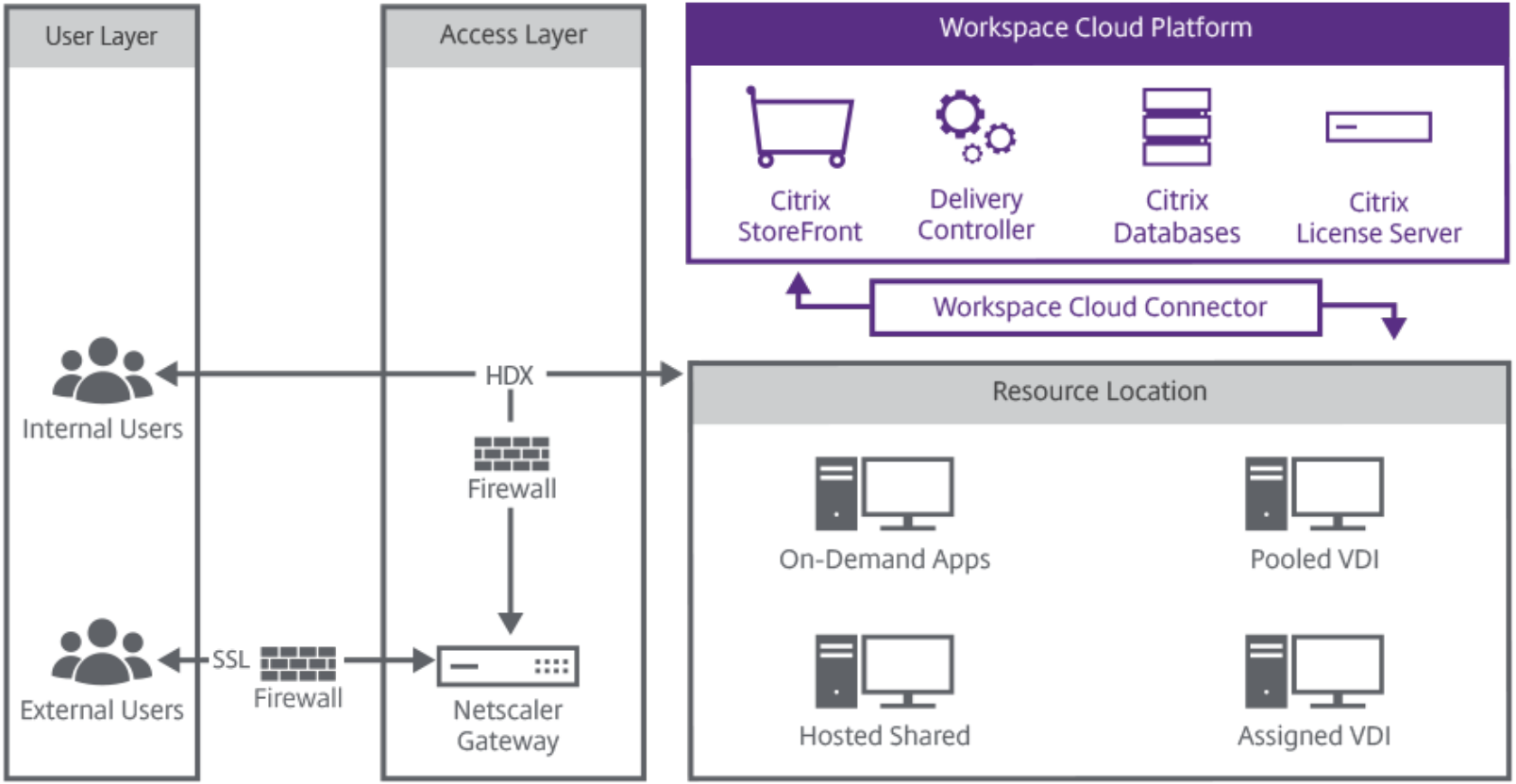
RD Web Access
StoreFront

RD Broker
Delivery Controller

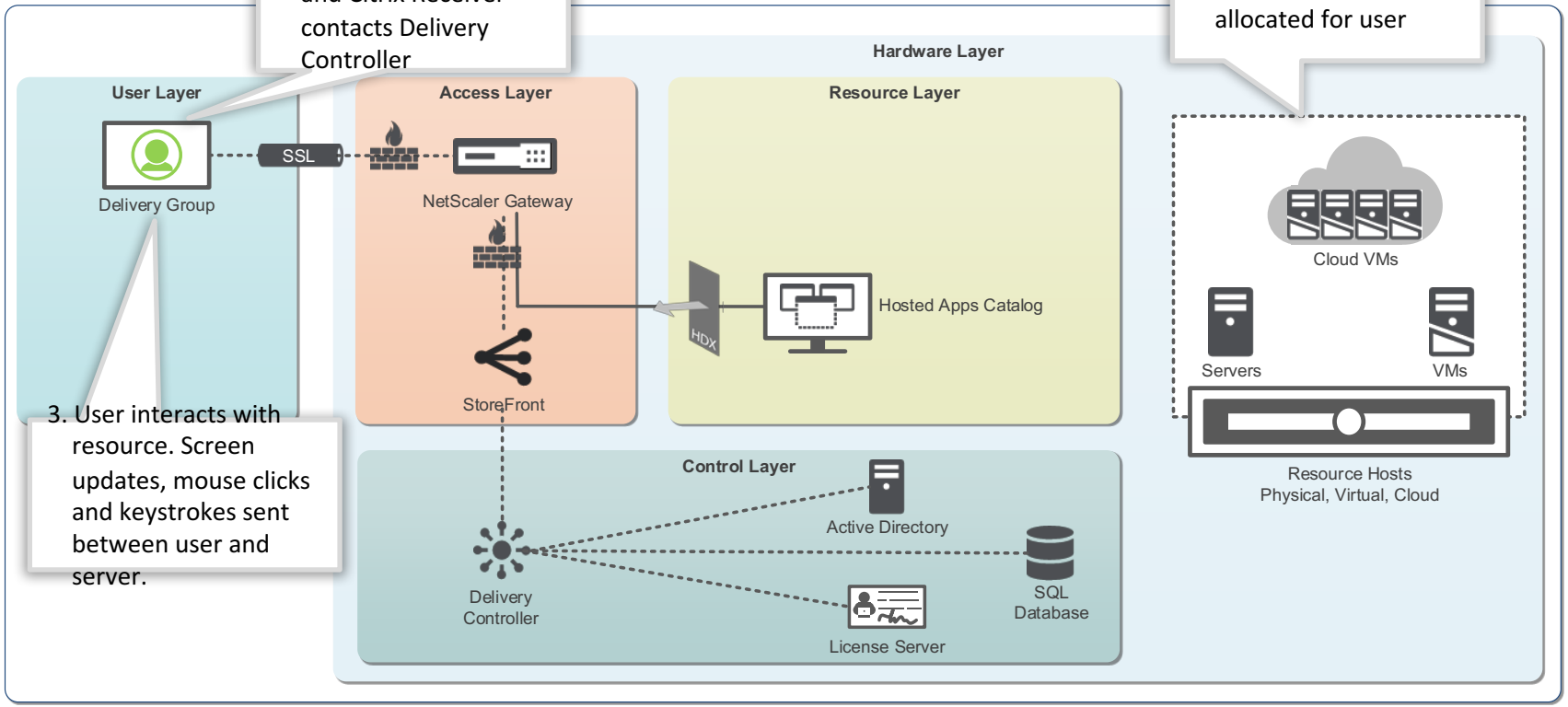
RD Session Host
XenApp

RD Licensing
Citrix Licensing


User Layer
Access Layer
Control Layer
Citrix StoreFront
Delivery Controller
Citrix Databases
Citrix Licenses Server
Internal Users
HDX
Firewall
Resource Layer
On-Demand Apps
Pooled VDI
SSL
Firewall
External Users
Netscaler Gateway
Hosted Shared
Assigned VDI

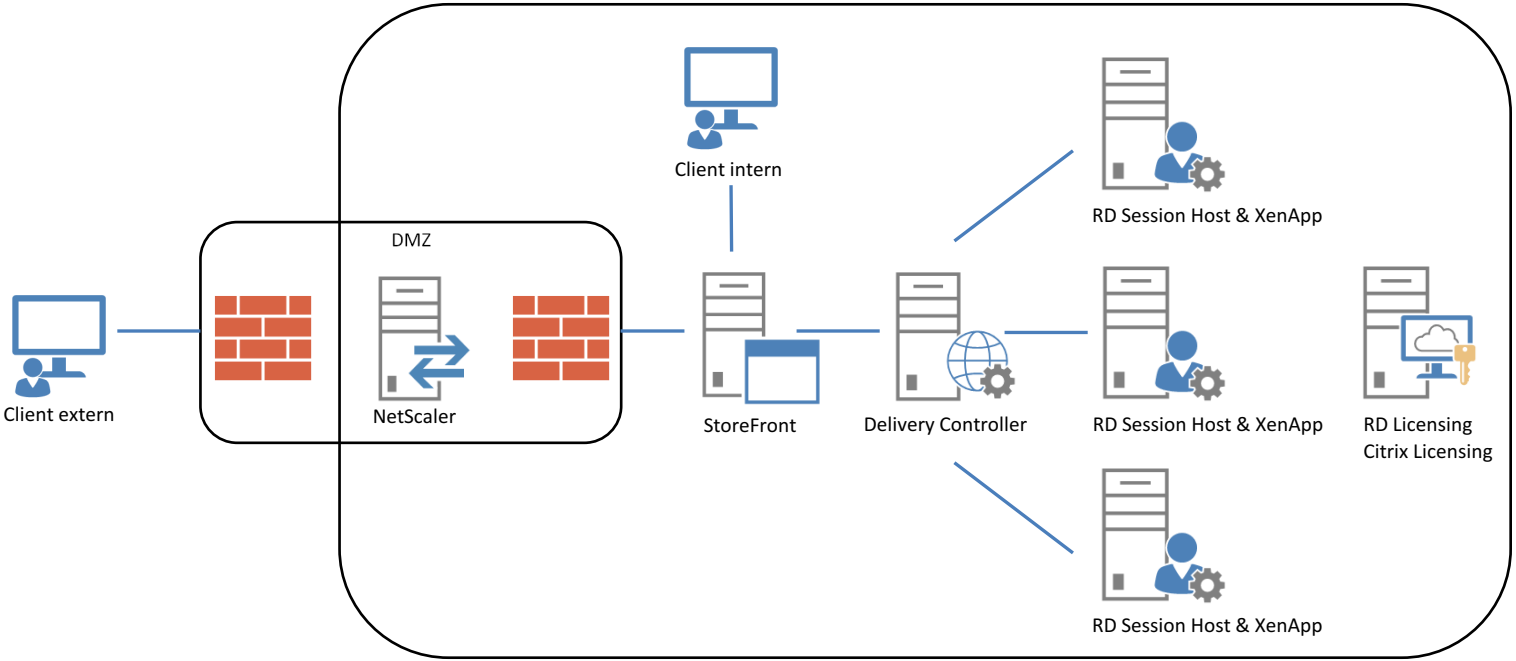

User Layer
Access Layer
Workspace Cloud Platform
Citrix StoreFront
Delivery Controller
Citrix Databases
Citrix License Server
Workspace Cloud Connector
Internal Users
HDX
Firewall
Resource Location
On-Demand Apps
Pooled VDI
External Users
SSL
Firewall
Netscaler Gateway
Hosted Shared
Assigned VDI

Server hosted application



Citrix XenApp

Voorbeeld


Client intern
RD Session Host & XenApp
DMZ
Client extern
NetScaler
StoreFront
Delivery Controller
RD Session Host & XenApp
RD Licensing
Citrix Licensing
RD Session Host & XenApp

Citrix XenApp

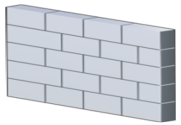
Voorbeeld Open Line

(Standaard klant omgeving)

IronPort Appliance

NetScaler VPX Appliance

RSA Appliance



Domain Controllers / DHCP / DNS

Applicatie servers

File server / OfficeScan server

SQL server

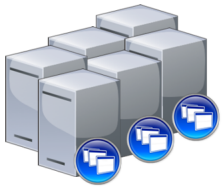
Mail server

LAN

AppSense / App-V server

Provisioning servers

Delivery Controllers / License / StoreFront servers



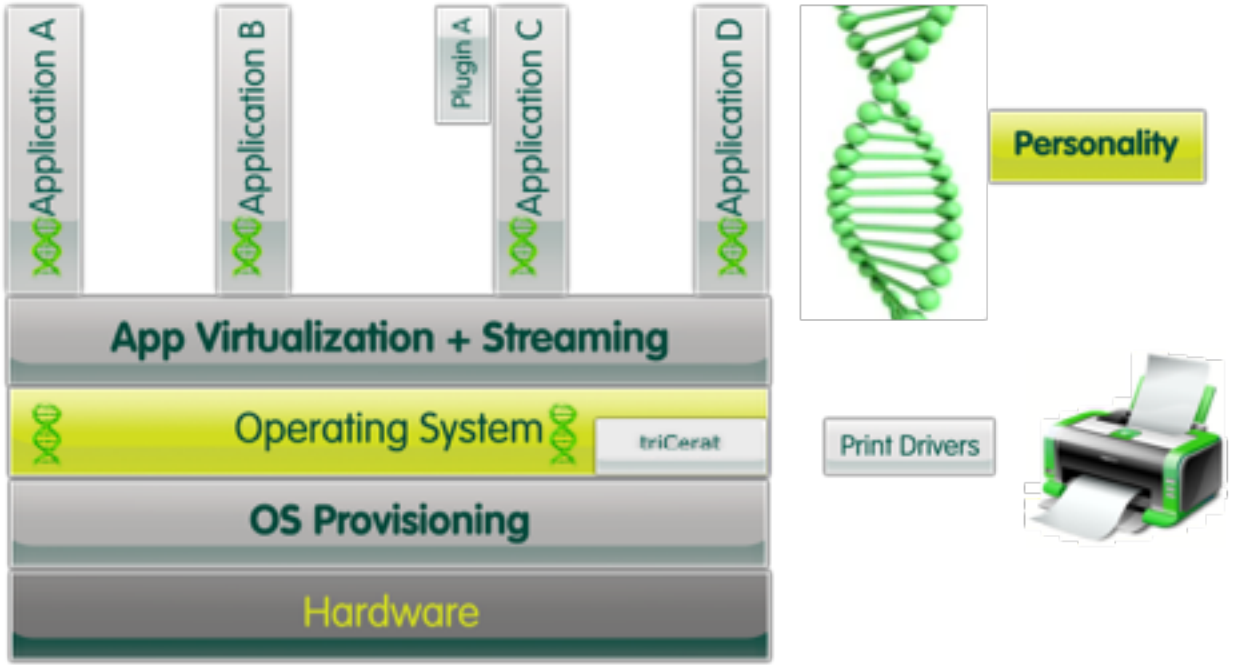
Citrix XenApp servers (Site)

DEMO

EUC voorbeeld

Open Line Modulair Desktop concept

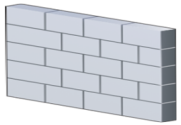
Open Line standaard klant omgeving


Application A
Application B
Plugin A
Application C
Application D
App Virtualization + Streaming
Operating System
triCerat
OS Provisioning
Hardware
Personality
Print Drivers

IronPort Appliance

NetScaler VPX Appliance

RSA Appliance



Domain Controllers / DHCP / DNS

Applicatie servers

File server / OfficeScan server

SQL server

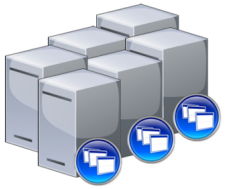
Mail server

LAN

AppSense / App-V server

Provisioning servers

Delivery Controllers / License / StoreFront servers



Citrix XenApp servers (Site)

DEMO

Vragen?