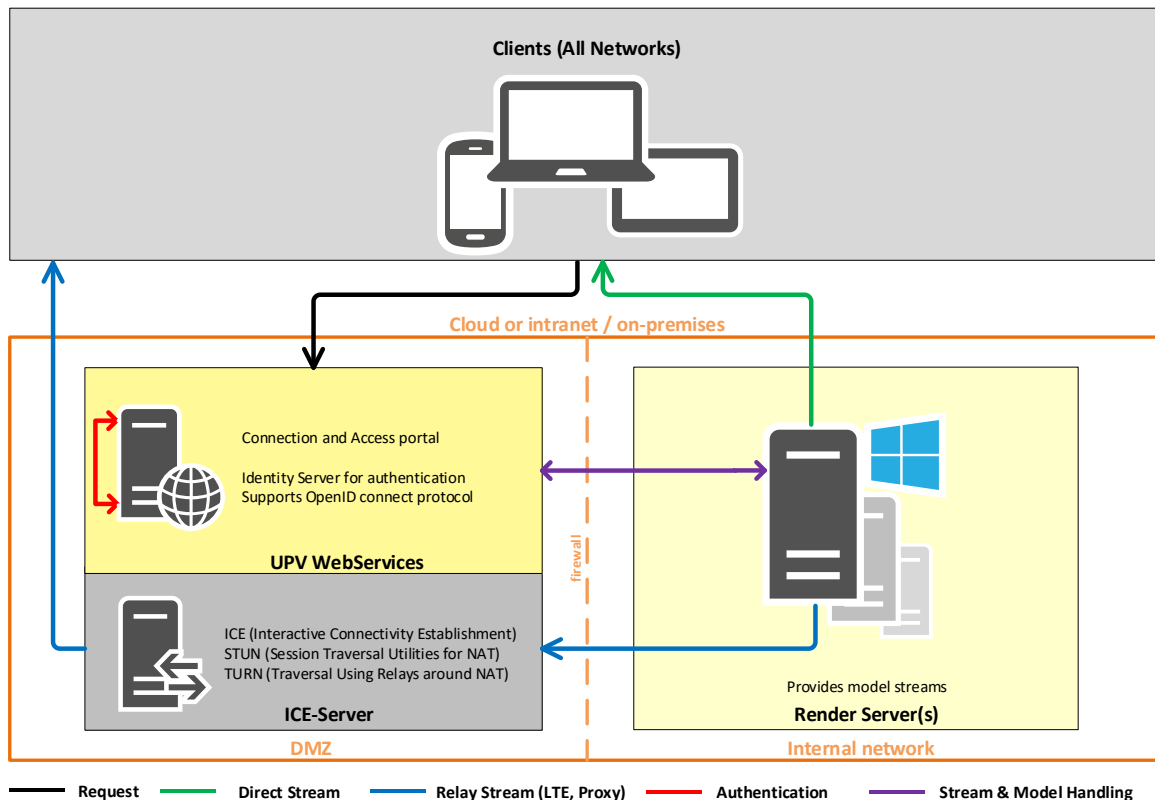


# UniversalPlantViewer

## BrowserBasedViewing hosting and architecture

UniversalPlantViewer is a simple and easy viewer. Hosted on Oracle cloud, bring the best performance to your clients, regardless of the hardware used.

### UPV BrowserBasedViewing (BBV) Architecture



### System Prerequisites

#### UPV WebServices

- Hardware recommendation: CPU 4 cores, 16 GB of RAM
- Software requirements: **MS Windows Server** (IIS) or **Linux** (apache or nginx)
- Ports required: TCP 443 (SSL)
- Certificate from official authority

#### ICE-Server (optional)

- Hardware recommendation: CPU 2 cores, 8 GB of RAM  
High bandwidth (>100Mbit bidirect.)
- Software requirements: Linux (with coturn)
- Ports required: TCP 443 (SSL)  
UDP ports depending on settings, 3 ports per concurrent stream, e.g.: 50000 – 50300 for 100 conc. streams.
- Certificate from official authority

#### Render Server

- Hardware recommendation: Nvidia GPU (e.g. RTX 5000) 2GB VRAM + 4 GB RAM per stream Min. 8 CPU cores, setup may vary according to use case
- Additionally, multiple render servers can be used on one WebServices Unit for load balancing.
- Software requirements: **Microsoft Windows**
- Ports required: Access to ports defined for UPV WebServices and ICE-Server