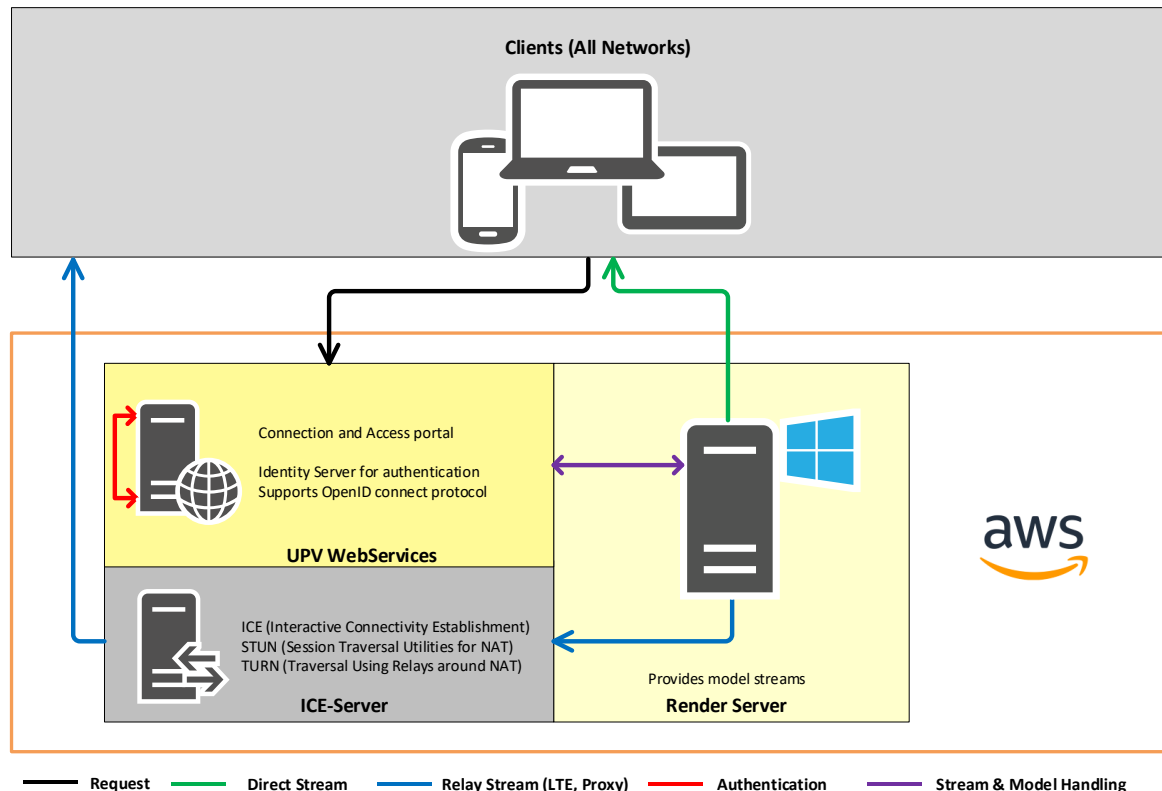


# UniversalPlantViewer

## BrowserBasedViewing hosted on AWS Cloud

Please find below the architecture diagram and hardware prerequisites for hosting UPV WebServices with BrowserBasedViewing technology on AWS Cloud.

### Architecture for UPV WebServices on AWS Cloud



### System Prerequisites

#### UPV WebServices

- Hardware recommendation:  
CPU 4 cores, 16 GB of RAM  
Different AWS machines applicable, depending on customer preferences
- 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:  
For apx. 8-10 simultaneous streams:  
AWS EC2 G3 with 2 GPUs (16GB VRAM).
- For more streams, an AWS EC2 G5 Instance is recommended (multi-GPUs).
- Multiple render servers can be used on one WebServices Unit for simple load balancing.
- Software requirements:  
**Microsoft Windows with GRID-Drivers**
- Ports required: Acces to ports defined for UPV WebServices and ICE-Server

Requirements may vary with the use case. For detailed individual hardware recommendations, feel free to contact us.