

# Azure VFX & Animation Rendering

## First Render Pilot Program

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## Accelerated Onboarding for Rendering in Azure

### Goal

The first render pilot program is expected to successfully setup and execute an end-to-end render in Microsoft Azure and works with your existing render queue software. The first render process will identify requirements to optimize automation and performance for consecutive renders. Traditionally, the first render pilot is scoped to a small scene that allows for multiple render jobs to be processed.

### Azure Services

Here are the major steps to setup the Azure services.

1. **Azure Infrastructure** - Consider building your infrastructure with [azurerm](#) terraform module and using examples from the [Avere Terraform page](#). This will help with learning and later enable automation with a [devops pipeline](#).
2. **Network** – Establish virtual network connectivity between Azure and the on-premises network with your storage system. Choose one of the following Azure network services based upon ease of deployment vs. need for performance testing.
  - a. [Azure VPN Gateway](#) – Quickest way to setup direct connection to on-premises over the Internet.
  - b. [Azure Virtual WAN](#) – Increases throughput to 20 Gbps over the Internet to on-premises.
  - c. [Azure Express Route](#) – Up to 100 Gbps private direct connection to Azure.
3. **Custom Image** – Build a custom render node VHD image on Azure ([link](#)). Deploy a single VM using the custom image, mount your on-premises filer and render a single frame. Azure can also import an image from GCE ([link](#)).
4. **Storage Cache** – Deploy one of the following Azure cache services to bring your data files close to Azure compute.
  - a. [Azure HPC Cache](#) – Managed cache platform service that contains the Avere vFXT caching technology.
  - b. [Azure Avere vFXT](#) – Cache infrastructure service that is deployed entirely in your Azure subscription.
5. **Compute Scaling** – Deploy an [Azure Virtual Machine Scale Set \(VMSS\)](#) for render scale testing your custom image.

### Pilot Process

To complete the first render pilot in a timely manner, engineering leads should meet regularly to unblock any issues. Here are a few suggested approaches and activities.

- **Pilot Kickoff Call – 90 min call** to familiarize with above pilot steps, gather required deployment information, and identify any prerequisite access needed to progress
- **Azure Learning** – optional in person meeting to cover the fundamentals of Azure
- **Deployment – 1 to 2 day** in person meeting to enable rendering workflow in customer Azure environment
- **Support** – Engineering support available through email, phone and Teams to accelerate unblocking of issues

### Post-Pilot Optimization & Customization

Consider potential post-pilot optimizations and customizations including security review, performance optimization, cost optimization, cost reporting, logging and security auditing, integration with your preferred render farm manager, etc.