Microsoft

Azure VFX & Animation Rendering

First Render Pilot Program

June 2020

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. **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.

2. **Custom Image** – Build a custom render node VHD image on Azure. 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.

3. **Storage Cache** – Deploy one of the following Azure cache services to bring your data files close to Azure compute. Deployments can be automated via the HPC Cache Terraform provider.
    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.

4. **Compute Scaling** – Deploy an Azure Virtual Machine Scale Set (VMSS) for render scale testing your custom image. Example automated deployments via Azure ARM or Terraform are available on Github.

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. Infrastructure and networking teams should be involved at all steps.
- **Deployment** – **1 to 2 days** to enable rendering workflow in your 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.

Contact Jon Weisner if you need more information: jweisner@microsoft.com

Commented [EB1]: VPN will be default for most pilots, remove other options?

Commented [EB2]: For 3 and 4, mention and link terraform scripts for deployment

Commented [EB3]: Make this a self directed process

Commented [EB4]: Create a 'Post-Pilot Optimization and Customization' guide. This can and should be multiple pages (but still short!)