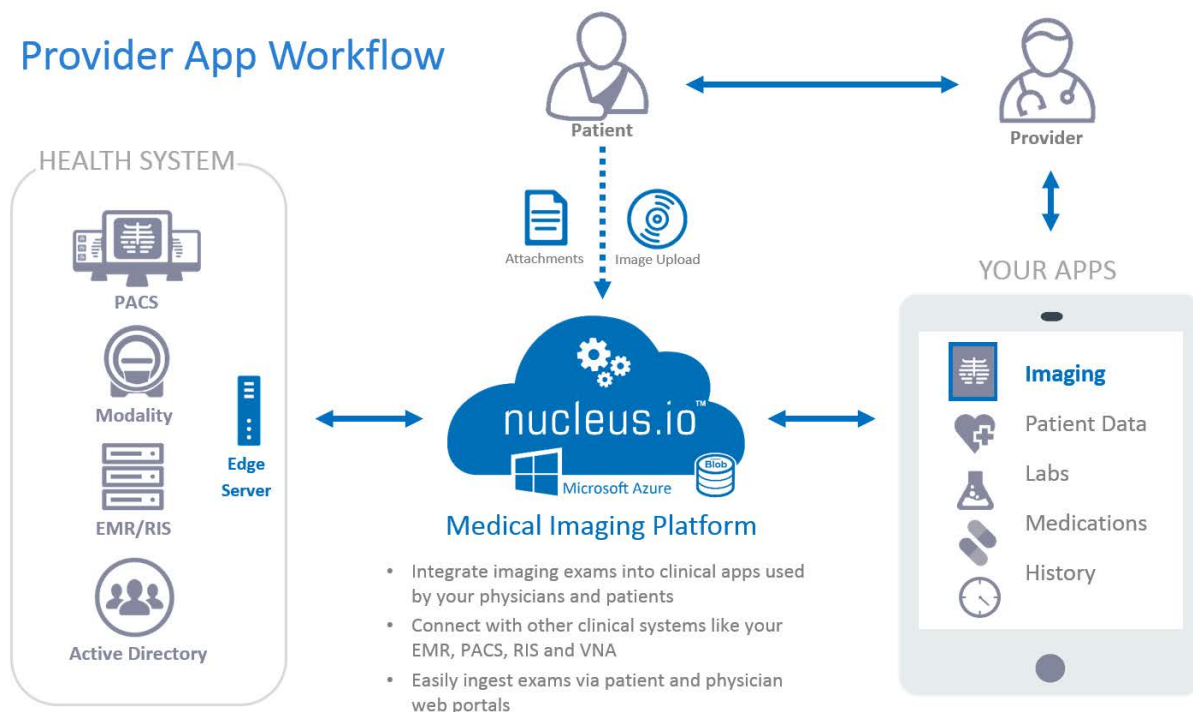**PROBLEM**

Providers have developed or acquired clinical applications to deliver patient data to caregivers while they're mobile (e.g., patient history, medications, lab results, etc.). Key data missing from those applications - critical for delivering superior patient care - are current and prior diagnostic medical images (i.e. DICOM).
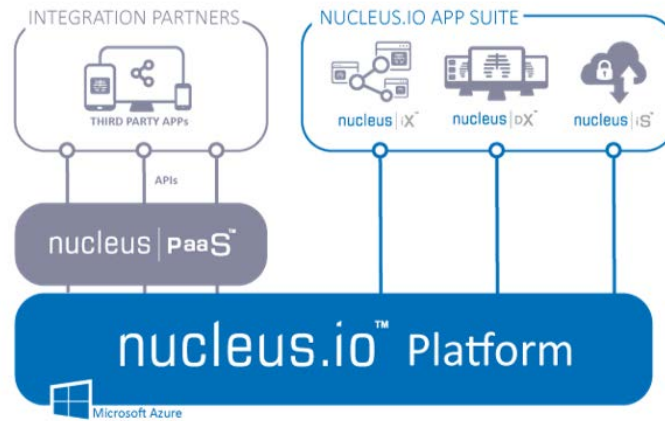
SOLUTION

Nucleus.io is a web-based, scalable and secure platform that provides instant access to medical images with advanced diagnostic workstation performance – without latency – to any web enabled device anytime and anywhere. Nucleus.io utilizes modern browser technology, client-side rendering, the computing power of today's mobile devices, and the power of Azure to deliver imaging pixel data via patented streaming technology. This technology allows us to stream images of any size instantly to any device - from the Azure cloud - regardless of network speed.

Provider App Workflow

The Nucleus.io platform powers a complete suite of imaging applications including image ingestion, diagnostic reading, archiving, image sharing, clinical viewing and a Platform as a Service (PaaS). Integration partners, like providers, build applications on the Nucleus PaaS to deliver their applications, tools and specialty workflows.

Nucleus PaaS gives software developers a fast, easy, and cost-effective tool to build web applications tailored for medical imaging. We built the necessary, non-differentiating aspects so developers can create, test, manage, automate and update their unique apps. RESTful APIs enable true interoperability, flexibility, and customization.

Nucleus.io is architected for:

- Scaling out processing and storage. When more capacity is needed, we can easily add additional application servers and all image data reside in Azure blob storage which is infinity scalable.
- Minimizing operational costs including IT infrastructure and support costs.
- High availability and redundancy. We only deploy highly available systems leaving no single point of failure.
- Financial industry security and data protection.
- Dedicated deployments - for customers who want maximum control of their system and data.
- Supporting our Dx Workstation with MPR, MIP, hanging protocols, thick slab and other capabilities of a full diagnostic workstation – all running in a web browser built on a machine learning platform.