Any organization that has leveraged technology to help run their business knows that the costs associated with on-going maintenance and support for legacy systems can often take upwards of 50% of the budget. Analysts and IT vendors tend to see these on-going investments as sub-optimum, but for mission critical systems that have served their organizations well for decades and tight budgets, the risk to operations and business continuity make replacing these tried and tested mission critical systems impractical. In many cases, these essential systems contain thousands of hours of custom developed business logic investment.

Products such as Actian Ingres and, more recently Actian X Relational Database Management Systems (RDBMS), have proven Actian’s commitment to helping our customers maximize their existing investments without having to sacrifice modern functionality. Ultimately, this balance in preservation and innovation with Ingres has taken us to three areas of development and deployment: continuation of heritage UNIX variants on their associated hardware, current Linux and Windows for on-premise and virtualized environments and most importantly, enabling migration to the public cloud.

Based on a recent survey of our Actian X and Ingres customer base, we are seeing a growing desire to move database workloads to the Cloud. Given the acceleration of digital transformation, we have introduced the Actian NeXt Initiative, enabling our customers to use the same time-tested and proven Ingres and Actian X technologies with their preferred public cloud platform.

Leveraging Cloud Infrastructure as a Service

The fundamental tenets of and advantages to cloud economics are well established, however often require underlying technical rearchitecting by data management, integration, and analytics vendors to fully harness the potential benefits from the cloud. Appropriately done, these modifications to underlying systems components should abstract and shield programmatic level business logic from direct impact.

Rearchitected for Docker containerization, the Actian X RDBMS and Ingres 11.2 RDBMS offer a cloud-ready solution that enables users to rapidly realize value from the scale and elasticity offered by cloud environments, while also providing the portability to move data between cloud providers or back to data center environments. Over time, the Initiative will further enhance cloud capabilities including Kubernetes management and Helm Charts for ease of deployment.
By taking this Docker/Kubernetes/Helm Chart approach we will gain a high degree of portability not just between public cloud platforms but for use in private cloud and modern, virtualized on-premise Linux and Windows environments.

Actian customers that wish to employ a BYOL (Bring Your Own License) strategy can move their existing licenses to the Cloud or purchase additional ones. Both offerings will run on Google Cloud Platform, Microsoft Azure, or Amazon Web Services with Actian’s commitment to a multi-cloud support.

**Actian Ingres Database as a Service via Actian Avalanche**

Users that leverage the Actian Ingres NeXt initiative will have the ability to join operational analytics with live transactional data for near real-time reporting as well as access built-in data integration from Actian’s DataConnect platform and enjoy enhanced functionality for management and administration. The Actian Ingres Database capabilities will be part of the Avalanche Data Platform (see Figure 1), allowing Actian Ingres Database to be delivered as a fully managed service for use with the public cloud platforms referenced above. Customers will no longer need to manage backups, patches, or upgrades and will be able to realize the cost savings in their cloud of choice. Further, customers will also benefit from cloud elasticity as the periodic and unexpected changes in workload size that necessitate capacity planning and capital investment can instead grow and shrink dynamically as business needs change with minimal change to existing data center infrastructure. The Avalanche platform’s integration capabilities will allow Actian X and Ingres database customers to connect to a variety of data sources and to easily and reliably load data into the database.

![Actian Avalanche Data Platform](image)

**Figure 1 Actian Avalanche Data Platform**

**Actian X and Ingres Databases Available via Public Cloud Marketplaces**

Actian X and Ingres Database customers can purchase capability as they need it. This model is ideal for application development and testing, testing applications against the latest product releases, and quickly spinning up new environments for scenarios like disaster recovery. Existing sales, pre-sales technical assistance and post sales services, maintenance and technical support is provided through current channels.
Leveraging cloud economics is only part of the digital transformation journey for most of our customers. In addition to improved scalability and cost savings provided by the cloud, the Actian Ingres NeXt initiative includes the OpenROAD toolset for data-centric, rapid application development. With the OpenROAD toolset, Ingres and Actian X customers can modernization application presentation to end users accustomed to modern web and mobile clients. While the Initiative covers both cloud migration and application presentation modernization, customers can leverage just the OpenROAD toolset regardless of whether the backend Ingres or Actian X deployments are moved to the Cloud. With OpenROAD, ABF character and “Green Screen” apps can be extended for use with modern development technologies, such as HTML5 and JavaScript without having to re-write previously developed business logic. This allows organizations to develop modern user interfaces without the cost, resource effort, or risk associated with manual modernization processes.

The OpenROAD 11.2 toolset has utilities that capture the business logic contained within partitioned ABF applications and moves that business logic to the OpenROAD Server to retain the many years of investment made in that business logic as seen in Figure 2 below. Once in the OpenROAD Server, that business logic can be called directly from OpenROAD applications or from Mobile and Web Applications via JSON-RPC + COM. A separate utility can convert ABF Forms to OpenROAD Frames, providing an instant face-lift to the application.

The OpenROAD transformed applications can be deployed against Actian X and Ingres databases both on premise and in the cloud, providing the flexibility to address each organization’s unique business needs.

![Figure 2 Actian OpenROAD 11.2 Data Centric Application Presentation Modernization](image)