Actian Zen Database Product Family

Zero DBA, embeddable database for Edge application and mobile and IoT local, distributed and cloud data management

Key Benefits

Zero DBA, developer-configurable

NoSQL and SQL

Embed or bundle with your business-critical applications

Support multiple data tables and files each up to 64TB

Cross platform and version data portability follows your application

Simple upgrades

Backward compatibility

Transactional, JSON, BLOB, and Time-series support

Supported Platforms

Windows 10, Windows 2012, 2016, and 2019 Servers, Linux, macOS

Android/Android Things, iOS, Windows IoT Core & Nano Server, Raspbian Linux distributions

VMWare, Nutanix, Microsoft, and Citrix Hypervisors (Zen Cloud Server)

Docker Container with Kubernetes

Orchestration and Helm Chart support

Intel x86/x64 and ARM 32-bit/ 64-bit support

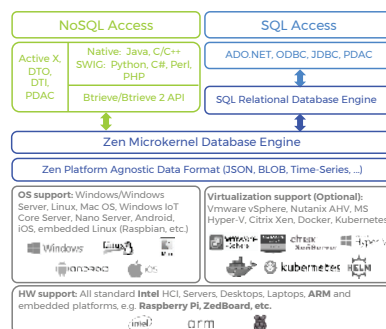7MB (client) and 50MB (Edge server) minimum installed footprints

License Options

Free single-user developer community and multi-user trial evaluation licenses

Royalty-free licensing for developers to embed and distribute Zen Core with their applications

Zen Edge licensing: 100, 250 and 1000-user packs

Zen Enterprise licensing: On-premise 64-bit deployment for 6, 10, 20, 35, 50, 100, 250, and 500 concurrent users, Workgroup for Windows 32-bit deployment for 1 – 5 users with 25, 100, 1000 user count group packs

Actian Zen database product family is a single, secure, scalable Edge data management portfolio that meets the needs of on-premise, cloud, mobile and IoT application developers. Actian Zen provides persistent local and distributed data across intelligent applications deployed in enterprise, branch, and remote field environments, including mobile devices and IoT. Develop and deploy on Intel or ARM running Windows 10, Windows 2016 and 2019 Servers, Linux, macOS and iOS, Android, Raspbian Linux distributions, Windows IoT Core and Windows Nano Servers, supporting the latest application requirements for local data and embedded analytics.

ISVs, OEMs, SIs, and Enterprises building in-house applications increasingly need to embed a data management platform to support value-added features and functionality, including end-user personalization and multichannel context, decision support, hybrid cloud support, provisioning, management, and security and governance. With both relational and direct data access for structured data, JSON, BLOB, and RDBMS and time-series data, self-tuning, reporting, data portability, exceptional reliability, easy upgrades, and backward compatibility, developers of intelligent software can deliver applications at scale across on- premise data centers, hybrid cloud, branch, and remote field environments.

NoSQL and SQL

Actian Zen: Zero-DBA, Embedded, Nano-footprint, Multi-Model, Multi-Platform

Zen offers NoSQL access for data-intensive application performance and local analytics support that leverages all popular programming languages (C/C++/C#, Java, Python, Perl, PHP, etc.), providing the perfect combination of speed and flexibility. Developers can choose among several methods of direct access to data without going through a relational layer. Zen databases also offer SQL access for reporting, query, and local transactions. This enables fast read and quick insert, update, and delete performance alongside full ACID response on writes and ANSI SQL queries. Zen supports SQL access via JDBC/ODBC and NoSQL access via the Btrieve and Btrieve 2 APIs.

Actian Zen: purpose-built single-scalable architecture

The Actian Zen database family is built with a single, modular architecture that scales from a core set of libraries capable of single-user client data management to a fullfledged, enterprise-grade server, capable of supporting thousands of users on multicore, VM cloud environments (Nutanix AHV, VMware vSphere, Microsoft HyperV, and Citrix XenServer) or in Docker

containers with Kubernetes orchestration and Helm chart deployment configuration.

Add-on packages for auditing, replication, and multiinstance synchronization further support networks of branch offices and remote workers or mobile and IoT devices connected to gateways.

New Btrieve 2 API

Java and C/C++ app developers can take advantage of the new version of the Btrieve 2 API, with the same access calls as the original but in a simplified, more intuitive client library. The Btrieve 2 API SDK also includes Simplified Wrapper and Interface Generator (SWIG) files for C#, Perl, PHP, and Python, giving developers in those languages Btrieve data access with a quicker ramp to productivity.

Zero Database Administration

Set it and forget it. OEMs and ISVs cannot always count on customers purchasing support and maintenance for their products and therefore need to avoid integrating components that create undue burdens and unforeseen support costs. All Zen products are built for non-IT environments, removing the need for consultants or DBAs.

Data Portability

Zen databases all support the same data types and file formats and prior PSQL versions, so none of the typical ETL overhead is required for accessing and moving data between any operating environment or versions of Actian Zen or PSQL database products. Seamless portability simplifies development, deployment, and maintenance. No ETL work, from device to cloud – just copy data and go.
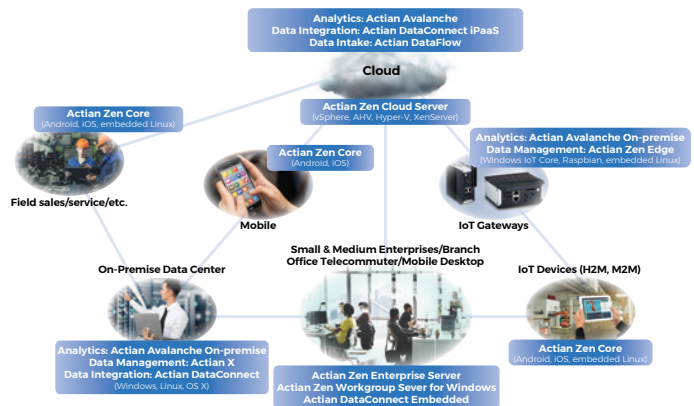
Backward Compatibility

Backward compatibility has long been a top priority for Actian Zen and earlier PSQL versions. Upgrading to the latest release is designed to be easy, with no need to migrate data, rewrite or recompile code, or even reinstall existing applications. Just keep moving smoothly from release to release with the same low-stress maintenance and possibilities for innovation.

Making Intelligent Applications Data-Driven

Actian Zen Enterprise database is ready to handle your application architecture as it evolves. It enables you to incorporate intelligence, multiplatform support, stateful distributed processes, and other features that drive value for your end users and revenue for your products and services. With Zen you can ensure your app has the data it needs to personalize and improve your application's relationship with its end users through decision support and situational awareness capabilities. Furthermore, localized data management can improve data security, monitor and manage upgrades and determine which features and functions are most and least used and which ones have bugs, what the upgrade path should be, and so on. In all these cases, your app data should be encrypted and stored in your own embedded database.

On-premise, Cloud, Mobile and IoT intelligent apps with a single, secure, scalable data management platform

File systems or simple local SQL databases (for example, SQLite) are not powerful enough to support the range of devices or data sizes or to handle both transactional data and local analytical processing in client-server or peer-toepeer settings. Alternatively, the traditional databases or NoSQL platforms are incapable of limited configuration for a full range of embedded systems, do not embed into apps, require on-site support, and do not support OEM models. Most developers and designers create products across platforms and data management and file systems, which can slow design and coding through multiple APIs, adding ETL overhead for data conversion, maintenance, and support. As described above, the Actian Zen database family runs on virtually all platforms, operating environments and can be called from most popular programming languages.

SaaS and Remote/ Branch ERP Apps Dedicated Database	Mobile & IoT Local, Distributed, and Gateway Databases	Various other applications
▪ NOMAD support/data sovereignty for persistent data ▪ Dedicated Application structured data table management (document/records management, RDBMS use cases) ▪ User behavioral (preferences, context, historical use) data ▪ Libraries for localized NLP, translations, etc. ▪ Baseline, historical data for decision support ▪ Edge advanced analytics and query acceleration	▪ Condition Monitoring and Predictive Maintenance ▪ Asset tracking and management ▪ Machine Vision including video surveillance ▪ Augmented Reality / Virtual Reality ▪ Robotic process automation ▪ Local device and grid management ▪ Intelligent and Autonomous vehicle networks ▪ Historical/baseline data for unsupervised ML inference	▪ Dedicated data management for complex capital equipment (MRI devices, airplanes, etc.) ▪ Edge governance: remote configuration, management, monitoring ▪ IT security – SIEM support, event logging ▪ Local cache for CDNs ▪ Edge data pump for AI/ML