

# Actian Zen Enterprise Server

Zero DBA, embeddable database for data-driven intelligence

## Key Benefits

Zero DBA, developer-configurable

SQL and NoSQL

Embed or bundle with your business-critical intelligent applications

Support multiple data tables and files each up to 64TB

Optimally handle traditional structured, JSON, BLOB, and time-series data with a single DB

Cross platform and version data portability follows your application

Simple upgrades

Backward compatibility

## Supported Platforms

Windows 10, Windows 2012, 2016, 2019, and Nano servers, Linux, Mac OS X

VM Support for VMware vSphere, Nutanix AHV, Microsoft Hyper-V  
Docker Container with Kubernetes orchestration and Helm Chart support

Intel x86/x64 and ARM 64-bit  
175MB minimum installed footprint

## License Options

1 - 5-user, 32-bit Workgroup Server for Windows kit with 100, 1000 user count group packs

64-bit Enterprise Server with 1, 6, 10, 20, 35, 50, 100, 250, and 500 client packs for commercial deployment

[Teach yourself Zen.](#) Quickly and easily get up to speed on installing, configuring, and embedding next-generation Edge data management functionality.

Data sheet

Actian Zen Enterprise Server database focuses on the needs of remote embedded, on-premise and cloud application developers, providing persistent local and distributed data across intelligent applications deployed in enterprise, branch, and remote field environments. Develop and deploy on Intel or ARM running Windows 10, Windows Server 2019, Linux, or macOS and virtualized environments such as VMware VMs and Docker containers. Zen Enterprise Server extends the features of classic PSQL embedded editions to the latest application requirements for an underlying database engine to support captive data, embedded analytics, and machine learning.

SIs, ISVs, and OEMs increasingly need to embed a data management platform in their applications to support value-added features and functionality, including end-user personalization and multichannel context, decision support, multitenant cloud support, provisioning, management, and security and governance. With both relational and API data access, 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, and branch and field environments.

## SQL and NoSQL

Zen Enterprise Server offers SQL access for reporting and local transactions and NoSQL API access for performance with local data processing and analytics support that leverages all popular programming languages, 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. This enables fast read and quick insert, update and delete performance alongside full ACID response on writes and ANSI SQL queries. Zen Enterprise Server supports SQL access via ODBC and JDBC and NoSQL access via the Btrieve and Btrieve 2 APIs.

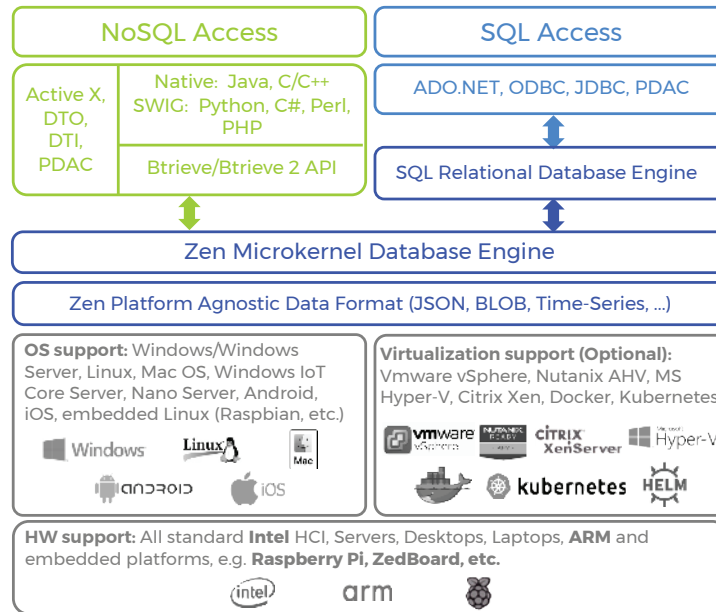
## New Btrieve 2 API

C and C++ application 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. Access the performance and flexibility of the Btrieve engine without the complexity. 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. Zen Enterprise Server database is built for non-IT environments, removing need for consultants or DBA supervision. Whether you elect to never touch your app or continually patch and redeploy it, Zen Enterprise Server won't break your application under any circumstances.

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



## Data Portability

Zen Enterprise Server database supports the same data types, including structured, JSON, and BLOB, and file formats as the rest of the Actian Zen product line and prior PSQL versions, so none of the typical ETL overhead is required for accessing and moving data between Windows, Linux, macOS or Actian Zen Edge and Zen Core platforms such as Android, iOS, Windows IoT Core, and so forth. Plus, data portability and AES 256-bit data encryption extends across all supported platforms and multiple versions of Actian Zen database products. Seamless portability greatly simplifies development, deployment, and maintenance. No unsecured ETL work – just copy data and go.

## Backward Compatibility

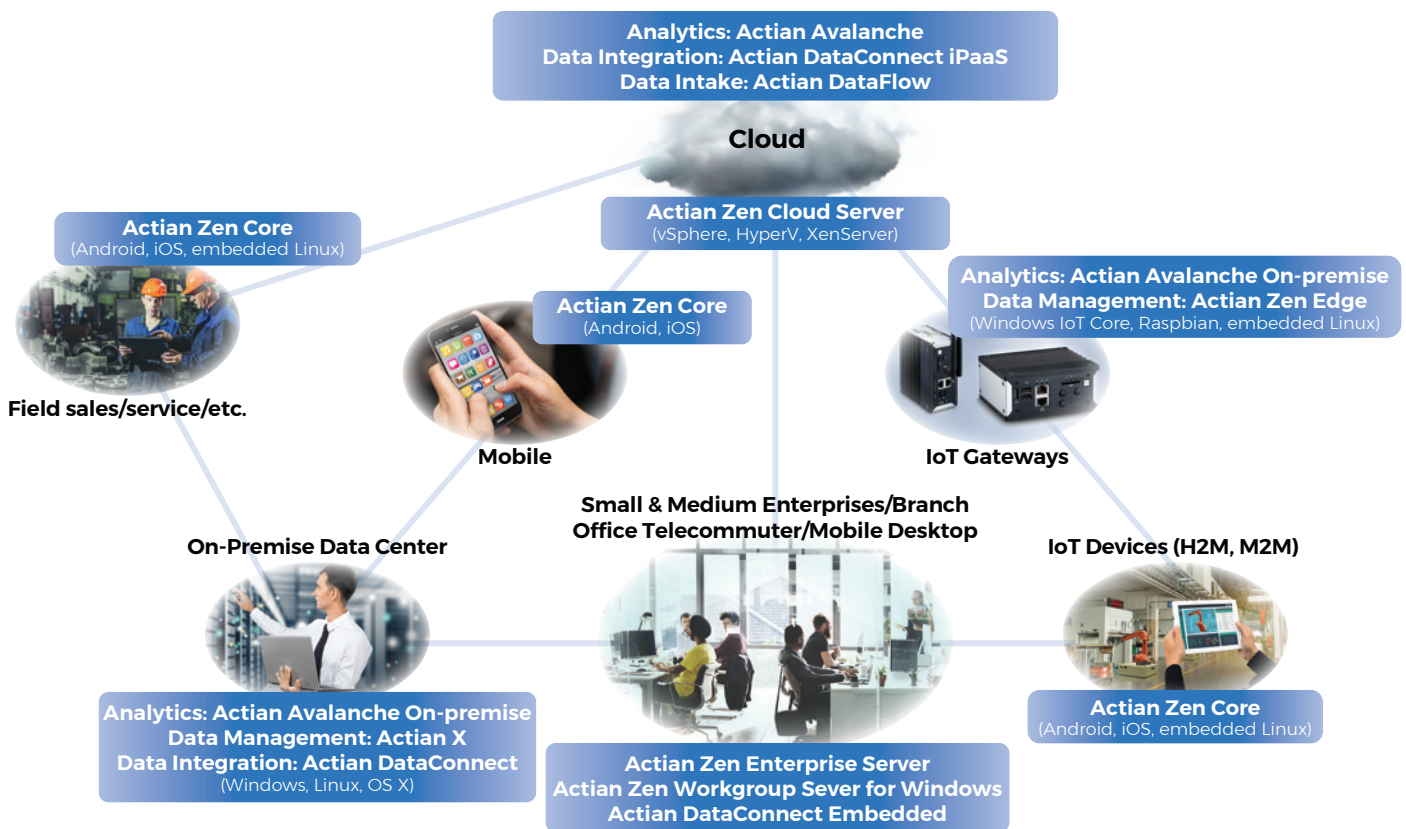
Backward compatibility has long been a top priority for Actian Zen and earlier PSQL versions. Upgrading to the latest release is designed to be easy, with no need to migrate data, rewrite or recompile code, or even reinstall existing applications. Just keep moving smoothly from release to release with the same low-stress maintenance and possibilities for innovation by taking advantage of new functionality like time series data stamps and record count or JSON field parsing.

## Making Intelligent Applications Data-Driven

Actian Zen Enterprise Server database is ready to handle your application architecture as it evolves. It enables you to incorporate intelligence, multiplatform support, stateful distributed process, and other features that drive value for your end-users and revenue for your products and services. Some data, such as your customer's data on their customers, will reside in common data repositories and enterprise warehouses. However, data that your application needs to improve satisfaction rates, secure it, enable you to monitor and manage upgrades and determine which features and functions have bugs, what the upgrade path should be, etc. should be your IP – just as your source code is – and should be encrypted and stored in your own database.

## Offer OS, Virtual Machine, or Container-based intelligent applications with a single data management platform on Intel, Arm, and Public Cloud platforms

Developers, product designers, and OEMs need to be able to support multiple environments with a single data management platform. Whether it's a traditional Windows or Linux server app or an embedded app in a smart device, the Actian Zen database family can be used in traditional Enterprise apps in the Cloud or a data center, at branch offices, in consumer-facing or hidden industrial apps – with a range of supporting resources, from SoC to field-based server. 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-to-peer settings. Alternatively, the traditional databases or NoSQL platforms are incapable of limited configuration and focus (Document Store vs. Time-Series, for example) 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. The Actian Zen database family runs on servers, desktops and laptops, and embedded systems, deploys on any Intel or ARM platform, including Linux, Windows, Windows IoT Core, Android, iOS, and OS X, VMs, and Containers.



## With Actian Zen Edge Data Management applications will be smarter, driving automation of IoT and decision support

From chronic disease management in healthcare to digital twinning in manufacturing or asset tracking and management in transportation and logistics, the breadth and depth of use cases for edge intelligence is seemingly limitless. The growth of IoT and Mobile and the coming infusion of unsupervised ML inference into edge applications is driving the need to harness and exploit the underlying data at the edge rather than simply tossing it or sending it back to the Cloud. Further, the expected deployment of 5G with Multi-Access Edge Computing frameworks that drive containerized microservice-based applications at the edge will further accelerate the need for more robust data management.

The figure below provides lists of representative use cases where Zen edge data management can provide superior functionality, non-stop operation, ease-of-use, platform portability, performance, security and support for an OEM lifecycle. All of these are mandatory features and functionality required in mission critical operations technology and commercial software offerings where on-site support for configuration, monitoring, management, and periodic services are unavailable. Many alternative offerings meet some of these requirements but only Zen meets them all.

SaaS and Remote/ Branch ERP Apps Dedicated Database	Mobile & IoT Local, Distributed, and Gateway Databases	Various other applications
<ul style="list-style-type: none"> <li>▪ NOMAD support/data sovereignty for persistent data</li> <li>▪ Dedicated Application structured data table management (document/records management, RDBMS use cases)</li> <li>▪ User behavioral (preferences, context, historical use) data</li> <li>▪ Libraries for localized NLP, translations, etc.</li> <li>▪ Baseline, historical data for decision support</li> <li>▪ Edge advanced analytics and query acceleration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Condition Monitoring and Predictive Maintenance</li> <li>▪ Asset tracking and management</li> <li>▪ Machine Vision including video surveillance</li> <li>▪ Augmented Reality / Virtual Reality</li> <li>▪ Robotic process automation</li> <li>▪ Local device and grid management</li> <li>▪ Intelligent and Autonomous vehicle networks</li> <li>▪ Historical/baseline data for unsupervised ML inference</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dedicated data management for complex capital equipment (MRI devices, airplanes, etc.)</li> <li>▪ Edge governance: remote configuration, management, monitoring</li> <li>▪ IT security – SIEM support, event logging</li> <li>▪ Local cache for CDNs</li> <li>▪ Edge data pump for AI/ML</li> </ul>