

# A Dozen Great Reasons to Upgrade to Actian Zen

## 12 Reasons in a Nutshell

1. Windows 7, Server 2008, SQL 2008 End-of-Life in 2020
2. Actian Zen Core for Android and iOS
3. Improved SQL performance
4. Simplified license management
5. Support for the latest programming languages through Btrieve 2 API
6. BLOB, JSON, Time-Series Data Support for 64TB data files/tables
7. AES 256-bit Encryption
8. Community editions for developers and PoCs
9. Client Reporting Engine
10. Live VM migration support for all prior editions and Docker support
11. Online defragmentation
12. Unicode support

## Need More Reasons?

Visit [www.actian.com/zen](http://www.actian.com/zen) for product, service, and solution information, papers, success stories, developer news and much more.

[Try Zen Core Database](#), a full-featured NoSQL DB engine with royalty-free licensing for developers to embed and distribute Zen Core with their applications.

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

Solution sheet

Every day you rely on an Actian (formerly Pervasive®) data management product to power the success of your business-critical applications. This complete data management solution has provided you with performance at a low total cost of ownership in a powerful, secure, and scalable engine. And now we are proud to offer the next generation of our flagship solution, the Actian Zen database family. Actian Zen Enterprise Server database for Windows, 64-bit Linux, and Mac OS X and Actian Zen Workgroup for Windows Server (x86 and x64 support) inherit all the key features you've come to depend on, including Zero-DBA, ability to embed or bundle, nano-footprint, and SQL and NoSQL data access. You can upgrade to Actian Zen Enterprise Server today and ensure your success tomorrow with these new features:

## 1. Microsoft 2008 and earlier products migration by 2020

Most commercial Windows users are on older versions of Windows. However, Windows 8 reached the end of mainstream support January 2018 and, more importantly, Windows 7, Windows Server 2008 and SQL Server 2008 will become unsupported in January 2020. Unsupported versions receive no more bug fixes or security patches via Windows Update. IT support staff and end users must now worry about information security and system stability. Actian Zen supports Windows 7, 8, and 10 and Windows Servers 2008, 2012, 2016 and 2019 and is backward compatible with all PSQL versions running on those systems. Moving to Actian Zen usually requires no recompiling of code to support your existing PSQL SQL queries or Btrieve API calls. Actian Zen supports the same data file format as earlier versions of PSQL - back to 1994 - so migrating requires no changes to your application. Just install Actian Zen, copy over your PSQL data files and application, and go.

## 2. Actian Zen Core for Android and iOS

Aside from the push by Microsoft to transition desktop and laptop applications to Windows 10 and Windows and SQL Server 2019, many end users want applications or front-end components of their functionality on tablets and smartphones, especially for POS and similar applications, requiring local data or complex interactions. The vast majority of these devices are Android and iOS-based platforms with the same business-critical application requirements for local persistent data, such as the ability to run disconnected or in environments where network bandwidth is constrained. Actian Zen Core database for Android and iOS gives you the same security and data format on mobile and IoT devices as other Actian Zen for enterprise deployed platforms, avoiding the cost and integration burden of ETL between disparate databases and file systems.

### 3. Improved SQL Performance

Actian Zen Enterprise provides improved SQL performance with a native 64-bit engine (as of PSQL v11) across Windows, Linux and OS X. Actian Zen Workgroup for Windows Server provides backward compatibility to 32-bit only environments. Actian Zen also supports JDBC 4 drivers for performance improvements over JDBC 2 as well as ADO.Net and ODBC for broader support.

### 4. Simplified License Management

Prior versions of PSQL strictly enforced licensing requirements and limited flexibility on hardware changes as well as mobility in VM environments. Additionally, PSQL when running in a VM required Internet connectivity to maintain a valid product key after authorization, creating support issues for customers running v10 and v11. With Actian Zen Cloud Server database, only the machine name is necessary for license authorization, allowing for greater mobility in cloud and virtualized environments – particularly in secure environments, such as behind a firewall. Simplified license management in Actian Zen Cloud Server means reduced support cost and trouble-free application operation for ISVs and end users. Actian Zen Cloud also provides an alternate data size instead of concurrent user pricing model which may be more economical in certain Internet connected use cases.

### 5. Support for the latest programming languages through the Btrieve 2 API

Actian Zen improves SQL performance for PSQL users, but NoSQL performance will always be better. Plus, many application developers prefer to use standard programmatic APIs to access data. Actian Zen offers the Btrieve 2 API, which includes SWIG files for scripting languages such as Python, Perl, C#, and PHP to enable the API to serve native objects in those environments. Actian Zen also provides a new and simplified C/C++ API for Btrieve. The Windows DLLs for this API are installed with Zen and can be accessed in parallel with legacy API calls.

### 6. JSON, BLOB, and Time Series Data Support

Actian Zen adds several new Btrieve API functions and features to support JSON, BLOB, and Time-series data at comparable or better performance than other narrowly built Document Store or Time-Series databases. Btrieve adds a new key type called AUTOTIMESTAMP to automatically include the current time stamp value in nanoseconds in support of time-series data such as video, audio and sensor data

streams. File size has been extended to 64 TB with the ability to handle BLOBs and also support for JSON data filtering in Btrieve extended operations.

### 7. AES 256-bit Encryption Support

Actian Zen improves at-rest data security for PSQL users, adding AES 256-bit encryption of files with owner names up to 32 bytes long. PSQL v12 and earlier versions provided 128-bit encryption, secure at the time of earlier PSQL releases but maybe out of compliance with more recent and stringent security requirements in many industries and use cases.

### 8. Community Editions for Developers and expanded Embedded OS support

Actian Zen Enterprise Server and Zen Cloud Server already support traditional Windows and Linux enterprise development and deployment environments – as did prior versions of PSQL. However, with Actian Zen Edge, we've added Windows IoT Core Server and Raspbian Linux distributions on Raspberry Pi ARM 64-bit boards. Actian Zen Core for Android and iOS adds support other embedded environments such as smartphones, tablets and IoT devices. Support for these platforms and new programming languages in the Btrieve API compelled us to provide free, full-featured community editions so that developers can do proofs of concept at no cost.

### 9. Client Reporting Engine

Big report queries can impose a heavy load on PSQL Server v12 and below, competing for resources with the normal stream of smaller transactions. Actian Zen reduces the demand on Zen Server report execution with Zen Reporting Engine set up as a proxy server. This specialized 64-bit engine combines features of Actian Zen Relational Engine and Actian Zen Client Cache Engine to offload big SQL jobs to reduce database server workload. When big queries run on the reporting engine instead of the server, performance for normal production operations can improve.

### 10. Live VM migration support for all prior PSQL versions and Docker support

Actian Zen Cloud Server provides migration support, enabling any prior version of an embedded or bundled PSQL Vx Server database using VMware vMotion (and its equivalents in Nutanix AHV, Microsoft Hyper-V and Citrix XenServer) to move between virtual machines on different physical machines without disconnecting the client or application that the PSQL Vx instance is servicing. Actian Zen Cloud also provides Docker container support for Windows 10 and Windows Server

2019 systems, including the community editions. Containers are quickly becoming the virtualization tool of choice for many developer communities.

## 11. Online Defragmentation

Fragmentation of database files can degrade performance over time and, given that packaged application providers are generally unable to maintain deployed environments, there was no way to reduce it in prior PSQL versions without downtime. Actian Zen includes automatic defragmentation that can run unattended on recently opened files with qualifiers for whether the files are larger than 10MB, have 15% or more fragmentation, and more than 5% of records are out of order. Optionally, there are command line options to configure monitoring, starting, stopping, running multiple files in batch modes, etc.

## 12. Unicode Support

Actian Zen support for globalization allows you to store text in multiple languages in the same database, enabling your application to handle data in whatever language required. Wide character data types are supported for editing view, procedure, and trigger body text and default column values that contain NCHAR text outside of the database code page. The Btrieve 2 API also offers International Components for Unicode (ICU) collation for STRING and WSTRING data.



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