



# What's New in Zen

Zen v16

Activate Your Data™



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# About This Document

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This document contains information about the features and enhancements in this release. It does not provide comprehensive usage instructions for the software. Its purpose is to summarize what is new and different from the previous release.

The Zen family of products includes the following editions of the database engine:

- Enterprise Server
- Cloud Server
- Workgroup

Throughout the Zen documentation, all content covers all three editions unless differences are explicitly called out. For example, you will occasionally encounter topics that apply only to Zen Workgroup. Unless stated otherwise, anything that applies to Enterprise Server also applies to Cloud Server.

In addition to the database engines, Zen has the following client editions that provide application access to remote engines:

- Client
- Client Reporting Engine

Throughout the Zen documentation, all content concerning access methods applies to both client and engine editions unless differences are explicitly called out

We would appreciate your comments and suggestions about this document. Your feedback can determine what we write about the use of our products and how we deliver information to you. Please post your feedback at the [Zen community forum](#).



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# What's New in Zen v16

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The release of Zen v16, version 16.00, offers the following new features and changes:

- [File Format 16.0 Supports Keys Longer than 255 Bytes](#)
- [New Data Synchronization Utility](#)
- [Improved Integration of SQL and non-SQL Data Access](#)
- [SQL Improvements](#)
- [Performance Improvements](#)
- [ADO.NET Support](#)
- [Offline Rebuild](#)
- [Linux-based Systems](#)
- [Zen Containerization](#)
- [JSON](#)
- [Btrieve 2](#)
- [Supported Platforms and Deprecated Features](#)
- [Known Issues and History Logs](#)
- [Documentation](#)

This document may be updated after the release. Download the latest version from the [Actian Electronic Software Distribution \(ESD\) website](#) or visit [docs.actian.com](#).

## File Format 16.0 Supports Keys Longer than 255 Bytes

- Zen v16 introduces a new file format called 16.0.
- Format 16.0 files have a maximum key length of 1024 bytes.

## New Data Synchronization Utility

The **easysync** command line utility is a new Zen data synchronization tool for automating the replication of newly created or updated records from one Zen database to another. The two databases can be on different servers or on the same one. Frequency of syncing can be near real-time or on a longer schedule. It includes a logging feature to enable general monitoring, detection

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of errors, and troubleshooting of unexpected results. The **easysync** documentation is found in *Zen User's Guide* under [Command Line Interface Tool Reference](#).

## Improved Integration of SQL and non-SQL Data Access

- Retrieve operations now succeed for files with SQL triggers defined.
- Status code 149 is no longer returned for these operations.

## SQL Improvements

- Support for LIKE with ESCAPE.  
Example: `SELECT c1 FROM Tbl WHERE c1 LIKE '%10-15!% off%' ESCAPE '!'`
- Support for data values up to 2 GB for INSERT and UPDATE statements on bound columns. The previous maximum was 64 KB.
- Secure USER.DDF and RIGHTS.DDF files with encryption on disk.
- SQL query logging settings in the ZenCC debugging properties of a Zen database engine, with options to include or exclude FETCH statements. No engine restart is required to turn logging on or off.

## Performance Improvements

- MicroKernel page read-ahead for improved performance of Step operations

## ADO.NET Support

The Zen v16 ADO.NET SDK has added support for .NET 8.

## Offline Rebuild

Zen v16 introduces a standalone, command-line version of the existing Rebuild tool, called Offline Rebuild. This utility is meant for use to convert Zen data files on systems where Zen is not installed. Rebuilding a large number of files, or very large files, can slow Zen database engine performance for other users. Rebuilding the files on another system avoids this problem.

In addition, Zen v16 cannot read files in the 5.x format, so they must be converted to a later version. Only **rbldcli\_offline** can read and convert 5.x files.

The tool is not installed with Zen v16 but is a separate download, including a quick start guide.



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## Linux-based Systems

- Zen installation and removal have been simplified by consolidating installation scripts.
- Only TAR installation is now supported.

## Zen Containerization

Kafka integration using a Docker image with Btrieve source and sink connectors.

## JSON

The Step/Get Extended JSON query operator now supports nested JSON objects.

## Btrieve 2

- Support for system data fields in bulk retrievals.
- Improved examples and documentation for BRestful and Document APIs.
- Python package delivery using Python Package Index (PyPI).

## Supported Platforms and Deprecated Features

- Visit [communities.actian.com](https://communities.actian.com) for a list of [platforms currently supported by Zen](#).
- Files in pre-6.x formats are no longer supported. The new [Offline Rebuild](#) utility can be used to convert them to supported file formats.
- The Zen PDAC SDK has been discontinued as a development platform in this release. PDAC applications developed with previous releases will continue to work in Zen v16.

## Known Issues and History Logs

- An updated Zen known issues log lists unresolved technical and usage issues, with workarounds when available.
- An updated Zen history log lists fixed defects and selected enhancements in Zen v16 and any released service packs.
- You can download both of these files, as well as Zen v16 release notes and this What's New document, at the [Actian Electronic Software Distribution \(ESD\) website](#).

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## Documentation

The documentation for this release has been updated to cover new or changed functionality. It has also been revised for clarity, grammar, spelling, and changes to internet addresses and product names.