MVON4
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What makes MVON4 different from other MultiValue systems?

Flexible Licensing Model and Developer Edition

MVON4 may be licensed either on a core or user base model.

For more information, please visit www.ONgroup.com

Horizontal Scalability

A significant feature that differentiates ONgroup's MVON4 platform is the ability to horizontally scale implementations of MultiValue. MVON4 gives MultiValue developers the tools to write software in MV, transpile to C# and run it in the .NET Common Language Runtime.

Because MVON4 uses .NET as the MultiValue run machine (p-machine) and SQL Server as the DBMS for MultiValue applications, it provides a wealth of functionality that other MV platforms lack. This capability allows MVON4 users to define primary, secondary and tertiary lock servers and to have as many nodes as required in the MVON4 Cluster. Nodes can be added and removed in real time, while each node can be configured with different RAM, disk and processors, and Windows and Linux Nodes can be mixed in a single cluster.

Use both SQL and NoSQL Databases

MVON4 and other ONware products are database independent and can use multiple types of databases concurrently, including NoSQL DBMS such as MongoDB. Currently operational with ONware are SQL Server, and common MV databases including jBase, Open QM, UniVerse, UniData and D3.

Advanced Security Features

With the continuing increase in data breaches and resultant regulations to keep them at bay, the security features of many MultiValue applications are often questioned. Particularly as users require access to multiple databases on multiple servers distributed across different physical locations, database security administration can become complicated.

This is one among many reasons why ONgroup elected to utilise Microsoft's solid industry platforms to our benefit as their organization continues to invest in the widely respected security of its .NET run machine, as well as their SQL Server DBMS. With MVON4 Tools, one can run existing MultiValue applications in .NET with SQL Server and similarly run SB+ applications in .NET with the MVON4 NetBuilder emulator.

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PYTHON, Javascript, TypeScript and MV BASIC Interaction

Because Python, Javascript and Typescript integrates seamlessly with NetBasic, via C#, MVON4 users are not restricted to using only Basic Developers on ONgroup systems. This is a typical scenario for sites running on Microsoft with MVON: Not only are all these languages running in the same runtime as the MV application (with MVON applications running in .NET) there is also no client-server required. Python, Javacript, Typescript and MV BASIC interact fluidly. Call a subroutine written in Python, Javascript or Typescript from your BASIC code and it all just runs in .NET

High Availability, Extensibility and Capabilities of .Net Framework

The benefits of using MVON4 on SQL include 'built-in' high availability, failover and extensibility as well as the capabilities of the .Net framework to create user defined functions in SQL.

The Always On availability groups feature is a high-availability and disaster-recovery solution that provides an enterprise-level alternative to database mirroring. First introduced in SQL Server 2012 (11.x), Always On availability groups maximizes the availability of a set of user databases for an enterprise.

An availability group supports a failover environment for a discrete set of user databases, known as availability databases, that fail over together. An availability group supports a set of read-write primary databases and one to eight sets of corresponding secondary databases.

MVON4 and its related ONware products are created to provide comprehensive and sustainable extensibility for future use. Extensions can be through the addition of new functionality, or through modification of existing functionality. These principles provide for enhancements without impairing existing system functions.

Multivalue Extensions for Visual Studio Code

Through its collaboration with Zumasys, ONgroup has enabled programmers to easily code in Pick BASIC using Visual Studio Code, the free open-source editor created by Microsoft for Windows, Linux and macOS. Not only does this empower current MultiValue developers, it also embraces the next generation by supporting VS Code, which has rapidly grown to become the most popular Integrated Development Environment (IDE) available.

The following MultiValue extensions for Microsoft Visual Studio Code via ONgroup's MVON4 product are currently available on Microsoft's Visual Studio Marketplace:
• MV# TCL Extension: Used for code highlighting, intellisense, and syntax checking for MV# command line development
• MV# Developer Extension: Used for code highlighting, intellisense, program formatting and remote file connectivity for PickBASIC code development
• MV# Debugger: Allows developers to visually debug PickBASIC programs

ONgroup pioneered this space with the release of the first Pick extensions for Microsoft Visual Studio Code. Zumasys contributions have centered around an enhanced architectural direction with RESTful services and making the product configuration driven, which allows other MultiValue databases such as D3, Unidata, Universe, Revelation, Reality, etc. to easily integrate and improve all flavors of Pick and the market as a whole.

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