
The X4 MeghaVault Advantage

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Introduction

The X4 MeghaVault Framework is a new paradigm for application development and integration based on a zero-coding approach that even non-programmers can use to create apps quickly and affordably.

What sets MeghaVault apart from other zero-coding tools is that it can be used across a broad spectrum of programming models and environments. For example, MeghaVault can be used to integrate data across many data sources, products, and tools. In fact, MeghaVault allows you to address new needs while enhancing the value of your existing technology portfolio including older technologies (i.e. legacy assets)

Megha in Sanskrit means "cloud" but the X4 MeghaVault Framework also accelerates software development and integration of devices for the Internet of Things (IoT) a.k.a the Internet of Everything (IoE)!

Breadth and Scope

When positioning the X4 MeghaVault Framework in the marketplace, the following diagram provides context by illustrating its breadth and scope.

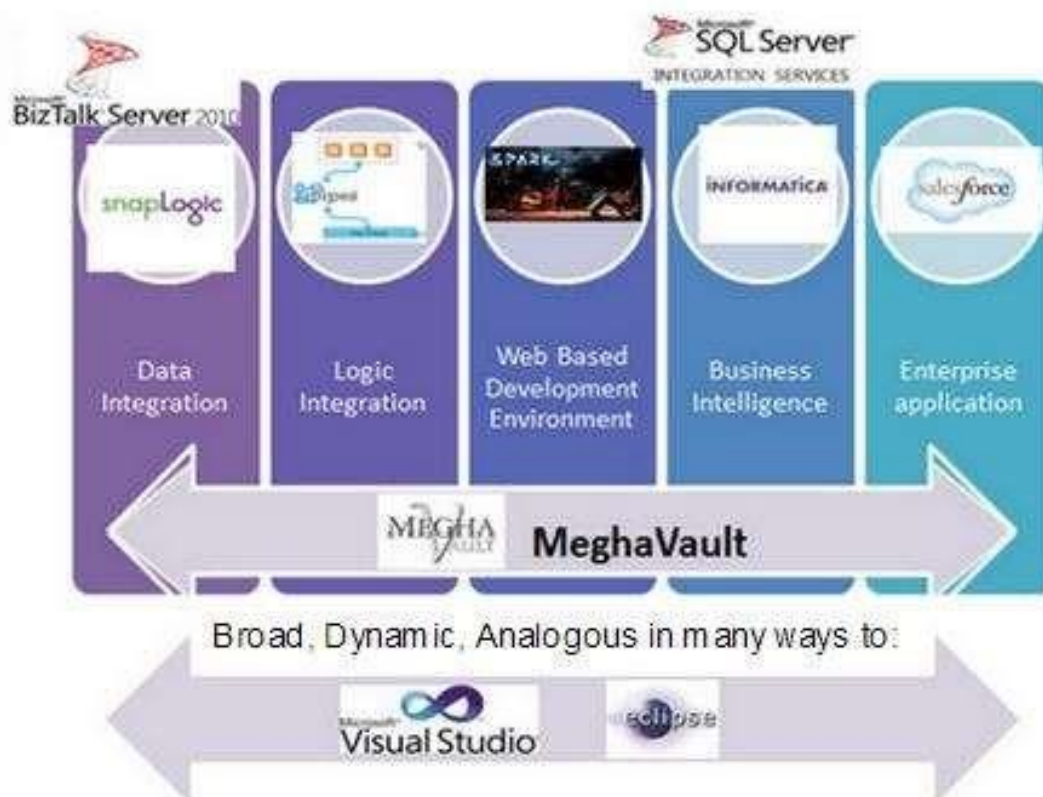


Figure 1: Broad Functionality, but Much Simpler than Existing Tools!



What the preceding diagram shows in practical terms is that many types of apps that would otherwise require substantial programming to create using Visual Studio can be created using MeghaVault without any coding and in a fraction of the time at a fraction of the cost.

MeghaVault is not attempting to *replace* traditional development studios, but rather to provide an *affordable alternative* that dramatically expands the number of people who can create applications. MeghaVault can make programmers *more productive*, but also allows *non-programmers* to "get in on the action" to create and modify their own apps. In fact, apps created using MeghaVault can be shared easily for further customization by others who have been given permission by the application's owner.

MeghaVault can be used to create a simplified zero-coding development environment that has been custom-configured for a specific set of data connectors and a subset of the development functionality needed. Providing the product administrator the ability to specify a user's reach and scope within the tool is unrivaled. Also unique is the ability to create partial apps in MeghaVault then hand them off to be completed by a programmer using a popular Integrated Development Environment (IDE).



Figure 2: A New Paradigm for Bridging and Enabling Technology

The preceding diagram depicts MeghaVault as a dynamic and flexible code-free development studio that fills the gap between code-free development tools very specific in their scope and purpose, and powerful IDEs that programmers use to create and enhance an organization's or individual's applications. Using MeghaVault, non-programmers like business analysts and programmers can save time and money. This means certain activities that required Visual Studio, programming tools, 3GLs, and senior technical staff before, can be accomplished quickly and easily by a savvy business analyst using MeghaVault independently.

Comparisons within Application Platform as a Service (APaaS)

In the latter part of 2013, a few industry analysts began referring to a specific niche category of cloud-based software development tools called Application Platform as a Service (APaaS). APaaS vendors shown in the following diagram offer varying degrees of development and deployment environments for application services. The X4 MeghaVault Framework is the ONLY solution that *excels in all six categories*:



Figure 3: MeghaVault Excels Across All Categories



Three Overlapping Products

The following table compares MeghaVault to three prominent industry products. These products only perform subsets of MeghaVault capabilities.

Figure 4: Comparing MeghaVault

Product Name	MeghaVault	Boomi	SnapLogic	Cast Iron
Criteria				
Targeted Markets	SMB*, Enterprise, and Individuals	Primarily Enterprise	Primarily Enterprise	Primarily Enterprise
Targeted Users	Non-Technical & Technical	Technical	Technical	Technical
Security	Very High (MFA**)	Medium	Medium	Medium
Cost to use	Low for Enterprise, SMB*, and Individuals	TBD	TBD	>10X More
Technology	Vendor & Technology Neutral	Proprietary	Proprietary/ Custom	Proprietary
Integration and Extensibility	Broad	Limited	Broad	Limited
Range of Connectivity	Extensive	Limited	Extensive	Limited
Ease of Design (construction of complex business logic)	High	Medium	High	Low
Rapid Deployment	High	Medium	Medium	Medium
Flexibility	High	Medium	High	Medium
Robustness	High	Medium	High	Medium
Acquisition Status	Private	(acquired by Dell)	Private	(acquired by IBM)
* Small to medium-sized businesses ** Multi-factor Authentication				

It is worth noting that MeghaVault can be used by individuals, Small to Medium-sized Businesses (SMB), and organizations with an enterprisewide IT organization.

MeghaVault Capabilities

What Makes MeghaVault Different?

The traditional approach to building business applications requires one or more programmers who know about many different areas. The larger an organization, the more knowledge and expertise is needed. For example, programmers working on a project at an Enterprise level would likely need to know how to use middleware tools such as Tibco or Cast Iron, as well as various development tools that handle reporting, workflow, content management, and data management, to name a few. People with these skill sets can be very hard to find and very expensive to engage.

Conversely, MeghaVault provides less-skilled users to achieve positive results with a rich application development studio and integration framework that is affordable, easy to use, and requires zero coding. MeghaVault provides a unique "Application Development as a Service" environment for the public, private or hybrid cloud. MeghaVault is flexible even in this regard, as it can be run on-premises, if preferred.

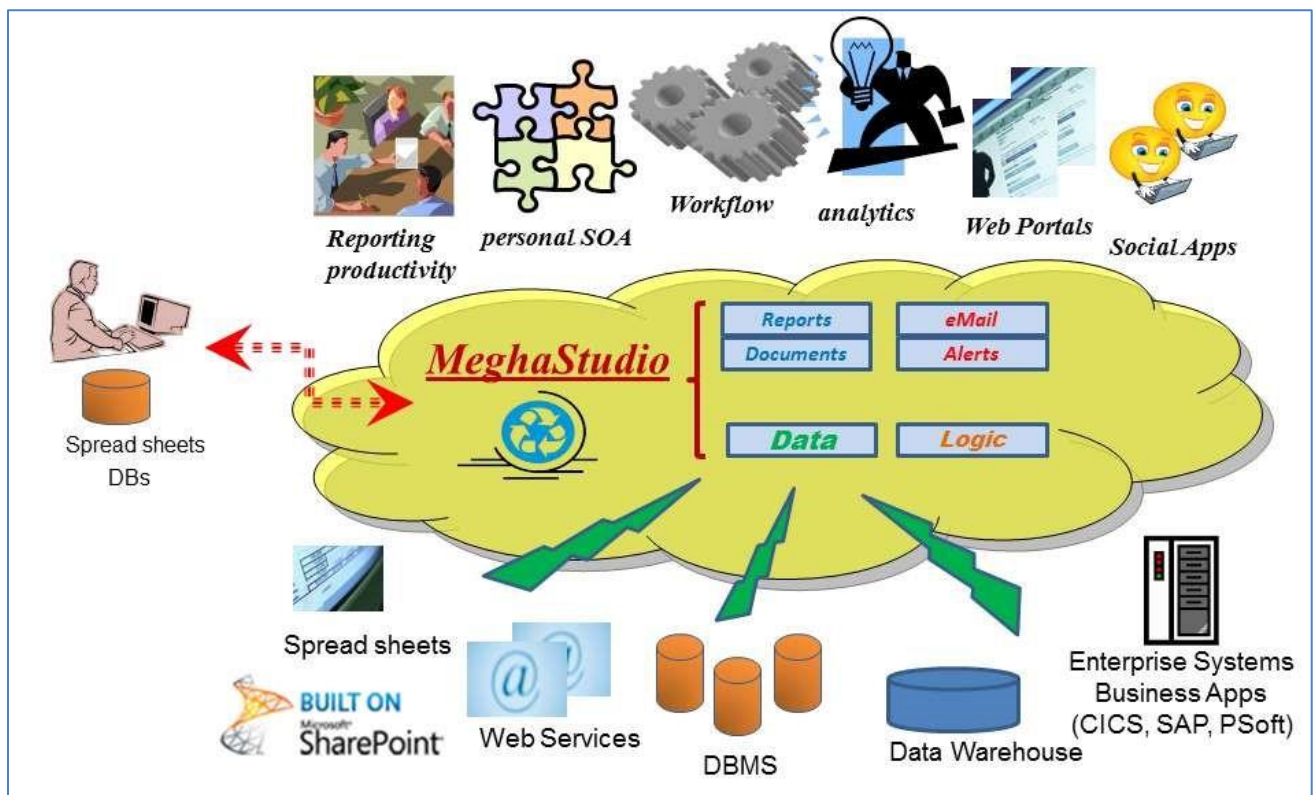


Figure 5: MeghaVault – The Easy Integrator

MeghaVault and Service-Oriented Architecture (SOA)

As those who are familiar with SOA might have suspected, a review of MeghaVault's underpinnings reveals its SOA-based orchestration framework. This means it is a loosely-coupled development platform that provides great flexibility to users as to the types of new applications they may create. This flexibility also extends to the scope and context in which MeghaVault may be applied, making it a personal SOA.

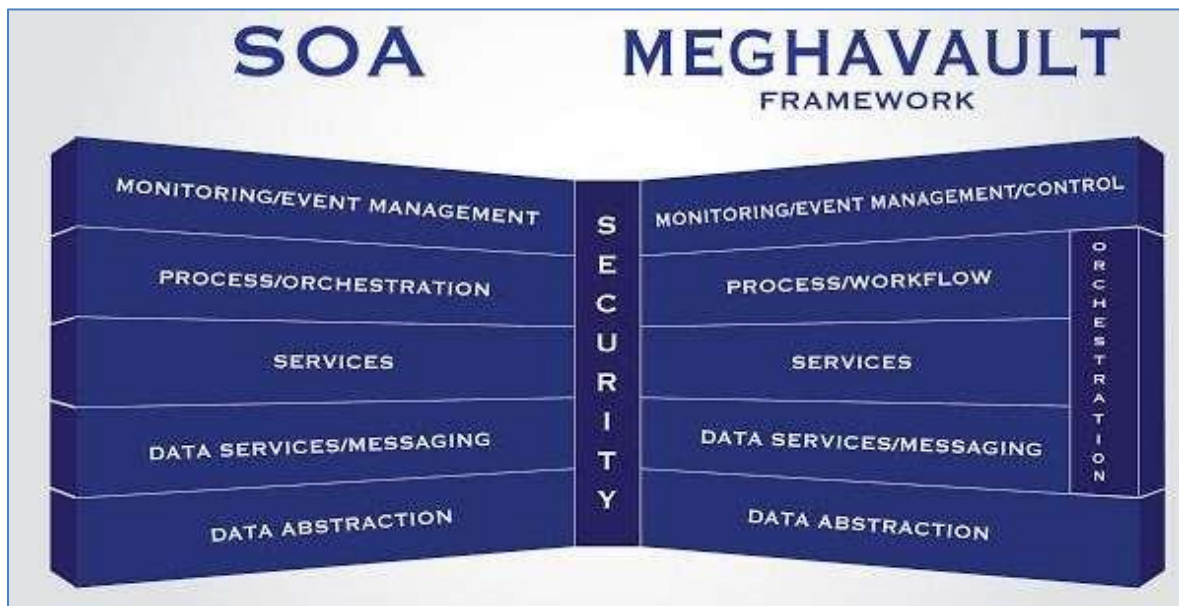


Figure 6: SOA-Based New Paradigm

Using MeghaVault, the application developer has numerous deployment options including cloud, mobile, IoT, and more. A MeghaVault application may be:

- Operated within the MeghaVault server-based environment;
- Downloaded for execution in a variety of mobile environments;
- Offered as a web service, that can be consumed by any other application in any other environment by passing the required parameters;
- Executed as a DLL and thus be used in conjunction with a Visual Studio or Eclipse based Java application; and,
- Partially completed in MeghaVault, then retrofitted to a 3GL (Visual C#) and imported into Visual Studio for further enhancement and completion.
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What other SOA attributes also describe MeghaVault?

The X4 MeghaVault Framework also addresses challenges with additional characteristics of SOA:

- 1. Business-Driven** – The core platform of MeghaVault allows app architecture and design to be in constant sync with how the business evolves over time by applying important cloud-technology strengths, including:
 - On-Demand usage;
 - Multi-tenancy;
 - Elasticity; and,
 - Ubiquitous application.
- 2. Vendor Neutral** – The underlying architecture of MeghaVault supports and is based on vendor-neutral technologies and industry standards.
- 3. Enterprise-Centric** – The MeghaVault Platform can be used to develop applications and services that can be reused as part of different solutions that automate different business processes.
- 4. Composition-Centric** – MeghaVault provides the ability to accommodate constant changes via the repeated re-composition of shared services. Thus strengthening the reliability and availability of services/applications built using the X4 MeghaVault Framework.

Additional Differences and Advantages of MeghaVault

Pricing

MeghaVault will be competitively priced for small business, and more affordable than the aforementioned comparable companies selling to enterprise-class customers by a factor of 10 or more.

Functionality

One key component in MeghaVault is its patent-pending logic engine which allows it to be used to develop a broad range of applications. Using MeghaVault the developer can design and construct complex business logic without writing code. Support is included for adding on programmed objects and scripts where desired.



Flexibility

MeghaVault can be fully integrated into other vendor's software products and re-badged, extending the market coverage accordingly. Conversely, other vendor products can be integrated into the X4 MeghaVault Framework to extend its available services. For example, Version 1 contains a thirdparty tool that allows recording of a user's web session keystrokes for inclusion in the MeghaVault application logic.

Development Frameworks

MeghaVault data connection allows a developer to view all permitted data objects from each data source. This allows the use of these objects to extend the features of an existing enterprise application. MeghaVault can also be quickly supplemented by integrating other applications, products, and connectors where they can be more easily incorporated and accessed directly from within each developer's studio.

Architecture

As mentioned, MeghaVault provides each user their *personal SOA environment*. Intelligently orchestrated applications are saved as web services, which can be re-used, revised, and exchanged immediately throughout the Enterprise, including business users. An orchestration can compose web services without requiring any changes in the web services themselves.

Portability

An application produced by MeghaVault can be run on premises, if desired, or in the cloud. MeghaVault also supports links to and integration with mobile devices and other applications, respectively.

Security

MeghaVault uses "bulletproof" as a design principle. Also, Akros TechLab's multi-factor authentication has been included as an integral feature. The Akros solution uses soft tokens, and is more manageable and much more affordable than solutions using RSA tokens or dongles.

Market-reach

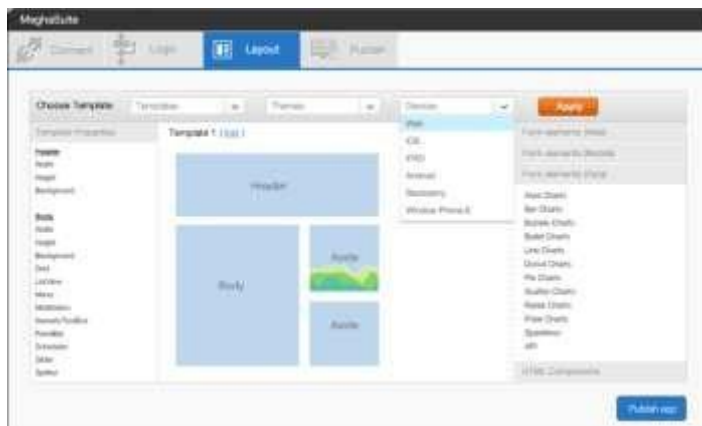
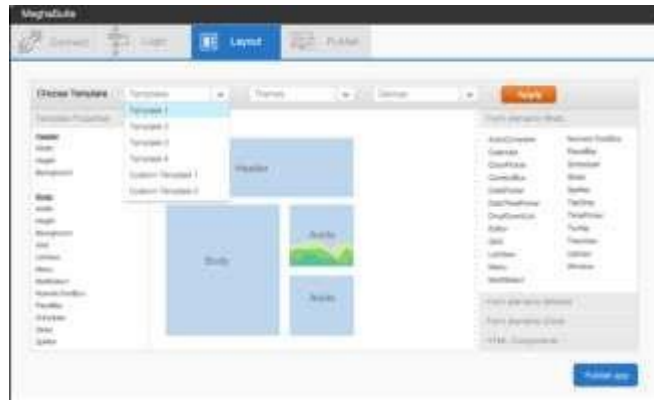
MeghaVault has appeal for businesses and government entities of all sizes. It has applicability in every vertical market imaginable, including energy, health care, manufacturing, finance, insurance, legal, manufacturing, education, transportation, communications, and many more.



An Example

Here is a high-level view of some screenshots taken while assembling a front-end user interface for a MeghaVault app. It is as easy as one-two-three.

1. Choose a template or design your own layout.



2. Choose device support you want included.
MeghaVault makes deployment of application runtimes simple.

3. Publish. Use MeghaVault to create portal apps, dashboards, interactive web pages, in minutes. See Appendix A for the types of programming paradigms supported by our logic engine, but remember, coding is **not** required.





Solving Problems for Whom?

MeghaVault can appeal to mass markets that include programmers, nonprogrammers, business analysts, and users within the small, medium, and large Enterprise. Applications developed with MeghaVault can also be deployed affordably within small operations, medium sized companies and organizations, Data Centers and Hosting companies, and Independent Software Vendors (ISVs).

In vertical markets, MeghaVault is a cross-industry product suite that can address the broad information needs of the industries listed below.

- Energy
- Banking and Financial
- Healthcare
- Research
- Government and Defense
- Transportation
- Manufacturing and Supply Chain
- Entertainment
- Retail
- Academic (e.g., Universities, K-12, Education)

Revenue Model

Two primary paths will be pursued to achieve revenue projections and growth, namely direct sales and partnerships. Direct sales will be targeted at specific markets to establish and grow a reference base, critical to growing sales. Partnerships will be established to leverage key technology vendors with an established base or new vendors with strategic technology and/or distribution networks that enhance market position and share. In conjunction with these paths, consulting services will be provided to ensure successful engagements. From this, new revenue streams can be established using successfully developed apps and partnerships.

Direct sales will be targeted at:

- Technology-laden organizations with formal IT Departments;
- Medium and large businesses without IT departments; □ Small businesses, including start-ups and inventors; and, □ Individuals.

Partnerships will be established to enable growth through:

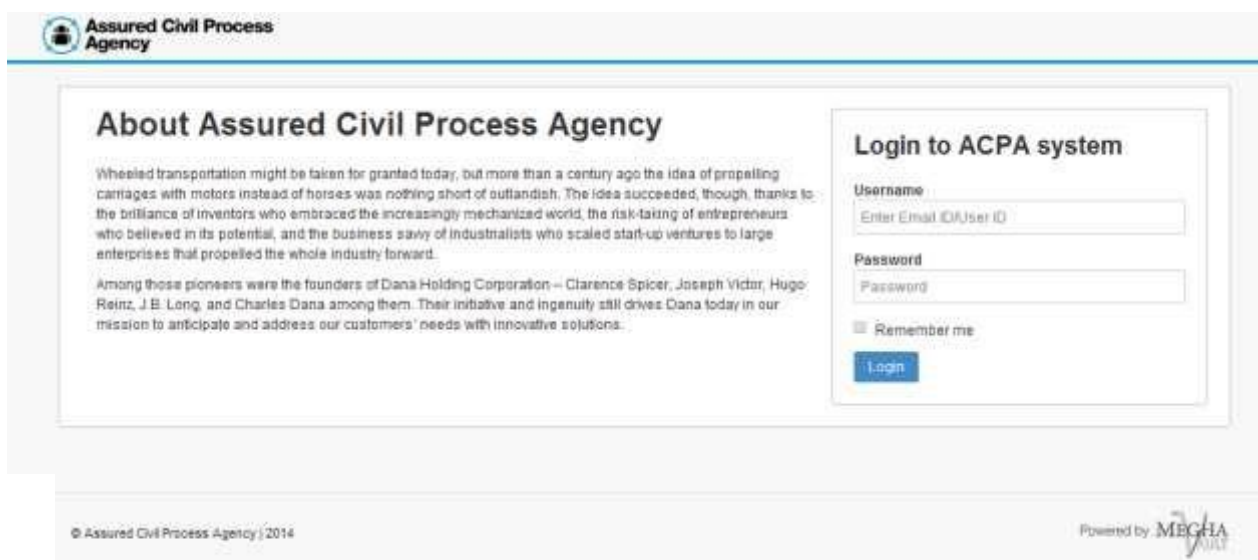
- Hardware OEMs and Resellers;
- Embedding into Cloud and Mobile Applications;
- Embedding into other ISV products; and,
- ADaaS subscribers and related managed services.

After some strategic applications have been developed and proven, additional revenue streams open up to include:

- Selling customizable solution templates via an online apps store,
- Custom development and business transformation consulting services utilizing purchased or developed apps, and □ Reselling synergistic products and services.

First Customers

Process Servers: Process-Serving (subpoenas) Tracking and Invoicing System



The screenshot displays the website for the Assured Civil Process Agency. The header includes the agency's name and logo. The main content area is divided into two columns. The left column, titled 'About Assured Civil Process Agency', contains two paragraphs of text describing the agency's history and mission. The right column, titled 'Login to ACPA system', features a login form with fields for 'Username' (with a placeholder 'Enter Email ID/User ID') and 'Password', a 'Remember me' checkbox, and a 'Login' button. The footer contains the copyright notice '© Assured Civil Process Agency | 2014' and the text 'Powered by MEGHA VAULT' with the company logo.



Additional Applications for Early Adopters

- Quarterly Commission Calc system for independent financial advisor
- Monthly Commission Payout Reporting system for pension and insurance fund manager
- Customer Email Management System (CEMS) for Small business bulk email
- Band Fan Management System (BFMS) for entertainers
- Customer Information Management and e-mail System for owner-operated Pest-Control business

Development Project Pipeline

- Create a custom front-end for ERP software
- On-Line Analytical Processing (OLAP) reporting system for end-users (Gov of Canada)
- Property Management reservation and billing system
- Real Estate Document Management System
- Quick Books invoicing optimization
- Mobile apps for SMBs for iOS and Android
- Product development and support for two startups

Strategic Partnerships and Alliances

- ACTS Corporation – Sales and Marketing - actscorp.com
- SoftPLC Corp. – products and network services for the IoT* – softplc.com

**IoT – Internet of Things*