



Magic's Low-code platform

# Magic xpa

## What Is Magic xpa?

Magic Software's Magic xpa is a powerful low-code development platform designed to enable rapid creation, deployment, and management of business applications across various environments, including desktop, web, and mobile. It allows developers to build complex applications with minimal hand-coding by leveraging pre-built components and an intuitive development interface.

Magic xpa is known for its scalability, robust integration capabilities, and support for multi-platform deployment, making it an ideal choice for enterprises looking to streamline their application development processes. The platform also offers strong security features and the flexibility to deploy applications on premise or in the cloud, ensuring that businesses can meet their specific needs while maintaining high levels of performance and compliance.

## Deployment Architectures

Magic xpa allows for the deployment of applications using any one of the following architectures:

### Web Application

Pure Angular applications, Secure, scalable, high performance running on a browser. The backend can be deployed on premise or on the cloud.

### Rich Internet Application

A fully interactive and fully connected internet-based application that can be activated from any location. This includes mobile applications on Android, iOS and Windows desktop devices. The backend can be deployed on premise or on the cloud.

### Service Provisioning

A back-end application servicing other applications, Web portals, mashups and so forth using a REST API.

### Full Client Application

An application providing fully connected applications that run fully on Windows desktop machines.

### Partitioned Full Client Application

An application that enhances the service level of a Full Client application by partitioning selected tasks to run on a centralized server.

## Development Environment

Magic xpa provides a Microsoft Visual Studio based studio, allowing GIT connectivity and CI-CD (continuous integration, continuous delivery) capabilities.

The studio caters for application debugging, monitoring and logging.

Magic xpa provides a modern web application development framework, including a WYSIWYG browser based form designer, providing rapid business application development using Angular, HTML5, CSS and typescript.

# Key Principles



## Metadata Driven Pre-Compiled Engine

Most programs in a business application share a common schematic flow. The key principle of the Magic xpa deployment engine is that the code for supporting the common flow of a business task has already been written, compiled and tested to facilitate any specific business program. You can then fine-tune the skeleton of the business program to serve the needs of the actual program. Fine-tuning the schematic and pre-compiled program unit of an application is done by declaring what actual artifacts are to be handled by the program, what is the precise logic needed to be executed by the program and what is the user interface design required for the program.

This metadata definition of the programs, together with other elements of the application that are also described in a metadata form, such as models, data sources, and Help screens, are stored in XML-based files that constitute the application source “code”.

The pre-compiled deployment engine is designed to support any business application functionality to provide application virtualization. The engine caters to every technological requirement and is transformed into your unique individual application by metadata driven specifications.



## Virtual Machine

Being pre-compiled and metadata driven, the Magic xpa server engine serves as a virtual machine, enabling the implementation of the application on various server machines without making any modification to the application metadata. The virtual machine keeps a clear separation between the specific environment definitions and the application business logic, enabling customization for new deployments.



## Backward Compatibility

Magic xpa also provides compatibility with existing Magic applications, including eDeveloper and uniPaaS applications. This means that legacy business applications can be migrated to become available over the Web, while at the same time catering to the existing on-premise installed base.



## Multilingual Support

One of the challenges of producing cross enterprise applications that centralize the IT of disparate units is the ability to properly support multiple languages both in terms of the user interface of the application and the collected and presented live data.

When you build an application you do not always know what languages your end users might speak. Magic xpa has built-in support for multiple languages, so you can add language support after your application is already built.

This is done using the Magic Language Service. The MLS changes what is displayed to the user. The actual source application does not change at all.



## Unicode Support

Magic xpa lets you use the Unicode standard for data conversion and transmission. This capability is in addition to Magic xpa’s ANSI and OEM support.

# Application Platform as a Service - aPaaS

Magic xpa addresses the requirements and management of implementing an internet application in a form of multi-tenancy, which is the key principle of providing enterprise applications in an Application Platform as a Service (aPaaS) model.

Magic xpa allows for leveraging any internet-based application into an aPaaS model by providing multi-tenancy support at the platform level, relieving the developer from resorting to complex tenant-aware application design and development.

## Multi-Tenant Support



### Tenant Encapsulation

Magic xpa makes sure that for a single implementation of an aPaaS-type application, each tenant will be fully encapsulated.



### Data Space Sharing and Isolation

The platform level support for multi-tenancy enables the application vendor to design an application without taking special heed of multi-tenant design and can remain focused on the application's basic design.

The Magic xpa platform will turn the application into a multi-tenant application by directing the application to the tenants' data space and by having each tenant served by an independent process.

Nevertheless, the Magic xpa platform enables the application vendor to fine-tune the tenant encapsulated environment in a way that utilizes data space that is shared and common between multiple tenants.



### Customization

The environment-driven and component-based architecture of the Magic xpa platform enables customization of every part of the application, thereby achieving a singular application deployment that serves multiple tenants where each tenant gets to experience a tailored application.



### Local or Remote Hosting

The Magic xpa platform as a whole can be deployed on a cloud, using the facilities of a Magic xpa hosting service provider, independently by the application vendor, or even by the end-customer.

## Cloud Native Deployment

Magic xpa's middleware is cloud native. It can be deployed on a cloud service such as Amazon's EKS (Elastic Kubernetes Service) or Azure's AKS (Azure Kubernetes Service). Other Magic xpa components are due to become cloud native as well, so that the full platform will be deployed natively on the cloud, as a Kubernetes managed service.

# Connectivity

This section describes Magic xpa's connectivity capabilities.



### Call 3rd Generation Languages

You can call a UDP (User-Defined Procedure) or a method in a DLL, to invoke the execution of a 3rd generation language program.



### Java Integration

Java Integration lets Magic xpa interface with a Java class or Enterprise JavaBeans (EJB) by using pseudo-references that represent instances of Java classes or EJB files. Instances, static methods, and variables are invoked by Java and EJB functions.



### .NET integration

With Magic xpa you can embed and integrate any .NET control or assembly.

You can upgrade the look and feel of your application by directly placing new .NET controls as part of your user interface. You can also enhance the functionality of your application by integrating any form of .NET assembly.



### Mail Functionality

Magic xpa supports email functionality by providing mail functions that support SMTP for sending mail, and POP3 and IMAP for receiving mail.



### Drag-and-Drop Functionality

Drag-and-drop functionality is supported within a Magic xpa project, and between a Magic xpa project and other projects running on the same machine. Its main purpose is to enable the passing of information within a Magic xpa project and between projects by dragging and dropping, which have become a standard in Windows applications.

# Why choose Magic xpa?

## **Comprehensive Development Environment:**

Magic xpa offers a fully integrated development environment that simplifies the creation, testing, and deployment of applications, making it ideal for both small and large-scale projects.

## **Scalability:**

The platform is designed to grow with your business, allowing applications to scale efficiently as your user base and data needs expand.

## **Low Code Development:**

Magic xpa's low-code approach enables developers to build complex applications with minimal coding, reducing development time and lowering the barrier for non-technical team members to contribute.

## **Real-Time Application Deployment:**

With Magic xpa, you can deploy updates and changes to applications in real-time without disrupting users, ensuring continuous availability and minimizing downtime.

## **Cross-Platform Versatility:**

The platform supports the development of applications that work seamlessly across multiple environments, including mobile devices, web browsers, and desktop systems, providing users with a consistent experience.

## **Cross-Database Connectivity:**

The platform supports connectivity to a large set of databases, including Oracle, SQLServer, PostgreSQL, MySQL, SQLite. The platform hides the database-specific implementation from the developer allowing for a single application to access different databases seamlessly without the need deal with customization.

## **Robust Integration Capabilities:**

Magic xpa excels at integrating with a wide range of third-party systems and databases, making it easier to connect your new applications with existing IT infrastructure and data sources.

## **Enterprise-Grade Security:**

Magic xpa includes built-in security features that meet enterprise standards, ensuring that applications are protected against threats and comply with industry regulations.

## **Future-Proof Technology:**

The platform is continuously updated with new features and technologies, ensuring that your applications remain competitive and compatible with the latest advancements in the industry.

## **Global Support Network:**

Magic Software offers a strong global support network, providing customers with the assistance they need to resolve issues quickly and keep their projects on track.

## **Proven Reliability:**

With a long history of successful implementations across various industries, Magic xpa has proven itself as a reliable platform that businesses can trust for mission-critical applications.

# Why deploy Magic xpa on the cloud?

## Scalable Infrastructure:

Deploying Magic xpa on the cloud allows you to easily scale your applications based on demand, ensuring optimal performance without the need for significant upfront investments in hardware.

## Global Accessibility:

Cloud deployment enables users to access Magic xpa applications from anywhere in the world, facilitating remote work and collaboration across geographically dispersed teams.

## Cost Efficiency:

Hosting Magic xpa in the cloud can reduce IT costs by eliminating the need for on-premises servers, reducing maintenance requirements, and offering flexible, pay-as-you-go pricing models.

## Automatic Updates:

Cloud-based Magic xpa ensures that your applications are always running on the latest version of the platform, with automatic updates and patches applied without disrupting your operations.

## Enhanced Security and Compliance:

Cloud providers offer robust security measures, including encryption, regular backups, and compliance with industry standards, ensuring that your Magic xpa applications and data are well-protected.

## Faster Time to Market:

Deploying Magic xpa on the cloud allows for quicker setup and deployment, reducing the time it takes to bring new applications or updates to market.

## Disaster Recovery and Business Continuity:

Cloud-based Magic xpa provides built-in disaster recovery options, ensuring that your applications remain available and your data is protected even in the event of a failure or disaster.

## Seamless Integration with Cloud Services:

Magic xpa on the cloud can easily integrate with other cloud services, such as databases, analytics, and AI, enhancing the functionality and capabilities of your applications.

## Future-Proofing:

By choosing cloud deployment for Magic xpa, your business is better positioned to adopt emerging technologies and adapt to changes in the market, ensuring long-term competitiveness and innovation.

## About Magic Software Enterprises

Magic Software Enterprises (NASDAQ: MGIC) empowers customers and partners around the globe with smarter technology that provides a multichannel user experience of enterprise logic and data. We draw on 30 years of experience, millions of installations worldwide, and strategic alliances with global IT leaders, including Oracle, salesforce.com, Microsoft, IBM and SAP, to enable our customers to seamlessly adopt new technologies and maximize business opportunities.

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