

Avanade Connected Architectures for .NET Development

For many years the Web has been touted as *the* enterprise business platform. Microsoft® .NET combined with Visual Studio .NET brings that promise to fruition. Here's how: Visual Studio .NET is the only development environment built from the ground up for XML Web services. This allows applications to quickly and easily share data, regardless of operating system, over the Internet. But, as with any revolutionary software, there is a learning curve. Avanade and ACA.NET will help developers expedite a company's migration to Web services.

How? We've developed a set of tools – the Avanade Connected Architectures for .NET (or ACA.NET) – that complement Visual Studio .NET by providing a framework upon which developers can more quickly build XML-based Web services and applications. Built entirely on the Microsoft .NET platform, ACA.NET is a set of pre-configured software development components and features including database portability, robust event logging, and integrated security management. ACA.NET also provides a powerful event-driven development model to create applications with true separation of business and presentation logic enabling companies to easily support many different platforms.

All of these features are coordinated and integrated through a WinForms utility called the ACA.NET Application Designer tool. Architects use the tool to graphically depict the application process model and generate the code that defines the structure of the application. Developers add application business logic to the generated code using customized ACA.NET enterprise templates and the embedded on-line help.

ACA.NET – Benefits for Enterprise-Level Applications

ACA.NET offers many benefits to developers. A few of them are:

- **Speed .NET Adoption:** ACA.NET simplifies the complexities of learning .NET technologies by providing easy-to-use components with guidelines to promote consistent development for high performance and scalability. It is designed for extensibility and compatibility with the .NET model; it does not replace the .NET frameworks, but rather it supplements them.
- **Successful Software:** Using the ACA.NET tools and guidelines will produce a sound, working application – it will perform, it will be reliable, and it will scale.
- **Adaptability:** ACA.NET is adaptable on the front-end by providing the ability to target multiple delivery channels (browsers, LAN-connected workstations, mobile devices, etc.). ACA.NET, with its extensible database architecture, is also adaptable on the back-end by running on and providing access to multiple databases.
- **Reusability:** The ACA.NET application model also promotes reusability of business components. It is composed of large-grained reusable architecture services designed and build by a large team of talented architects and developers.
- **Consistency:** ACA.NET provides an application framework. This framework makes development more consistent and regular across a development project, and between development projects. This consistency results in fewer bugs and applications which are easier build, test, and maintain.



- **Scalability:** The ACA.NET application model defines a stateless, multi-tiered, load-balanced architecture for maximum scalability.
- **Flexibility:** Visual Studio .NET is a highly configurable environment. This provides great flexibility, but managing the configuration can become a difficult task. ACA.NET provides powerful tools to help manage application configuration without losing the flexibility.
- **Leverage:** ACA.NET makes your teams more scalable and better leveraged because every team member does not need to be an expert. Team members build business components inside the application framework.

ACA.NET – Integrating Key Microsoft Technologies

The foundation of ACA.NET is the .NET Framework and Visual Studio .NET. ACA.NET also provides guidance on integrating with other Microsoft server products:

Microsoft® Windows® 2000: ACA.NET facilitates integration with Active Directory to extend the .NET Security framework with user profiles and security data caching.

Microsoft® SQL Server™ 2000: ACA.NET integrates with SQL Server and simplifies data access via ADO.NET ensuring programming consistency and providing database independence (including support for Oracle).

Microsoft® Commerce Server and Passport: ACA.NET integrates with Commerce Server and Passport for user authentication and personalization.

ACA.NET References

Major Italian Financial Management Company

With changing industry regulations, this customer was driven to become more competitive. Working with Accenture, an application was created to allow the financial institution to offer state-of-the-art services to customers. The application leverages several of Microsoft's .NET technologies and Avanade's ACA.NET which serves as the foundation of the application architecture.

Australian Government, Department of Employee and Workplace Relations (DEWR)

As the Australian employment agency, DEWR is responsible for connecting job-seekers to employers. DEWR's ability to do this was limited by legacy systems and applications that intertwined screen presentation with business logic. After substantial evaluation, DEWR and Avanade developed an integrated .NET solution, including XML web services that could be distributed to other government agencies that use different application delivery platforms. The solution was built using Microsoft® Visual Studio.NET, SQL Server 2000, Active Directory and the predecessor to ACA.NET. The pilot system proved that all scalability, reliability and maintainability goals could be met or exceeded.

Connect with Avanade

If you would like more information on Avanade or ACA.NET, please visit us at www.avanade.com or email us at information@avanade.com.