

A decorative graphic on the left side of the page consists of three overlapping rounded squares. The top square is light gray and partially overlaps the middle square. The middle square is a slightly darker shade of gray and overlaps the bottom square. The bottom square is the darkest shade of gray and is partially obscured by the middle square.

Avinon NetScenarios™

Putting Web Services to Work

The Emerging Extraprise Application Architecture

White Paper

April 2001

Avinon NetScenarios

Putting Web Services to Work

Avinon harnesses the emerging Web services architecture to help companies drive key e-business initiatives and deliver new application services. CIOs today are under tremendous pressure to deliver new technology solutions to real business problems, while ensuring that projects are completed on time and under budget. Their job has been further complicated by the e-business requirement to integrate multiple disparate systems and applications—both within the corporate firewall and across growing networks of customers, partners and suppliers.

Web services combine new technology standards with an innovative business model that is revolutionizing e-business, transforming proprietary systems into flexible, reusable and broadly accessible Internet components. Avinon NetScenarios provide a powerful and intuitive way of putting Web services together within a meaningful business context, so companies can leverage and extend their IT assets to transform existing customer- and partner-facing business processes and establish new e-business relationships. As a result, Avinon NetScenarios enable companies to immediately take advantage of the business benefits Web services offer—including faster time to market, broader collaboration and increased innovation.

“Avinon adds significant value to the emerging Web services application architecture by providing an easy-to-use, visual environment that allows business people to drive and participate in the development of new Internet-based applications.”

David Smith
Vice President of
Internet Strategies
Gartner Group

Understanding Web Services

Web services are the fundamental building blocks of the new Internet application architecture. They are Web-based software components that encapsulate vital business functions and make those functions available over the Internet to other systems, individuals or organizations. Examples of Web services include everything from credit card validation and

tracking packages to monitoring currency exchange rates. Each of these is a narrowly defined activity, but one that supports the broad business needs of multiple individuals and organizations.

Web services address the greatest obstacles to business use of the Internet—interoperability and integration. As companies have developed their own distinct ways of connecting various back-end systems to customers and partners over the Web, the complexity and diversity across the e-business spectrum has become overwhelming. As a result, many companies have been frustrated by the time and costs required to develop new Web products or services, integrate enterprise systems and applications or pursue new business partnerships.

Web services solve these challenges and support broad interoperability because they are fully self-contained and self-describing; clients only need to know what the Web service does, not how it works. This requires standard ways of finding available services, making requests, sending data and returning results.

Web services are based on open standards including:

- **HTTP**—The transport protocol used to communicate with and access Web services over the Internet
- **XML**—The meta-language that facilitates the exchange of information between different sources in a standardized format
- **SOAP**—The XML-based messaging protocol for remote calling and invocation of Web services
- **WSDL**—The XML-based specification that allows providers to describe the interfaces to their Web services
- **UDDI**—The public or private registry where providers publish and consumers search and subscribe to the Web services they need

By making technology assets universally available via the Internet, Web services foster broad collaboration within and between organizations and create new business opportunities. They bring unprecedented flexibility to the Internet business model, allowing companies to connect with each other based on their business needs—not just their underlying technologies. Registries of Web

Avinon NetScenarios provide a powerful and intuitive way of putting Web services together within a meaningful business context.

services such as UDDI enable businesses to publish their needs and capabilities to other companies around the world, and to discover and connect with customers and businesses that have complimentary services or requirements.

What's more, Web services dramatically simplify the creation of e-business applications by enabling a component-based approach to development. This represents a major advance in productivity—bringing object-oriented application assembly into an Internet environment that spans multiple systems, companies and geographic locations.

Leading technology providers are lining up behind the Web services architecture, as the benefits of this groundbreaking business architecture become apparent. Vendor-specific initiatives include .NET from Microsoft, IBM WebSphere, HP's Netaction, Oracle Dynamic Services, and the Open Net Environment (ONE) from Sun. As the Web services architecture gains momentum, the vision of an Internet built on open, interoperable standards is fast becoming reality.

Putting Web Services to Work with Avinon NetScenarios

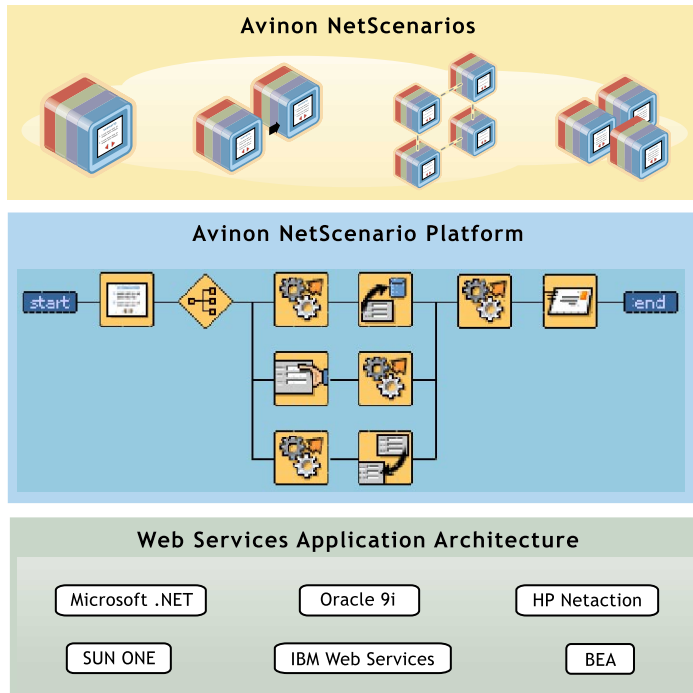
Avinon helps companies derive real and significant business value from the emerging Web services architecture. Avinon NetScenario Platform provides a visual environment and integration framework for combining and extending Web services to create complete e-business solutions that address real business problems. This platform supports the rapid design, flexible deployment and ongoing management of modular, Web-based NetScenario applications.

NetScenarios capture and automate strategic, customer- and partner-facing business processes and interactions, invoking one or more Web services to perform specific tasks. Avinon NetScenario

Platform can automatically discover, reference, configure and aggregate Web services, allowing users to create NetScenarios that support essential business processes and describe process-specific business logic.

By leveraging Web services to quickly and effectively bring strategic processes online, Avinon supports a new, more flexible approach to deploying Internet applications. Until now, companies implementing e-business solutions have had to choose between building their own custom solutions—an expensive and time-consuming process—or purchasing monolithic packaged applications that are difficult and costly to customize. Now Avinon is enabling a new application assembly and deployment model that offers the best of both worlds—supporting the quick and easy assembly of custom solutions built from “pre-packaged” Web services components.

A intuitive, visual environment empowers the experts who manage business strategy to work proactively and collaboratively with their IT counterparts responsible for technology issues. This allows companies to focus on their core competencies, relieves overburdened IT resources and brings NetScenarios to market



Avinon NetScenario Platform lets companies leverage the emerging Web services architecture to create high-value e-business applications

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Avinon enables a business-centric approach to e-business that makes Web services immediately relevant and accessible.

more quickly. Thus, Avinon helps companies assemble complete, next generation e-business applications with greater speed and adaptability than ever before, so they can address changing market needs and optimize their resource investments.

A New Way of Doing Business

Avinon enables a business-centric, rather than technology-centric, approach to e-business that makes Web services immediately relevant and accessible. Anyone who can describe a business process can now successfully capture that process and bring it to the Web. Instead of using a complex, programmatic development paradigm, users simply select the Web services they need and visually assemble them into NetScenario applications. Thus, Avinon supports the active participation of all members involved in the delivery of e-business initiatives, including business experts, Web designers, application developers and systems analysts.

This collaborative approach fosters innovation and brings new solutions to market more quickly. Business and technology experts across the organization can rapidly build, test and deploy complete NetScenario applications that integrate any number of Web services. Internal systems can be extended outside the firewall and flexibly combined to create new product or service offerings. And existing Web services can be reused, recombined or customized as business needs evolve.

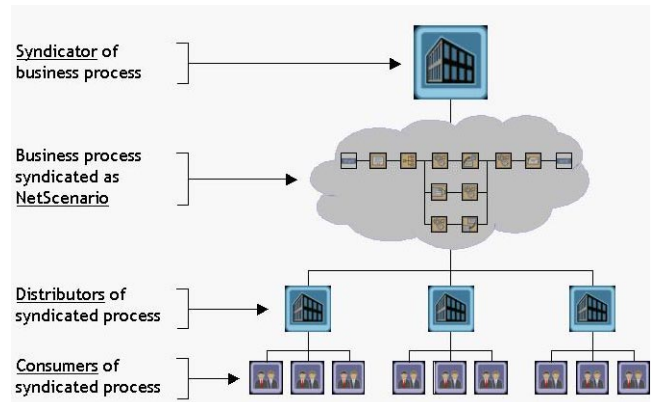
By promoting the use of Web services throughout the organization, Avinon also creates a more flexible, more open and more valuable e-business environment. No longer must strategic business alliances be constrained by issues of incompatible technology. Companies can build and maintain profitable relationships across the entire e-business value chain by seamlessly connecting their business processes with customers, partners and suppliers.

Syndicating Business Processes

In addition to enabling the integration of Web services into e-business applications, Avinon allows companies to publish NetScenarios as new Web services in their own right. This supports the development of syndicated, cooperative applications between partners across the enterprise value chain.

Syndication is the dissemination of NetScenarios to other people or organizations, who then integrate, enhance and/or redistribute those services. More specifically, NetScenario syndication involves the packaging and online distribution of core competencies. These syndicated processes may be shared internally (among employees or groups within an organization) or externally (between organizations and across the enterprise value chain).

Perhaps the most common use of internal syndication is from corporate IT departments to business professionals. For example, technology



Avinon NetScenarios enable the syndication of business processes within the enterprise, across the extended value chain or to reach new markets.

experts can create libraries of Web services to integrate with back-end systems, and then syndicate these for business experts to use in building complete NetScenario applications. This enables business experts to be more self-sufficient, while sparing IT staff from having to develop custom applications each time a new business need arises. Business experts can simply “mix and match” syndicated Web services to access whatever business functions, systems or applications they need, without requiring in-depth knowledge of the underlying technology infrastructure.

Companies may also syndicate NetScenario applications externally, enabling new business models across the enterprise value chain. By creating NetScenarios that integrate core processes with those of its partners and affiliates, any company can quickly leverage its existing business relationships to create additional value. Avinon enables the flow of NetScenarios across syndication networks, which may include multiple tiers of publishers, distributors and consumers. For example, consider an insurance company that develops a proprietary quotation NetScenario for online customers, and then syndicates this to multiple financial service providers. This allows the financial service providers to offer a broader portfolio, while attracting additional customers to the insurance company.

External syndication beyond the traditional value chain can help businesses reach new markets and create additional sources of revenue. By publishing their proprietary NetScenario applications as new Web services to UDDI or other registries, companies can create entirely new revenue streams as other businesses license those Web services for their own use. In other words, the business process itself can become a salable commodity and a source of incremental revenue.

According to Harvard Business review, "virtually any organization can benefit from syndication, often in several different ways if it's willing to view itself as part of a larger, interconnected world rather than seeking exclusive control at every turn." Whether applied internally or externally, Avinon's advanced syndication services facilitate easy publication, provisioning and management of syndicated applications. This simplifies cooperative development, opens up new distribution channels and creates new sources of revenue growth.

Conclusion

The powerful combination of the emerging Web services architecture and Avinon bridges the gap between technology strategy and business vision, helping CIOs deliver new solutions to real business problems on time and under budget. This gives companies the next generation solution they need to:

- Deploy sophisticated e-business applications with greater speed, agility and innovation
- Improve efficiency and create competitive advantage with new or value-added services
- Integrate disparate systems and applications throughout the enterprise and across the Internet
- Enhance business relationships by opening new channels to customers, partners and employees

Empowering business experts and IT professionals to work together to create technology solutions to business problems, Avinon helps companies accelerate their e-business transformation and adapt to changing market requirements.

For more information about how Avinon can put Web services to work for your company, visit www.avinon.com.

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1 Kevin Werbach. "Syndication: The Emerging Model for Business in the Internet Era. *Harvard Business Review*, May-June 2000