

An Integrated, Secure Portal Solution:  
Epicentric Foundation Server and Oblix NetPoint

WHITEPAPER

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# The Challenges of Portal Development and Management

Portals have become the leading enterprise solution for connecting users both inside and outside an organization to essential Web-based content, applications, and services. A centralized source for accessing otherwise disparate information, a portal is a powerful business tool for unifying an enterprise. Employees and managers—and even customers, partners, and suppliers—can communicate through methods standardized across the enterprise; autonomous business units and subsidiaries can gain visibility into an entire corporate operation through the simple use of a browser.

However, IT organizations face serious challenges in trying to provide manageable, scalable, and secure portal services, while at the same time trying to lower the overall cost of ownership. This paper outlines these challenges and presents the Oblix-Epicentric integrated solution that meets them head-on.

## Unifying Heterogeneous Applications, Web Services, and Environments

First, aggregating disparate back-end applications into a seamless portal environment is a daunting task. A company growing in size and reach can spend significant IT resources integrating heterogeneous applications, which may or may not be Web-based, into its portal. IT staff may need to dedicate copious time to developing custom logic that will make unrelated applications appear to interoperate seamlessly through the portal. Furthermore, in corporations using Web services located off site, IT staff must find ways to access remote data and code and deliver them effectively to end users through the portal.

Second, portal expansion must be carefully managed. All too often, enterprises end up with a collection of unrelated portal initiatives—an architecture that is not only expensive to maintain, but also susceptible to chaotic growth. To ensure scalability, many IT organizations therefore choose to develop and manage their portal environments using a single platform. This approach, known as Enterprise Portal Management (EPM), enables

- centralized control over multiple portal initiatives,
- the sharing and reuse of portal components, and
- scalable growth.

## Serving Large, Fluid User Populations

Third, as the amount and complexity of available corporate information grows, enterprises are also challenged to provide a simple, personalized experience to each user. Employees work more efficiently when portal views are specifically tailored to their job functions and preferences. Enterprises also gain more control over their customer and partner relationships by limiting or expanding each user's visibility into corporate information and services.

Many portal platforms already offer personalized presentation services. However, because user populations constantly grow and change, the administrative burden of managing their identity information quickly overwhelms the capabilities of these built-in services. To adequately serve large, fluid groups of portal users, personalization services must be intimately integrated with a robust identity management system.

## Eliminating Security Risks

Finally, the open nature of the Web and the ease with which internal and external users can access applications make it extremely important for enterprises to secure their applications and resources, whether delivered through a portal or not. This security must be enforced without reducing the productivity benefits derived from a portal network or driving up administrative costs. To manage these infrastructure security challenges, enterprises are deploying Web access management (WAM) solutions.

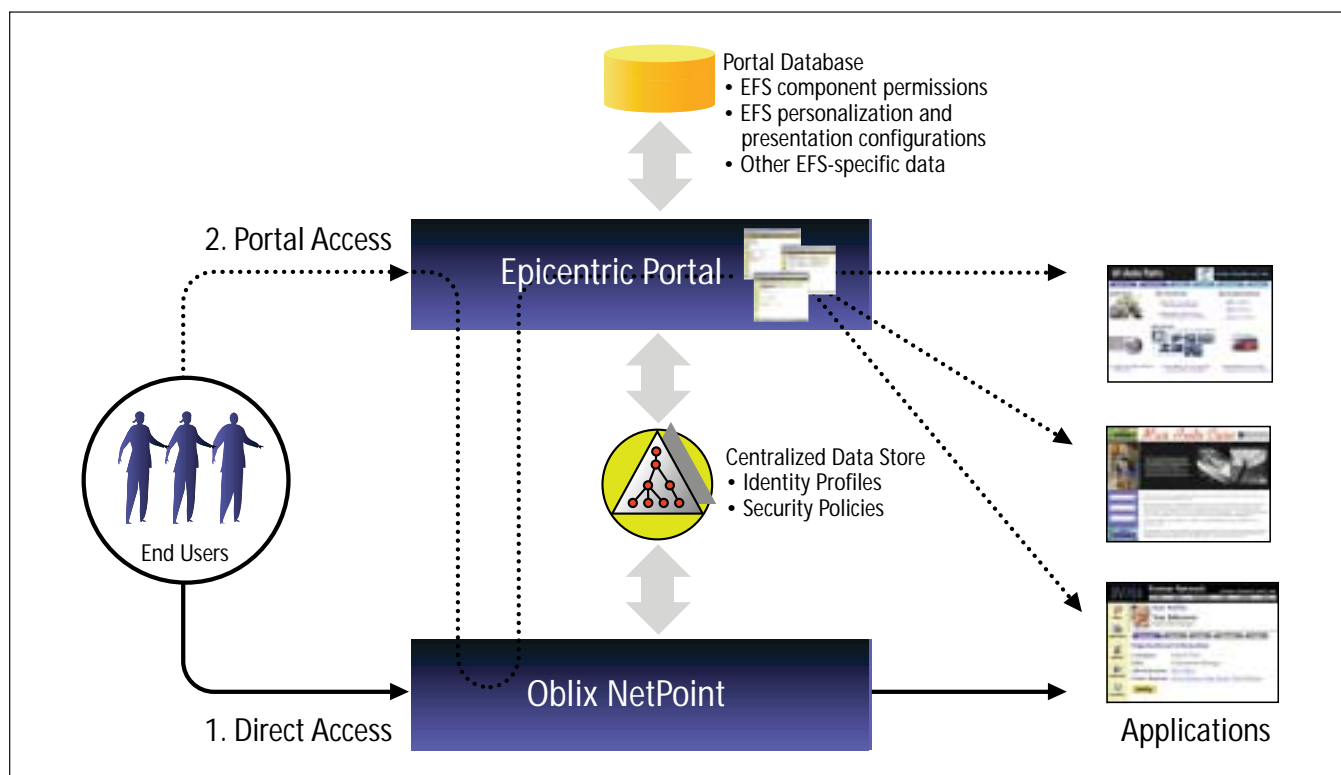
However with user identities constantly changing in the corporate environment, it is not enough to integrate a portal network with just any WAM system; that system must be based on a robust identity management infrastructure. The challenge becomes even greater when trying to provide streamlined access to users as they navigate across multiple portal initiatives and applications. In this case, the WAM system must provide a single sign-on experience across multiple domains.

# The Integrated Solution: Oblix + Epicentric

To meet these challenges, Epicentric and Oblix have teamed to provide companies with a complete solution for building customized, secure business portals with robust Web access management. The Oblix-Epicentric partnership integrates the Epicentric Foundation Server™—a powerful software solution for deploying business portals and portal networks—with Oblix NetPoint™, a comprehensive, unified infrastructure for Web access management.

In the integrated solution, the Epicentric Foundation Server acts as a gateway to an enterprise intranet or extranet, allowing users to access a broad variety of applications and content hosted by the enterprise. Oblix NetPoint provides a common enterprise security and user identity infrastructure, controlling access to the Epicentric portal and enabling single sign-on between the portal and other enterprise applications, including those applications exposed through the portal. Oblix NetPoint protects all enterprise Web resources by setting specific policies and allowing only those users with the right identity information to access designated applications, either directly or through the Epicentric portal.

The integrated solution features a shared user data store containing user identity information managed through Oblix NetPoint's powerful identity management functionality. This user data store may simultaneously be leveraged by the portal and other enter-



prise applications, eliminating the need for companies to create and manage separate user profiles for each application. The security policies that control Web access into the portal and other enterprise resources are also created and managed in this repository via Oblix NetPoint. This architecture provides a single, integrated portal solution with robust access control and authentication services, as well as centralized identity management services that may be leveraged by any enterprise application.

The integration of these two platforms perfectly meets the broad challenges of portal management:

- Rapid, scalable portal development and management
- Web single sign-on
- Enhanced portal security
- Cost effective identity management
- Enhanced personalization

To best understand the effectiveness of this complete solution, consider the complementary strengths of the Epicentric and Oblix components.

# Epicentric Foundation Server

The Epicentric Foundation Server provides businesses with powerful Enterprise Portal Management capabilities. The solution was designed to

- increase the efficiency of developing and managing multiple sites within a portal network, and
- reduce the complexity of delivering Web services and other Web or legacy applications to a multitude of diverse business communities, including employees, partners, and customers.

By creating an EPM solution that centralizes management, distributes administration, and leverages component reusability, Epicentric significantly lowers the cost of developing, deploying, and managing complex Web initiatives across the global enterprise. The Epicentric Foundation Server assembles personalized portals on-the-fly based on user roles and permissions within the Unified User Profile. Modules encapsulate enterprise content, business applications, and Web services through Epicentric Integration Modules. The Web Services Manager orchestrates the management and delivery of aggregations of enterprise content, applications, and Web services across multiple portal initiatives. The Mass Customization Engine dynamically generates multiple portals with individualized views from single installation. The Portal Command Center enables portals to be managed centrally while securely delegating key administrative functions to trusted business users.

This new approach to portal development and management reduces redundancies and eliminates barriers between critical portal resources. Rather than building a succession of portal silos, Epicentric's pioneering portal network capabilities enable customers to dynamically generate, host, and manage vast amounts of portals from one single installation.

## Personalization and Flexible Presentation

The personalized portals generated by Epicentric are based on the role and permissions of each user. Users can further personalize portals based on their own preferences, regardless of whether they are accessing information through a browser, kiosk, or remote device. Rich and flexible presentation layout lets users tailor every aspect of the content, module placement, and look-and-feel of each portal. In addition, Unified Site Themes enable administrators to define business standards and best practices for delivering consistent portal user interfaces across multiple sites.



## Ready-to-Use Rapid Integration Modules

Epicentric includes ready-to-use customizable Web services modules for email, calendaring, content management, ERP, CRM, and collaboration, so companies can offer a rich user experience without additional coding. Customers can also create new modules based on vendor-neutral standards. Epicentric offers a set of wizard-based Building Block Modules for the quick integration and reuse of existing structured information locked in databases, XML, Web content, Web applications, and unstructured documents.

## Universal Platform Support

Built in Java—with support for six major operating systems (including Sun Solaris and Microsoft Windows NT/2000), leading application servers (such as BEA WebLogic and IBM WebSphere), and vendor-neutral integration—Epicentric allows companies to choose the deployment environment that best fits their IT strategies. Due to Epicentric's open and flexible architecture, integrations with products like Oblix NetPoint can be easily and effectively deployed.

## Accelerated Web Services Deployment

Building on its experience integrating and delivering a wide selection of Web solutions, Epicentric has taken the lead in furthering the evolution of Web Services standards. Spearheaded by Epicentric, Web Services User Interface (WSUI) is a public specification for coupling SOAP, XML, and HTTP-based Web Services with XSLT-based presentational templates and embedding them into a Web application, such as a portal. The WSUI specification and a reference implementation have been published on the <http://wsui.org> Web site for the benefit of developers, ISVs, and Web Services providers.

WSUI was submitted to the Organization for the Advancement of Structured Information Standards (OASIS) in October 2001 for consideration. OASIS subsequently formed the Web Services Remote Portlets (WSRP) and Web Service Interactive Applications (WSIA) technical committees based in part on WSUI. Epicentric has been invited to participate as members of both committees along with IBM, among others. Epicentric expects that these initiatives will benefit from the conceptual framework of WSUI as it relates to the interactive and navigational aspects of Web Service integration.

WSUI has been implemented within the Epicentric Foundation Server as the preferred vehicle for integrating raw Web Services. WSUI serves as an intermediate, Web Services presentational language within the portal's Web Services Manager. The Web Services Manager provides wizard-driven tools that allow Web Services, such as WSDL-described SOAP services or XML data sources, to be surfaced in the portal. The Web

Services Manager auto-generates WSUI components, registered in Epicentric Foundation Server, that invoke these services. Advanced users, such as Sales Engineers and professional services providers, may optionally modify the generated WSUI component definition file to further customize the presentation of the respective Web Service. Epicentric will continue to support and advance WSUI in an effort to address the immediate needs of its customers until WSRP and WSIA define new standards.

# Oblix NetPoint

Oblix NetPoint is a comprehensive, unified identity infrastructure that serves as a cornerstone for an entire e-business network. A scalable, standards-based solution, this identity management system maintains both the identity profile and security policy information for all enterprise initiatives. This enables companies to maintain just one set of identity and policy information that all e-business applications access to determine authentication and authorization privileges. Companies need no longer manage static front-ends, multiple security systems, and scattered user data repositories. Oblix NetPoint centralizes the management of all these systems.

Because Oblix NetPoint places identity management at the heart of an e-business infrastructure, other applications that require access to user and policy information—such as provisioning and password management systems—can be easily integrated into the environment and deployed more quickly. These additional applications reside on top of the Oblix identity infrastructure, effectively leveraging the rich information that resides there. This creates a unified e-business network that not only is secure and scalable, but also can dramatically lower the cost of doing business.

Only Oblix NetPoint provides all these infrastructure essentials in an integrated access control and identity management system. It provides centralized management of user identities and security policies with delegated administration and automated workflow, all delivered in a Web services architecture.

## COREid delivers Identity and Group Management

The Oblix NetPoint solution has been designed from the ground up to support the highly dynamic nature of user identity information. The NetPoint Identity System is based on COREid.™ Powerful self-service features, multi-step customizable workflow processes, IdentityXML, group management, and delegated administration ensure that user identity information is continually kept current, even in dynamic e-business environments and across partner organizations. In this way, COREid provides the foundation that allows a company to put digital identity at the core of its e-business operations.

This approach significantly reduces administrative costs and burden by delegating out identity management across the organization. Because user information is always kept up-to-date, Oblix NetPoint increases the effectiveness of security policies and, in turn, the security of the overall e-business network on an ongoing, real-time basis. COREid within Oblix NetPoint also enables companies to manage user groups across an entire e-business environment.

## Comprehensive Access Control

Oblix NetPoint delivers common security across multiple Web and non-Web servers and applications and ensures that only authorized users can gain access to information, applications, and resources residing across virtual organizations. Access is controlled by a strict, standards-based authentication and authorization process that protects both Web and non-Web resources residing on companies' servers. Oblix NetPoint features Web-based single sign-on to deliver transparent access and common resource security across multiple servers and applications.

## Delegated Administration and Automated Workflow

Central to COREid's effectiveness is NetPoint's ability to support delegated administration, whereby identity information is approved and maintained by the individuals most knowledgeable about it. Oblix NetPoint provides complete management of all user information through an intuitive Web interface. Using a multi-step workflow engine, organizations can map their business rules and processes without restriction. This significantly lowers IT costs and simplifies the complicated task of managing the potential millions of users in an e-business network.

## Greater Scalability

Oblix NetPoint was designed for large enterprises planning extensive growth of their e-business operations. Designed with extensive caching and built-in fail-over features, Oblix NetPoint provides a highly secure, reliable, and scalable deployment. Not only does Oblix NetPoint deliver the highest performance in single sign-on log-ins per second, the COREid functionality is designed to scale corporate boundaries. This is particularly important for high-capacity extranets.

# Integrated Solution Features and Benefits

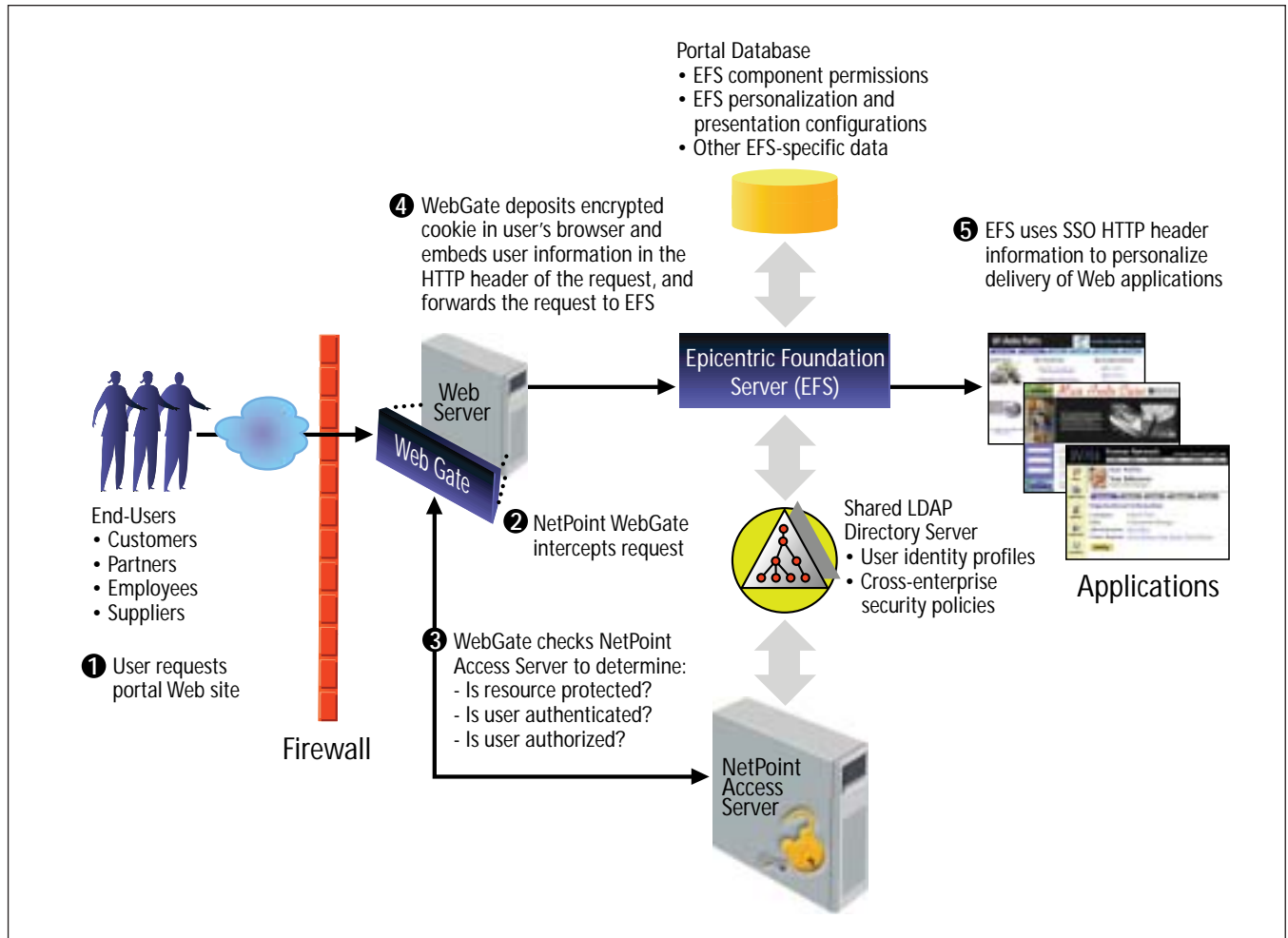
Deploying highly personalized portals that are also manageable, secure, and scalable requires both Epicentric and Oblix products. As described above, the Epicentric Foundation Server is capable of aggregating information from many enterprise applications and databases and displaying it in views uniquely tailored to each user. To provide the best possible online experience, companies want to ensure that users are not challenged for repeated log-ins as they navigate through a portal, or from a portal across to other enterprise resources. Just as importantly, enterprises want to block unauthorized access to protected applications.

The answer is integration of the Epicentric EPM solution with Oblix NetPoint, which provides Web single sign-on across the business portal and other applications, including those applications accessed through the Epicentric Foundation Server. For instance, consider the scenario in which an enterprise is exposing its Siebel and PeopleSoft applications through an Epicentric portal. If a customer requires access to these applications, they can gain un-challenged access to them, either through the portal or directly, after logging onto the portal only once. Oblix NetPoint supports single sign-on to Epicentric, Siebel, PeopleSoft, and a number of other Web-based systems.

Integration also ensures that when a user's Web access privileges into the portal change—or when those of millions of other users inevitably change—the appropriate Web access security restrictions will be immediately enforced. This ironclad protection is critical for managing the large, ever-changing user populations served by the portals of growing enterprises.

## Architectural Overview

The diagram below provides an architectural overview of an integrated Oblix NetPoint and Epicentric Foundation Server solution. When a user first requests a Web page from their browser that resides in the Epicentric portal, the Oblix NetPoint WebGate plug-in intercepts the request and challenges them for their credentials. The request is then passed to the NetPoint Access Server, which authenticates the user against credentials stored in the user store and passes the authentication token (in the event of a successful authentication) back to the WebGate plug-in. The request is then passed to the Epicentric Foundation Server (EFS), which authenticates the user against the Portal Database and passes the request to the Applications.



The Oblix NetPoint WebGate plug-in then stores this authentication cookie in the user's browser to enable single sign-on across all enterprise applications protected by NetPoint. If the user attempts to access a protected resource at a later time in the session, either through the portal or directly, authorization will be based on the authenticated identity information stored in the encrypted cookie.

At the same time, NetPoint forwards the user's request to the Epicentric Foundation Server and the NetPoint WebGate embeds user identity information in the HTTP header of the request. The Epicentric Foundation Server may use this information to look up the user's profile within the shared directory server for personalized delivery of portal content.

The information used to authorize access to multiple resources is derived from user identity profiles stored in an LDAP-based directory server. This directory server is centrally managed through NetPoint, and can be leveraged by any enterprise application, including the Epicentric Foundation Server. This enables an organization to maintain a single copy of each user identity profile for authentication, authorization, and personalization purposes. By eliminating duplicate identity profiles in multiple, disparate systems, an enterprise can assure the highest security for multiple applications and the best portal experience for its users.

Allowing users to manage their own identity profiles is also easy with this integrated solution. All Oblix self-service, self-registration, and user management functionality can be exposed directly through the Epicentric interface. As Oblix NetPoint's user interface is XML-based, it can be easily customized to blend in with an existing portal interface. Additionally, when the Epicentric portal is configured to support the directory server as its user data store, user self-personalization preferences configured through the Epicentric portal can be propagated to the identity profiles stored in the LDAP directory server.

## Key Solution Features

In summary, by taking advantage of the Oblix-Epicentric partnership, enterprises can profit from the following key features of their integrated portal solution.

### Rapid, Scalable Portal Development and Management

The Epicentric Foundation Server provides businesses with powerful EPM capabilities, allowing them to realize significant economies of scale by aggregating and managing multiple initiatives on a single portal network with minimal time and effort.

### Web Single Sign-On

The most important advantage of the two products' integration is to enable users to log in only once to all enterprise Web applications, including the portal. This increases productivity and the overall user experience. All of this is done with the assurance that users can access only the applications and resources that they are authorized to access, based on their roles and profiles.

### Enhanced Portal Security

The integrated solution combines the superior platform and Web services provided by Epicentric, with the powerful authentication and authorization services provided by Oblix NetPoint to yield enhanced portal security. Oblix NetPoint provides out-of-the-box support for multiple authentication schemes, including digital certificate-based authentication and RSA SecurID. This allows customers to deploy the Epicentric Foundation Server with authentication options stronger than user ID and password methods, without having to reconfigure the portal.

### Cost Effective Identity Management

Oblix NetPoint provides a user-friendly way to distribute the management of user identity profiles and access policies that minimize IT staff involvement. COREid found within the NetPoint Identity System provides sophisticated functionality to manage users in an LDAP-based directory server, which can be leveraged by any enterprise application, including the Epicentric Foundation Server. This architecture offers several advantages.

First, enterprises can be assured of the lowest cost of administering their infrastructure and opening up the applications and data to the maximum number of users. Sophisticated COREid functionality such as workflow-based self-registration, delegated administration, self-service, and group management enable enterprises to reduce the overall cost of administering their infrastructure.



Additionally, because the Epicentric Foundation Server and Oblix NetPoint leverage the same directory server, a user can gain access to the Epicentric portal immediately after his or her identity profile is entered in the directory server using Oblix NetPoint.

## Enhanced Personalization

The integrated solution offers a rich and flexible portal personalization experience that is based on centrally managed user identity profiles. The Epicentric portal personalization services provide an even more compelling user experience when they are based on identity profiles that are accurately and centrally managed through Oblix NetPoint's powerful identity management functionality.

## Password Management

Oblix NetPoint provides significant password management functionality that complements the Epicentric Foundation Server password management capabilities. Administrative password management functions offered by Oblix NetPoint—such as password reset, creation, reset, and lost password management—can be transparently integrated into Epicentric Foundation Server through the use of portal inserts and can be easily used without any additional infrastructure.

In addition, Oblix NetPoint provides many run-time password policy enforcement functions, such as password lockouts (based on the number of wrong attempts), enforcement of password composition constraints, and forced password changes.

## Portal Inserts

All of Oblix NetPoint's functionality can be directly exposed through Epicentric Foundation Server to provide a consistent user experience. For example, Oblix NetPoint's user management and password management functionality can be displayed as links or modules on a user's front page, giving him easy access to commonly used NetPoint functionality.

## Unique Solution Benefits

Different users within an extended enterprise benefit from the Epicentric and Oblix solutions individually and from the integration of the products. Here are just some of the compelling advantages these users can derive.

<b>Audience</b>	<b>Benefit</b>
Developers	Build and deploy Web applications more securely and quickly. Avoid writing custom code for security or for identity information management.
System admins and Help desk personnel computing initiatives.	Reduce identity maintenance tasks and cut down on manual password resets. Regain time to work on future
IT/Security personnel	Centrally manage security policies through Oblix NetPoint and apply them throughout a portal infrastructure built on Epicentric Foundation Server.
End users	Access needed information more quickly, securely, and efficiently.
Executives	Achieve investment protection and the ability to grow. Through an Epicentric portal infrastructure secured by Oblix NetPoint, immediately secure existing enterprise applications and feel confident that portal expansion will be cost effective, no matter how many applications or users are added in the future.

## Conclusion

Intranets and extranets are now the primary vehicles through which companies enable effective communication between internal and external constituents. The Epicentric Foundation Server provides a sophisticated platform that centralizes portal management, distributes portal administration, and leverages portal component reusability—all of which significantly reduce the cost of developing, deploying, and managing Web initiatives across a global enterprise.

At the same time, the security and management of Web services and applications become critical concerns once these resources are made available through portals. Oblix NetPoint is the integrated Web access and identity management solution that perfectly complements the Epicentric Foundation Server to deliver secure delivery of resources through a portal network. Oblix NetPoint is a critical infrastructure component for a successful, collaborative e-business: a Web access management solution with enough security, scalability, flexibility, and reliability to connect the right people to the right information for the greatest business advantage.

When integrated, Oblix NetPoint and the Epicentric Foundation Server form a comprehensive, powerful solution for portal management, delivering scalable and secure portal services while at the same time lowering overall cost of ownership.