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KEEPING IT SIMPLE A PRAGMATIC APPROACH TO IDENTITY MANAGEMENT

White Paper
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Chapter 1

Executive Summary

Today's Web-driven world has redefined for many businesses what it means to succeed. The proliferation of applications that enable life on the Web and the proliferation of Web users have transformed both business strategies and the IT infrastructures that support them, rendering the latter more complex than ever.

This new landscape has given rise to a new set of strategic imperatives for CIOs and CISOs, who must ask themselves how they can:

- Architect an identity infrastructure to meet changing business and security needs
- Build an identity compliance infrastructure that provides the required business transparency
- Develop a scalable, repeatable way to manage users, roles, resources, and policies
- Integrate Web applications and legacy applications into the identity infrastructure
- Extend the enterprise and incorporate partners, subsidiaries, acquisitions, and software-as-a-service (SaaS) applications into the identity infrastructure

Identity has a critical role to play in this effort. It provides the authentication and other capabilities necessary to give more users access to more resources as well as the security mechanisms to control the risk associated with access. A crucial issue is whether the identity infrastructure can be deployed in a cost-effective, scalable way that will offer the best possible return on investment.

Sun has adopted an approach that responds to the complexity inherent in this challenge by offering a simpler way. This paper makes the case for a pragmatic approach that focuses on making it easier for enterprises to build and maintain the identity and access management infrastructure that can support their successful growth today and over the long term. It will:

- Examine what is required of an identity infrastructure today
- Characterize Sun's pragmatic approach to identity
- Describe Sun's portfolio of pragmatic identity solutions
- Present examples of how Sun's approach to identity works in the real world

Chapter 2

Requirements for an Effective Identity Infrastructure

The evolution of identity

Just as applications and users have proliferated as the world has become increasingly Web-centric, so have the demands on the identity infrastructure to support those applications and users.

- *Stage 1.* Initially, an identity solution needed to provide little more than directory services and coarse-grained access control, and provide them only to the internal enterprise.
- *Stage 2.* As the number of users and applications surged, the need for more sophisticated capabilities such as enterprise single sign-on (ESSO) and multi-factor authentication also grew.
- *Stage 3.* Today, compliance has become critical to every enterprise, and collaboration with external partners has become an accepted and essential part of doing business. Enterprises therefore need more and varied identity capabilities to help them collaborate freely, operate securely and compliantly, and scale to work with more users and applications, both internally and externally.

What the identity infrastructure must deliver

To meet constantly evolving enterprise requirements, identity solutions must deliver:

- *Depth:* Organizations need help on many levels, from basic provisioning, access management, and security capabilities to automated role- and rule-based provisioning, federated single sign-on, and Web services security.
- *Compliance:* Today's CISO needs an identity infrastructure that will help ensure timely compliance with regulatory requirements and internal policies, and that can be built incrementally to meet growing and changing needs.
- *Scalability:* Identity solutions need to be able to evolve with the enterprise — offering; for example, Web access management capabilities that can work seamlessly with enterprise management solutions rather than only on a standalone basis.
- *Integration:* Identity components that are planned and designed to work closely together and with other IT infrastructure components are crucial to avoiding identity “sprawl” — the costly, inefficient phenomenon that results when solutions are deployed on an ad-hoc basis to handle multiple identity challenges without regard to the big picture.

How can an identity infrastructure work for an organization on all these levels without becoming overwhelmingly complex?

Chapter 3

How A Pragmatic Approach Can Make It Work

Sun's approach to identity management is to address growing enterprise complexity with simplification, instead of more complexity. This can help organizations achieve two key goals: to operate the extended enterprise and to achieve everyday compliance.

To achieve the goal of operating the extended enterprise, Sun technology helps build the infrastructure that consists of internal applications, internal Web services, partner services, SaaS applications, affiliates, acquisitions, and more.

To achieve everyday compliance, Sun identity technology provides transparency, auditability, and attestation for users, roles, and resources within the extended enterprise. In Sun's vision, the point is not just to offer identity technology assets; it's also to use those assets in the service of addressing everyday business problems.

The three key aspects of Sun's pragmatic approach

1. Simple

- Sun is committed to offering a portfolio of identity solutions that are 100% Java™ technology and the easiest in the market to deploy, configure, and use. With regard to usability, the approach focuses largely on the interface design. Design components include:
 - A wizard and task flow-based interface that significantly improves usability and reduces deployment complexity and cost
 - A homogenous interface across the identity portfolio to provide intuitive, constant, and repeatable deployment and management processes throughout the entire identity infrastructure
 - Design improvements that increase accessibility to identity-enabled business processes, reports, and tools for line-of-business managers who need more effective controls for managing the business

Sun is also investing in both on- and off-premise identity solutions to enable organizations to quickly choose and implement the elements of identity management that optimally align with their business and operations requirements. On-premise solutions will include packaging in the form of pre-integrated, pre-tested, ready-to-use appliances that quickly plug into the data center for immediate runtime services. Core to Sun's design principles, the appliances will offer a wide range of capacity and performance to scale on demand as needed.

To help simplify identity implementations, Sun is in the process of enabling a Web-oriented architecture (WOA) approach to its identity portfolio. This provides commonality, portability, common interfaces, reduced integration costs, and improved interoperability among products. Sun's identity services approach consists of two areas: resource-oriented architecture and composite, reusable services.

Resource-Oriented Architecture

Identity Web Services make the implementation of Sun identity management solutions more straightforward by providing a common means of invoking Sun identity management suite capabilities — regardless of whether the programming language is Java, .NET, Ruby, PHP, or any other. Sun has standardized on REST as the base-level method to expose its identity management product APIs; this provides a resource-oriented, easy-to-use HTTP interface that is highly popular among developers and commonly used by the most popular Web 2.0 companies, including Google and Yahoo. The figure below outlines Sun's approach to identity Web services.

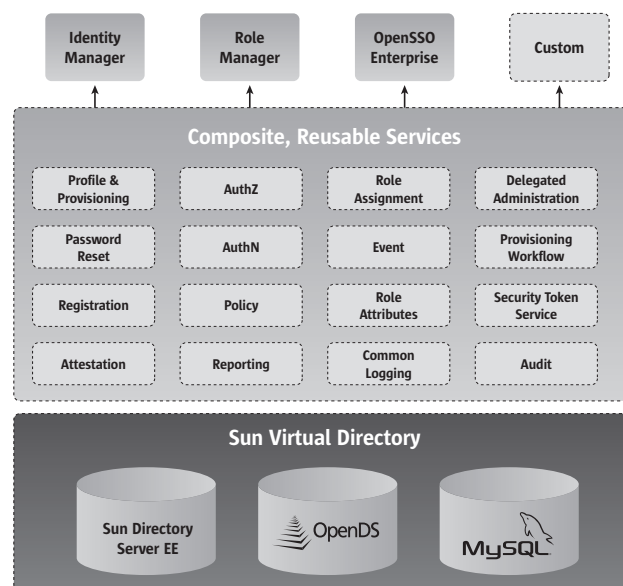


Figure 1.

Composite, Reusable Services

Sun is also in the process of rearchitecting its products so that all underlying components are developed as composite, reusable services. This allows Sun to build these components once and leverage them across the entire portfolio — for example, building logging as a common service that is leveraged by all products. Sharing common services across Sun's identity management solutions provides for elegant product integration, greater interoperability, and a simplified user experience. The figure below outlines how Sun incorporates composite, reusable services into its identity management portfolio.

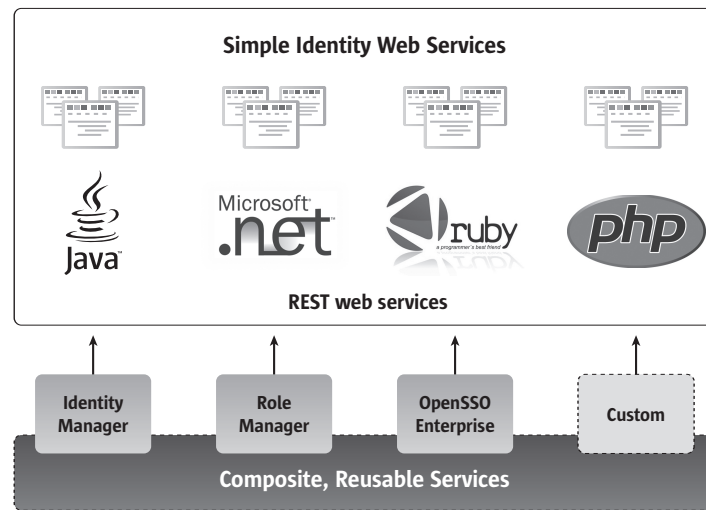


Figure 2.

2. Open

Sun is the largest single contributor of open-source projects in the industry. Through the last 25 years, the company has continuously delivered new innovations in open-source software. Today, Sun is moving up the software stack from open-source operating systems (OpenSolaris™), application servers (Glassfish™), and a SQL database (MySQL™) to offer the only supported open-source identity solutions in the world.

Sun's open-source projects (such as OpenSSO and OpenDS™) are available as fully supported products with indemnification. This enables organizations to start projects based on the open-source project code and then purchase support as needed for production environments. The benefits of Sun's identity open-source projects include:

- Regularly scheduled code drops
- Ongoing open access to engineering resources
- A large technical open-source community
- A complimentary commercial offering

Organizations that choose Sun's open identity solutions benefit from free product training from Sun Learning Services, transparency into the product development process, and access to source code, often resulting in a faster time to market.

Industry analysts anticipate that elements of open-source technology will be present in a large percentage of all commercial software within just a few years. Of all major platform vendors, Sun is best positioned to drive the integrated open-source "stack" into the mainstream.

3. Proven

Sun manages billions of user identities worldwide for more than 5000 organizations. The open architecture that characterizes Sun identity management makes the process of applying identity management to numerous networked resources faster and simpler. Sun's identity management solutions eliminate costly manual approaches to creating, maintaining, and deleting identity data, achieving up to 100% ROI in most cases within 12 months. Sun provides self-service and delegated administration to reduce help-desk and operations workloads up to 80%-90% in most cases. Additionally, Sun's identity management solution lowers total cost of ownership through ease of implementation and faster integration time, beating IRR targets up to 20% in most cases.

Sun identity management solutions have received positive recognition from a wide range of analysts and community leaders.

Forrester ranked Sun as a Strong Performer in the *Forrester Wave for Identity and Access Management*. Sun “meets very demanding customer requirements with minimal customization”

Forrester Wave for Identity Access Management, Q1 2008

Andras Cser, 14 March 2008

Gartner positioned Sun in the Leaders Quadrant of its *Magic Quadrant for Web Access Management*. Gartner places companies in the “Leaders quadrant” based on strong products and strong year-over-year growth.

Magic Quadrant for Web Access Management,

2H07 — Ray Wagner, Earl Perkins, 29 October 2007

Gartner positioned Sun in the Leaders Quadrant of its *Magic Quadrant for User Provisioning*. Those in the Leaders Quadrant demonstrate balanced progress and effort in all execution and vision categories. “Sun's actions raise the competitive bar for all products in the market, and they change the course of the industry.”

Magic Quadrant for User Provisioning,

1H06 — Roberta Witty, Ant Allan, Ray Wagner, 25 April 2006

2H07 — Earl Perkins, Roberta Witty, 23 August 2007

Sun OpenSSO Enterprise Won the Developer.com Best Security Product of the Year 2009 (<http://www.developer.com/java/other/article.php/3795991>)

SC Magazine gave Sun Identity Manager five out of five stars for its large-scale performance and emphasis on compliance and auditing, and praised its ease of use. Sun's solution was said to focus on “creating and managing provisioning workflows quickly and easily, as well as auditing and compliance.”

SC Magazine, 01 January 2008

Forrester ranks Sun a Tier 1 vendor based on estimated total market share, largest ERM deployments, most number of customers in production, and the fact that Sun is seen most frequently by vendors and customers.

Market Overview: Enterprise Role Management,

Andras Cser, Feb 2009

Chapter 4

The Sun Portfolio of Identity Solutions

Sun's portfolio includes pragmatic solutions for every aspect of identity management. Sun identity products can be deployed as a complete, integrated set of solutions or rolled out modularly over time to meet enterprise needs.

Sun Identity Manager

Identity Manager provides the comprehensive functions to apply and enforce security policy and meet compliance and audit requirements. It provides streamlined, integrated provisioning and auditing, including auditing that goes beyond simple reporting to provide automated reviews, proactive scanning, and consistent enforcement. Preventative and detective compliance includes policy violation tracking and expiration capabilities to handle exceptions.

Sun Role Manager

Role Manager is a role-based access control solution that conducts role mining to analyze user access patterns and define roles for managing access to applications and other resources. It dramatically simplifies exceptions control by applying enterprise access policies based on user roles rather than on individual access privileges. Its robust capabilities include role engineering and ongoing role maintenance as well as role certification by business unit managers or role owners.

Sun Identity Compliance Manager

Identity Compliance Manager enables organizations to automate the access certification that is essential for complying with external regulations and internal security policies. It reduces the risk associated with access control and facilitates successful audits by continually monitoring actual access against defined security policies and by automating existing manual access-certification processes.

Sun OpenSSO Enterprise

OpenSSO Enterprise was designed to address every aspect of the sign-on challenge — both internally and externally, both immediately and as needs evolve. Based on technologies developed in the open-source OpenSSO community, it is the only solution that provides secure Web access management, federated single sign-on for collaboration with business partners, and Web services security in a single, self-contained Java application.

Sun Directory Server Enterprise Edition

Directory Server Enterprise Edition is the only high-performance directory server with essential data services — including proxy, virtual directory, and data distribution — to provide highly available directory services all in one solution. It offers the most scalable directory infrastructure available, with proven capabilities to easily manage billions of identities in growing, dynamic enterprise environments.

Sun OpenDS Standard Edition

OpenDS Standard Edition is the world's first commercially available, pure Java technology-based directory server that is based on the innovations developed in the open source OpenDS community. It offers organizations of all sizes the newest technologies, rapid development cycles, and other benefits associated with open-source — but in a fully supported commercial solution that is easy to install, use, manage, and extend.

Product details are available at sun.com/identity.

Chapter 5

Sun's Pragmatic Identity Approach in Action

Telecommunications: Swisscom Mobile AG

Providing faster and better service at lower cost.

Company

Swisscom Mobile AG is Switzerland's leading telco, delivering all services and products for mobile, fixed, and IP-based voice and data communications.

Challenges

- Integrate 1,200 points-of-sale into Siebel Customer Relationship Management (CRM) system
- Provide secure authorization and compliance to data protection regulations
- Provide central authentication with single sign-on
- Deploy an identity management system to make business processes more efficient

Solution

Swisscom Mobile deployed OpenSSO Enterprise and Sun Identity Manager to reduce IT complexity and costs and improve customer service by streamlining its retail stores' access to the company's customer-oriented applications.

Results

- Saved over 5m Swiss francs (approx. US\$4m) per year
- Increased revenue potential of multiple millions per year
- Provided a return on investment (ROI) within three years

“The Sun identity management suite has significantly improved the efficiency of our customer services at our points of sales.”

— Christian Kattenbusch, Project Manager

Learn more: <http://www.sun.com/customers/software/swisscom2.xml>

Financial Services: Deutsche WertpapierService Bank AG

Leading German securities dealer manages identities across diverse systems with Sun software.

Company

Deutsche WertpapierService Bank AG is among the largest dealers of securities in Germany. It serves clients from all sectors of the German credit industry and counts approximately 250 banking institutions among its customer base.

Challenges

- Optimize and simplify identity and authorization management
- Centralize management and administration of user access
- Provide SSO to diverse applications and systems

Solution

The bank deployed Sun Identity Manager and other Sun Java Enterprise System software to centralize management of user identities and access across diverse systems.

Results

- Faster, simplified access to applications and resources
- Enhanced security
- Improved availability
- Streamlined administration and management
- Reduced infrastructure TCO

“We like the flexibility of Sun Identity Manager since the software works with our existing infrastructure.”

— Ralf Hoop, Project Manager

Learn more: http://www.sun.com/customers/index.xml?c=dwp_bank.xml

Healthcare: Blue Cross and Blue Shield of Kansas City

Large health insurer simplifies processes and HIPAA compliance with Sun identity management service.

Customer

Blue Cross and Blue Shield of Kansas City is the area's largest provider of health benefits, serving nearly 900,000 members in 32 counties in northwest Missouri and Kansas.

Challenges

- Implement identity management solution quickly to replace non-working system
- Meet HIPAA requirements
- Demonstrate compliance through an audit trail

Solution

Sun Professional Services used best practices and proven methodologies to deliver an identity management solution and related services to Blue Cross and Blue Shield of Kansas City, allowing it to rapidly deploy an automated solution to satisfy HIPAA regulations and establish an audit trail.

Results

- Deployed complete identity management solution in four months
- Achieved faster time to value with rapid implementation
- Demonstrated compliance with HIPAA and other regulations with minimum amounts of staff time
- Gained greater flexibility in making changes to role definitions
- Automated tracking of workflow for approvals and changes
- Improved control of software licensing fees by limiting role proliferation
- Reduced administration time to manage identities and assets
- Decreased contractor technical support and IT staff costs
- Improved ability to meet internal SLAs

“Sun Identity Manager is an elegant solution. It’s a very intuitive product.”

— Norma McKelvy, Corporate Privacy and Security Officer

Learn more: http://www.sun.com/customers/service/bcbs_kansas.xml

Education: Western Michigan University

Sun Identity management increases university security and improves user satisfaction.

Customer

Western Michigan University is a nationally recognized research university with nearly 1,000 full-time faculty members and a student enrollment of more than 26,000.

Challenges

- Manage complex identity requirements through the user life cycle
- Manage multiple and changing user roles
- Minimize security and privacy breaches
- Accelerate provisioning and deprovisioning

Solution

To improve communication with students and streamline the university's provisioning and deprovisioning processes, Western Michigan University deployed Sun servers and the Sun Java Enterprise System, which includes identity management, messaging, calendaring, and directory solutions.

Results

- Accelerated provisioning and deprovisioning, leading to increased user satisfaction
- Quicker and less expensive marketing to targeted individuals and groups
- Scaling IT through automation

"Provisioning student email systems, especially with the number of different systems we had on campus, was challenging, but deprovisioning the students was painful. Sun's Java Messaging Server, coupled with the power of Sun Identity Manager, offered a better approach."

— Greg Lozeau, Director of Planning and Middleware Services,
Office of Information Technology

Learn more: <http://www.sun.com/customers/software/wmu.xml>

Government: Government of Norway

Sun Identity management helps enable secure, personalized, single-point access to agency services.

Customer

Norway has launched the eNorway initiative to enable 4.5 million citizens to conduct their affairs with government agencies through a secure, personalized portal interface.

Challenges

- Provide a portal for easy browser access to government services
- Enable SSO for secure login to the portal
- Improve registration of new service providers
- Enhance security and increase availability
- Garner acceptance of Internet-connected citizens

Solution

With help from Sun partner Software Innovation ASA, Norway established the MyPage portal for access to services using Sun Java technology and Sun Fire™ servers running the Solaris™ 10 operating system.

Results

- Supported 30 service providers — both state agencies and municipalities — at time of launch
- Offered services to hundreds of thousands of users at time of launch
- Provided scalability for five-year initiative to support 4.5 million citizens

“Identity management, messaging, and calendaring are all integrated within the portal framework. Strict adherence to Web and security standards has helped us quickly respond to our customers’ requests for new capabilities.”

— Steve Myrseth, Chief Architect, Sun partner SW Innovation ASA

Learn more: <http://www.sun.com/customers/software/norway2.xml>

For a comprehensive list of externally referenceable customers of Sun identity management solutions, please visit: www.sun.com/identity/customers.

Chapter 6

Conclusion

The proliferation of users and applications within and beyond today's enterprise demands an identity management infrastructure that can handle complexity — without adding to IT complexity. Sun addresses the challenge by responding with a “pragmatic identity” approach that focuses on making identity management easy to deploy, with characteristics and capabilities such as 100% Java, open-source technology, and identity services.

Sun's complete, integrated portfolio of identity management products provides end-to-end capabilities that can be easily deployed as a comprehensive set of solutions, or one by one as needed to meet specific enterprise requirements. The Sun portfolio addresses every aspect of identity management, including provisioning, password management, identity data synchronization, role management, access control compliance, single sign-on (SSO), directory services, auditing and reporting, federation services and identity administration services.

As a leader in open-source, Sun is further simplifying identity management by offering open identity solutions, initially for access management and directory services, and ultimately for all identity management capabilities. As commercial products based on Sun's open-source projects, these solutions offer the best of both worlds: the full indemnification and support that come with commercial products and the benefits of working with a large open-source community.

To learn more about Sun's everyday identity solutions, visit sun.com/identity

