



# Identity Trends and how to achieve Rapid RBAC Deployment

# Agenda

- Identity Trends: Market conditions and how vendors and customers are responding
  - > Market conditions
  - > System trends
  - > Deployment trends
- Emerging Identity Deployment Example: Combining best practices, software, services, and deployment tools
  - > Role management and Role Based Access Control (RBAC)
  - > Rapid deployment
  - > Rapidly implementing RBAC using Sun VIDT
  - > Demonstration

# Section 1

## *Identity Trends*

# History

- June 2006: Big questions:
  - > Most important identity trends?
  - > Strategic framework?
  - > Where should Sun invest?
- January 2007: blog, “Identity Trends – What Do You Think?”
- February 2007: blog, “Identity Trends – Take 2”
- March 2007: Identity trends email survey
- May 2007
  - > JavaOne<sup>SM</sup> event
  - > Results on blog

# Identity Trends Analysis Project

- What this project is:
  - > Qualitative analysis and prioritization of insights
  - > Experience-based assessment of trends
  - > Business value focus
- What this project is not:
  - > Controlled scientific survey
  - > Quantitative market analysis
  - > Assessment of specific protocols, standards, or products

# Method: *Participatory Insights*

- Make assumptions, based on my observations
- Create a strawman; blog about it
- Ask a bunch of smart people their opinions
- Assess shared insights against the backdrop of my experience
- Create this presentation
- Present it at JavaOne event
- Blog about it (after JavaOne event)
  
- *Thanks to all participants!*

# Project Participants

Thanks to the following people who provided input to this project:

- Bob Horn
- Brad Wheat
- Brandon Whichard
- Derrick Harcey
- Eve Maler
- Gapa Ananthakrishnan
- Herve Derrien
- James McGovern
- Jamie Nelson
- Jim May
- Jonathan Gershater
- Kevin LeMay
- Kevin Saye
- Kirk Brown
- Marco Casassa Mont
- Mark McCauley
- Mark Richardson
- Mike Wyatt
- Orrin Char
- Rakesh Radhakrishnan
- Rob Dyson
- Robb Harvey
- Sean O'Neill
- Shesh Kondi
- Terry Gardner
- Terry Sigle
- Yuri Elson

# Condition: Leverage Identity Value

- Mature understanding of Identity's business value and ROI will drive broader deployment and expanded investment
- Success in larger enterprises will broaden to smaller enterprises as costs fall and deployment methods improve
- Role management and role-based access control will drive increased value
- Identity management will be leveraged more broadly to satisfy audit requirements
- Service providers will leverage Identity to provide personalized, blended services to customers



# Quotes: Leverage Identity Value

- “ROI is being achieved, compliance concerns are being met, and smart organizations are actually providing better governance and making better decisions.” - *Brad Wheat*
- “Companies who successfully deploy a centralized Identity Management across key systems will start to value it and come to depend on it similar and more than they do e-mail.” - *Kevin Saye*
- “More and more medium-sized businesses are looking to take advantage of an identity management infrastructure.” - *Robb Harvey*

# Condition: Enterprise Collaboration

- Enterprises are forming stronger alliances with more partners to share information and business services
- Service providers seek to leverage services from multiple partners to deliver compelling composite services to their customers
- Enterprise collaboration is increasingly global in scope
- Enterprises do not want to assume the liability for sharing Identities of partner employees

# Condition: Identity in eGovernment

- Citizens want to simplify interaction with governments (for example, avoid long lines at Motor Vehicle Division)
- Governments want to decrease costs and improve efficiencies
- Citizens demand increased security and privacy
- Identity is critical to solving the balance between convenience and security
- Multiple branches of government need to collaborate without sharing private Identity information

# Condition: Consumer Participation

- Priorities are expanding from the intranet to include the extranet as enterprises seek new revenue
- Rich user experiences on social networking, video sharing and other participatory applications (so-called Web 2.0) drive massive demand for Identity services
- Emerging markets like India and China will add billions of new entries to the Identity universe
- Users want improved customer experience (for example, SSO) while demanding more privacy and security

# Condition: Identity Crime

- Rising rate and severity of Identity theft (although some indication this may be abating)
- Increased financial loss and personal devastation
- Pressure from public and private sectors to improve privacy and security mechanisms
- Broadening black market for digital Identities

# Quote: Identity Crime

- “Continued **financial loss** and **personal devastation** will drive newer Identity mechanisms for privacy and security, pressured by the public and private sectors.” - *Kirk Brown*

# Condition: Government Regulation

- Continual increase in government regulation of enterprises to improve corporate governance and reduce effects to security failures
- Governments will increasingly use digital identity methods to enable citizen-government interaction and to track citizen location and behavior
- Strong pressure to use national ID cards and unique identifiers to battle Identity theft and ease citizen interaction with government agencies
- Increased government interest in enforcing graded authentication standards

# Quotes: Government Regulation

- “[Governments tracking citizen location and behavior] **scares the crap out of me**. ... say what you want about Big Brother but a national ID would go a long way in resolving this. ... A national ID would become the most sacred of values because it would link everything else in the system.” - *Mark Richardson*
- “Of course, if one goal is to create the largest possible profile on every individual in order to maximize price discrimination, then ID card is exactly the right metaphor. It will indeed be a world very much one in which we are asked, '**Your papers please.**'” - *Jean Camp (blog comment)*



# Identity Market Conditions (Review)

- Enterprises leverage identity value
- Enterprise collaboration grows
- Identity expands to eGovernment
- Consumer participation explodes
- Identity crime proliferates
- Government regulation expands

# Identity System Trends

- Identity federation accelerates
- Identity integration improves
- Role management gains momentum
- Policy-driven standards emerge
- Strong authentication becomes mainstream
- Identity controls network access
- User-managed / user-centric identity grows
- Identity service providers emerge
- Massive scale becomes the “norm”

# System: Identity Federation

- Federation answers increased demand for enterprise collaboration – requiring secure and seamless access across domains
- SAML is breaking out of early adopter use
- Many large enterprises are implementing federation to connect disparate access management systems
- The use of federation to connect disparate systems within an enterprise is rising

# Quotes: Identity Federation

- “SAML seems to be breaking out of early-adopter use and is becoming the thing you practically can't get fired for using if you have enterprise-strength security and privacy needs. - *Eve Maler*”
- “As Access Management starts to get deeper and deeper into the internal facing corporate environments, customers will require cross product compatibility / interoperation different from Federation and will also require more flexibility from the Access Management solutions.” - *Kevin Saye*”

# System: Identity Integration

- Components of vendor Identity suites are becoming more closely integrated
- Standards-based interoperability among multiple partners from different vendors is being demanded
- Network access control and physical access control are being integrated with application and data access control
- Physical or logical consolidation of customer identities will allow vendors to have a single view of their customers
- Enhanced, integrated logging and reporting is being demanded by customers

# System: Role Management

- Role discovery and management tools are emerging
- Tools to map business roles to user privileges are emerging
- Enterprises are increasingly implemented role management in addition to user privilege management to increase efficiencies and streamline identity administration
- Role-based identity administration enables role-based access control

# System: Policy Standards

- Policy driven methods will emerge to govern the entire Identity life cycle
- Standardization of audit policies will allow more uniform assessment of regulatory compliance
- Policy service interoperability using standard policy representation formats such as XACML are being demanded by customers

## Quote: Policy Standards

- “OK, if customers should manage vendors, what should this customer be doing to get the folks at Sun to start not just embracing open standards but to implement them in their products. This customer would like to see Sun do something with OpenID and XACML.” - *James McGovern (blog comment)*
- “Certainly governmental regulation has been a major driving force but I see some customers wanting to do it because it is the right thing to do.” - *Brad Wheat*



# System: Strong Authentication

- Increased Identity fraud and related government regulations require stronger authentication methods
- Customers demand easier implementations of multi-factor authentication
- Biometric mechanisms such as fingerprint scanners are increasingly being built into computing devices
- The lack of broadly-accepted standards will continue to slow progress

# System: Network Access

- Identity-controlled access at the network and device layer will increasingly complement access control at the operating system or application layer
- Identity-enabled network access control will increasingly be built into the network fabric
- Customers are requesting improved network access control tools

# Quotes: Network Access

- Identity in the network is pretty interesting. ... it is the next iteration of networking and security. ... Identity in the network layer will be a function that the major switch and router manufacturers will take on.  
- *Mark McCauley*
- Application Access Management and Network Access Management will merge. Network devices will become more intelligent. - *Shesh Kondi*

# System: User-Managed Identity

- “User Centric Identity” is a popular buzzword, but is still not broadly implemented in production environments
- Consumer concerns over privacy are driving many to demand control over their own identities
- URI-based Identity systems, such as OpenID, are growing in popularity for low-stakes transactions
- Customer-focused commerce models such as “Vendor Relationship Management” are emerging
- Other parties believe that the majority of consumers do not want to manage their identities

# Quotes: User-Managed Identity

- “To me, and therefore (by ego-originated projection) to every other non-technical person in the world, user-centric identity centers around the first person possessive pronoun: my. It's my identity. It is not one conferred upon me by an organization outside myself. It is not a representation of me in a context other than my autonomous and independent self, operating in the larger world we call the marketplace.”  
- *Doc Searls*
- “I just don't think people really want to control their own Identity. The average person barely understands the concept of a browser, a bookmark, and a website. What will win over the marketplace is the behind the scenes technology that hides it all from the average user.”  
- *Jamie Nelson*

# System: Identity Service Providers

- Identity Service Providers or Identity Brokers will emerge, somewhat on the model of current credit agencies, to “vouch for” the identity of an individual
- Consumers who use such a model will be willing to swap freedom for convenience, much like people rely on a government-backed drivers license to vouch for personal identification
- Providing a near-real time response from Identity Broker could help thwart Identity theft and consumer fraud

# Quotes: Identity Service Providers

- "We still need some means to having a source to vouch for a person's identity." - *Jim May*
- "Individuals will NOT want day to day approvals for use of their Identity profile, rather they will proxy themselves to trusted providers depending on the context of the identity usage. There will only be a handful of identity transactions that a typical individual will personally participate in. Liberty will be swapped for convenience." - *Kirk Brown*

# System: Massive Scale

Systems to provide Identity storage, Identity administration, authentication, and authorization services will need to scale to meet the hundreds of millions or billions of consumers or citizens who desire access to online merchants or eGovernment systems.



## Quote: Massive Scale

“This scaling will require a basic rethinking of how users are provisioned and managed. We will need a next generation engine for IdM to run at this level.”

- Sean O'Neill

# Identity System Trends (Review)

- Identity federation accelerates
- Identity integration improves
- Role management gains momentum
- Policy-driven standards emerge
- Strong authentication becomes mainstream
- Identity controls network access
- User-managed / user-centric identity grows
- Identity service providers emerge
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# Identity Deployment Trends

- Business-enabled Identity grows
- Rapid implementation methods improve
- “Identity as Service” emerges
- Identity enables secure SOA

# Deployment: Identity-Enabled

- Business applications will increasingly be engineered to integrate Identity from the start, rather than attaching Identity after the fact.
- Software solutions will be built to take advantage of enterprise Identity services, rather than built-in security functionality.
- New business models featuring a high degree of personalization will be enabled using Identity services.

# Quote: Identity-Enabled

"Identity Centric Architecture is the discipline of designing systems that put the concepts of secure, distributed, open and owner controlled digital identity at the center."

- *Rakesh Radhakrishnan*

- *<http://identity-centric-architecture.blogspot.com/>*

# Deployment: Rapid Implementation

- Template-driven rapid implementation methods will be used to reduce Identity Management implementation time and cost.
- Best practices captured in rapid deployment tools will allow enterprises to minimize customization and increase system effectiveness.
- Rapid implementation tools will allow Identity Management systems to be deployed in smaller enterprises.

## Quote: Rapid Implementation

“I have recently noticed customers more willing to adapt their business process to out-of-the-box capabilities and industry best practices. There seems to be a large shift in maximizing costs and conforming to standards based provisioning. If this trend continues to thrive, average implementation costs and maintainability will become more palatable for customers looking to get the most out of their phased identity deployments.” - *Robb Harvey*

# Deployment: Identity as Service

- Identity functionality is increasingly delivered as sets of services, rather than in monolithic applications.
- Autonomous organizations offering Identity services, both within and outside the enterprise, will become more prominent
- Emerging standards, such as the SAFE-BIOPHARMA standard for the health care industry, will allow standard services to be broadly provided.



# Quote: Identity as Service

“Identity enabled Web Services will move from the 'wish-list' to the 'requirement document’” – *Shesh Kondi*

# Deployment: Secure SOA

- Service Oriented Architectures are continuing to emerge as an effective way to deliver improved functionality and integration across a wide variety of enterprise information systems.
- Identity-enabled security practices will allow SOA-based systems to meet stringent regulatory requirements.
- For adopters of SOA principles, Identity will be a critical component of a secure system.

# Identity Deployment Trends (Review)

- Business-enabled Identity grows
- Rapid implementation methods improve
- “Identity as Service” emerges
- Identity enables secure SOA

# Identity Trends (Review)

- Market conditions – what is happening now and how things are changing
- How customers and vendors are responding
  - > System trends
  - > Deployment trends

# Section 2

## *Example*

# Example: Roles and Deployment

- Converging Trends
  - > Role management
  - > Role-based access control
  - > Rapid deployment
- Example combines best practices, software, services, and deployment tools
  - > Rapidly implementing RBAC using Sun VIDT
  - > Demonstration

# Role Management and Control

- Role Management

The process of capturing, modeling, and updating Identity relationships between people, processes, and objects in an enterprise or organization

- Role-based Access Control (RBAC)

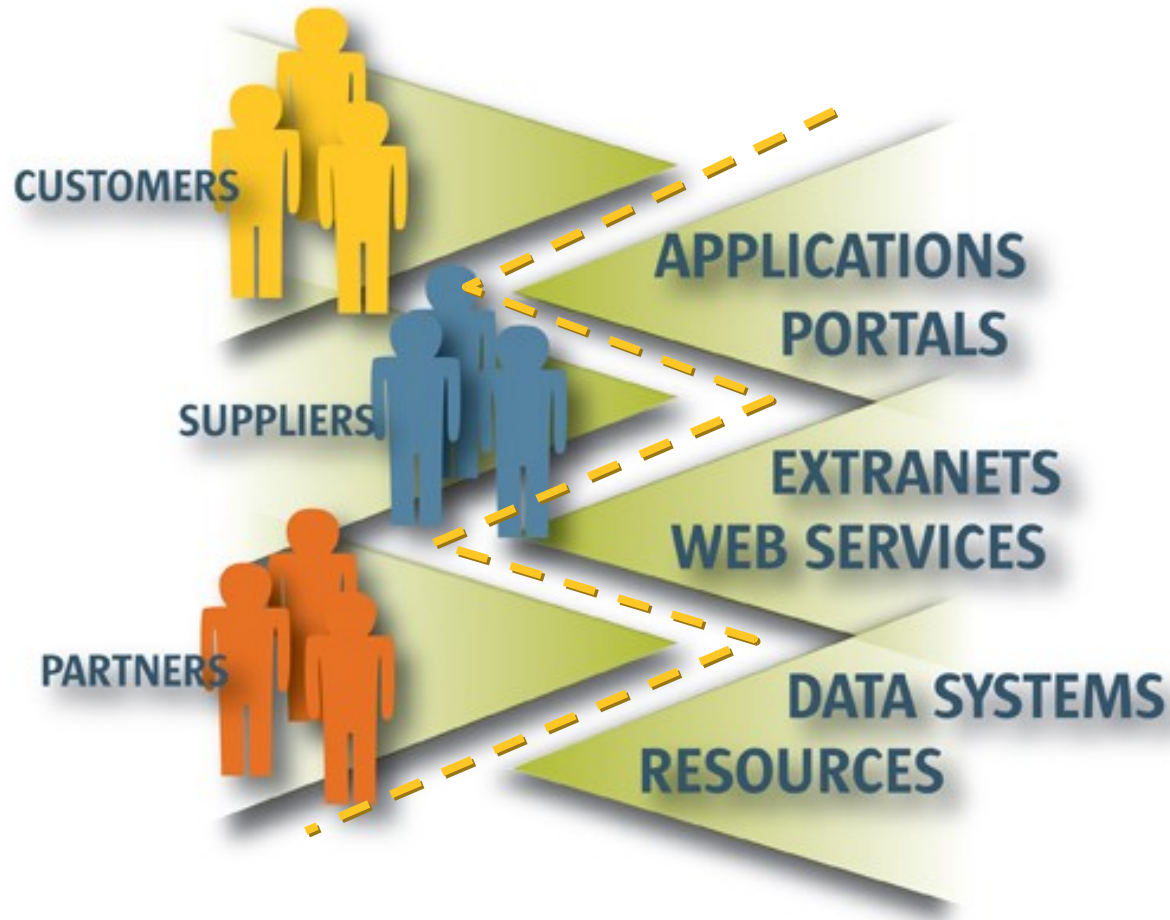
The process of provisioning and enforcing Identity policies, including granting or preventing access to information system resources, based on roles and relationships

# Rapid Deployment

- Rapid capture and documentation of Identity Management requirements for an organization
- Rapid configuration, implementation, and testing of an Identity Management system according to the captured requirements



# Access is Everything



# But, Access Exposes You to Risk and Complexity

Industrial espionage

Identity theft

Increased legislation

Costs of compliance

Administrative costs

*One wrong person gaining access  
to one wrong file  
can have devastating consequences.*



# Need to Address Conflicting Goals

**OPEN**

the enterprise  
to create  
competitive  
advantage

*BUT*

**INCREASE**

security  
and compliance

**INCREASE**

quality  
of service

*BUT*

keep costs

**LOW**

**IMPLEMENT**

quickly —  
right the first time

*BUT*

**WITHOUT**

extreme  
complexity and cost

# Identity Management is the Key

Right **Data**

Right **Time**

Right **Place**

Right **Cost**

Open and Secure Access to Information

# Sun Velocity Identity Deployment Tool

Get it Right the First Time—Faster

Identity Manager Implementation  
IP, Proven Methodologies & Expert Consultants

HR  
Synchronization

Role  
Management

Password  
Management

Delivered by the industry's  
leading experts in **Identity Management**

# Intellectual Property You Can Bet On

Sun's tools help simplify deployments and get it right

The *Sun™ Velocity Identity Deployment Tool* encapsulates deployment knowledge in a predefined approach.



## Benefits include:

- A dramatically reduced project scoping and deployment effort
- A more standardized quoting process
- More predictability in your project implementation

# Flexible Service Options

Modular services allow for rapid customization and choice

Do you want the ability to automatically provision systems based on changes in your HR resource system?

Do you need role structure defined to control provisioning of access privileges?

Do you want to include password management to enable functionality related to password setting, resetting, and so on?

Select use cases desired for each of the selected service offerings:

A. HR Sync, B. Role Mgmt, C. Pwd Mgmt

Do you want to change or add to the standard use cases?

Customer chooses scope and depth

Leads to full Identity Manager Implementation

# Sun™ Role Management Service

The logo is a green, wavy-edged shape with a slight shadow, containing the text "Sun Role Management Service" in white.

Sun Role  
Management  
Service

## CHALLENGE:

- To control access by roles without ending up with too many roles to manage easily or cost effectively.

## SOLUTION:

- Set up a tier of business roles and a tier of functional roles and map to avoid role proliferation to enable more effective management.



# Sun™ Role Management Service

The logo is a green, wavy-edged shape with a slight shadow, containing the text "Sun Role Management Service" in white.

Sun Role  
Management  
Service

## WHAT YOU GET:

- Identity Manager software fully implemented
- Fully configured role solution that helps avoid role explosion/proliferation
- Ability to manage roles more cost-effectively
- Ability to track and audit organizational roles and access privileges
- A supportable, maintainable, well-documented solution

# Defining Roles

The logo for Sun Role Management Service is a green, wavy-edged shape with a slight shadow. It contains the text "Sun Role Management Service" in white, stacked in three lines.

Sun Role  
Management  
Service

There are multiple approaches to defining a role structure

- > Import predefined role definitions into Identity Manager
- > Synchronize Identity Manager with an enterprise role management technology

# What These Services Mean to You

## Identity Expertise, Faster Implementations, Supportable Solutions

### Faster Time to Market

- Sun's Velocity Identity Deployment Tool enables immediate ROI to your software investment.

### Reduced Risk

- Proven methodologies and library of use cases brings predictability to deployment.
- Right the first time.

### Less Cost and Complexity

- Well documented best practices bring quicker, less expensive engagements.
- Best practices and common use cases reduce complexity.

# Demonstration

# Contact Information

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# Identity Trends

and how to achieve

# Rapid RBAC Deployment