

Magic Quadrant for User Provisioning, 2H07

Gartner RAS Core Research Note G00150475, Earl Perkins, Roberta J. Witty, 23 August 2007, R2434 09072008

User-provisioning solutions are processes and technologies to manage users' identities across multiple systems. Maturing markets driven by compliance and security efficiency have grown, but identity-driven governance and risk concerns raise new issues for customers.

WHAT YOU NEED TO KNOW

User provisioning has achieved a level of technical maturity that delivers relative value for business needs to make security more efficient and comply with regulatory and legal reporting and auditing. Also, it is ready for deployment for most enterprise identity management business needs. The extent of deployment will vary according to the business need.

Caution: Large-scale user-provisioning projects are complex initiatives and require experienced management to increase the chances of success. Although the success rates of such initiatives are now higher than in previous years, user-provisioning projects still have a significant failure rate due primarily to scope definition and managing to that scope;

When selecting a user-provisioning solution, customers should consider key differentiators that include (but are not limited to):

- Cost, including flexibility of maintenance and support programs
- Delivery time of projects and match to business plan
- Worldwide scope, depth, availability and extent of partnerships with consultants and system integrators to deliver the solution
- Partners to deliver subsidiary services not available in the core product (for example, role management for enterprises, federated identity management)
- Level and extent of experience within customer industry segment with provisioning projects
- Customer experience, including satisfaction with installed provisioning systems (that is, reference accounts)

Role management for enterprises (RMEs) is likely to be a prerequisite for many user-provisioning initiatives and should be considered at a minimum as a concurrent review requirement during the evaluation process. Ensure that the user-provisioning provider has a role management partner or has comprehensive role management capabilities in its offering.

Ensure that planning for virtualization in the enterprise includes user provisioning because it will play a key role for virtual machines (VMs), provide account provisioning and auditing for partitions, hypervisors and virtual machines monitors (VMMs), and enforce segregation of duties (SoD) for that environment.

See Figure 1 for the Magic Quadrant.

MAGIC QUADRANT

Market Overview

Identity and access management is a set of processes and technologies to manage across multiple systems:

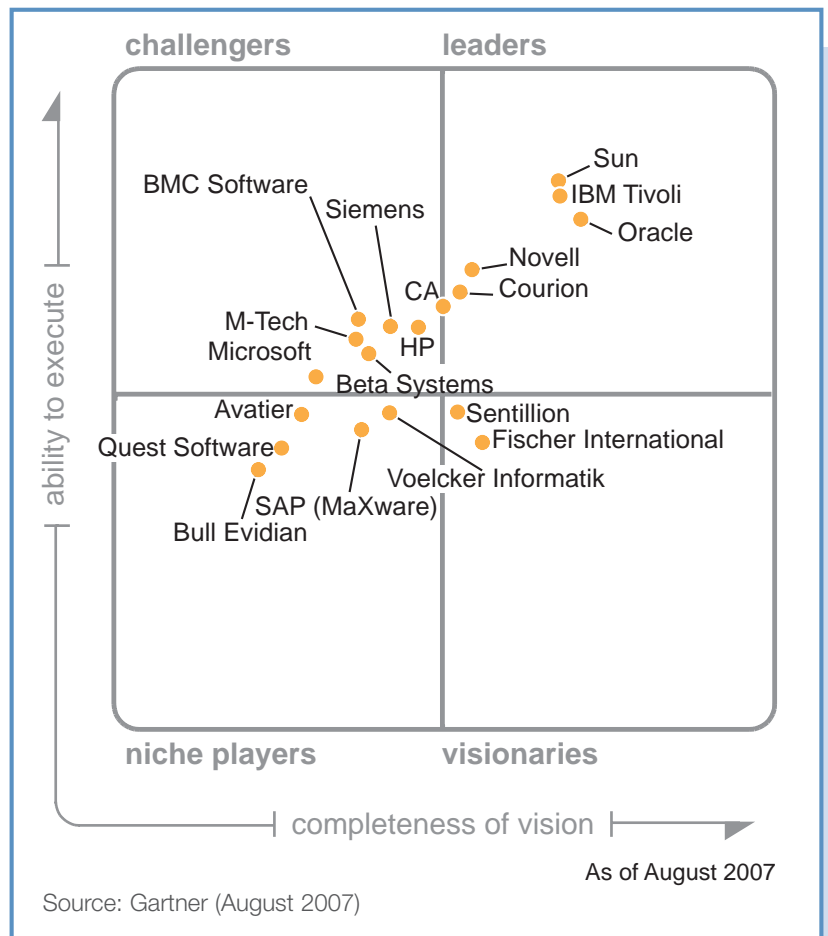
- Users' identities – each an identifier and a set of attributes
- Users' access – interactions with information and other assets
- User provisioning remains a key identity administration technology. User-provisioning tools can also offer the following functions:
 - Role management
 - Resource access administration
 - Credential management
 - Identity auditing

However, with few exceptions (password management being a common one), user-provisioning tool capabilities in these areas lag behind those of specialist tools.

The four major categories of identity and access management tools are:

- **Identity auditing** combines security information and event management (SIEM), SoD control and other monitoring tools to perform comprehensive activity, event and incident monitoring and reporting for auditing purposes.
- **Identity administration**, where user provisioning actually exists along with role management and credential management. Resource access administration is focused on providing the necessary service management capabilities to administer and manage identities effectively, from workflow to delegation, from self-service to connector management.
- **Identity verification** focuses on identity proofing, that is, validating identities as well as the authentication infrastructure, including single sign-on (SSO), federation and personal identity frameworks.
- **Access management** delivers Web access management, OS access management, authorization and content access management as well as network access control capabilities, and is also involved in encryption, digital rights management and content monitoring and filtering (CMF).

Figure 1. Magic Quadrant for User Provisioning, 2H07



These categories of tools are based on a foundation of directory and repository technologies that include virtual and metadirectories and underlying directory services with Microsoft Active Directory to Unix/Linux integration and are supported by a number of standards, including Lightweight Directory Access Protocol (LDAP) and X.500.

User-provisioning solutions are the main engine in support of identity administration activities. In the Magic Quadrant update for 2007, Gartner ranks vendors based on product capability, market performance, customer experience and overall vision to determine which vendors are likely to:

- Dominate sales and influence technology directions during the next one to two years

The Magic Quadrant is copyrighted August 2007 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

© 2007 Gartner, Inc. and/or its Affiliates. All Rights Reserved. Reproduction and distribution of this publication in any form without prior written permission is forbidden. The information contained herein has been obtained from sources believed to be reliable. Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although Gartner's research may discuss legal issues related to the information technology business, Gartner does not provide legal advice or services and its research should not be construed or used as such. Gartner shall have no liability for errors, omissions or inadequacies in the information contained herein or for interpretations thereof. The opinions expressed herein are subject to change without notice.

- Be visible among clients through several marketing and sales channels
- Generate the greatest number of information requests and contract reviews
- Account for the most new and updated installations
- Be the visionaries and standards bearers for the market

Key Market Trends

1. All vendors made progress in their ability to execute in user provisioning, showing basic improvements in features and functionality, marketing and sales execution, and expansion of their general customer base. Vendor differentiation from 2006 to 2007 was primarily in completeness of vision and customer experience, both existing and new.
2. Most vendors showed some level of progress in Magic Quadrant scores since the 2006 study, with some showing considerable progress because of substantial improvements in product functionality, market share, partner alliances or combinations thereof.
3. Entrants appeared for the first time in the Visionaries quadrant (Sentillion and Fischer) primarily because of the uniqueness of their vision for the customers they serve.
4. Microsoft and Siemens moved to the Challengers quadrant from the Niche Players quadrant based on the strength of their ability to execute, market share and customer experience.
5. Novell and Courion moved to the Leaders quadrant for the first time, based primarily on a more strategic vision tied to customer experience, market positioning and execution. CA is poised to enter the leadership quadrant with preparations made in similar categories.
6. Quest Software and Bull Evidian participated in the study for the first time. nCipher, a participant in 2006, did not participate because of a change in marketing focus.
7. Although consolidation slowed in the identity and access management market, it still continues, with user-provisioning vendor MaXware's acquisition by SAP in June 2007 and Oracle's acquisition of Bharosa in July 2007.
8. Most user-provisioning vendors reported healthy revenue in 2006, indicating a continued growth market. Gartner expects user provisioning to continue growing through 2008 and 2009, with a peak occurring in 2009 and 2010 as enterprises consolidate implementations and as another wave of vendor consolidations occurs to further refine this customer solution.
9. The top user-provisioning suite vendors have marketing themes consistent with their broader product portfolios. Those with tightly integrated marketing messages use the broader product portfolios to offer user-provisioning sales opportunities. For example, Oracle, IBM Tivoli and Siemens are examples of user-provisioning vendors that have broader product portfolios and are used to sell user provisioning into existing customer accounts by leveraging existing product portfolio messaging.
10. User provisioning is also part of a broader set of corporate identity and access management themes. Many, though not all, vendors have a marketing and/or technical strategy theme for their identity and access management portfolio. These themes may be part of a broader corporate strategy. For example:
 - Oracle – application-centric identity management
 - IBM Tivoli – “information integrity” identity management
 - BMC Software – business service management

Why is this important? It provides a customer with a context and a position by which it can evaluate the user-provisioning offering of the vendor and the value that offering has to the vendor in its strategy of addressing customer needs.

11. Compliance continues to be the most significant driver for global corporations for user provisioning. Security effectiveness as a broad theme related to matters of enterprise access control and risk management as well as security efficiency for cost containment and service-level targeting are also strong drivers in EMEA and Asia/Pacific. Interest in user provisioning is rising in EMEA, Asia/Pacific and Latin America while remaining at constant levels in North America. Many organizations based or operating outside of North America are skeptical about user-provisioning tools' capability to address the complexity of local regulatory compliance requirements. This includes, but is not limited to, reporting needs.
12. Significant contributors to the user-provisioning decision process for 2007 include (but aren't limited to):
 - Role management, which is defining, discovering and maintaining enterprise roles as input to the provisioning process.
 - Governance, risk and compliance support driven primarily from enterprise applications such as SAP and Oracle through ERP implementations and the need to support fine-grained authorization as part of the user-provisioning process.
 - Governance and risk management connections through control objectives mapping for the application of policies in access control frameworks.
 - System integrator and/or consultant selection for project or program implementation.
 - Privacy, which is providing user control of what is provisioned and ensuring that what is provisioned is adequately protected both from a technical and a regulatory perspective.
 - Provisioning for card management tools as part of a security management environment.
 - Identity audit and reporting, that is, the ability to report fully and accurately on the impacts of user provisioning across the enterprise.
 - Specific industry segment strategies, for example, healthcare user-provisioning differentiation.
 - Specific industry segment size strategies, for example, small and midsize business (SMB) targeting.

13. User provisioning was increasingly recognized as a component of a broader identity and access management market, found as part of a suite offering that included identity administration, identity auditing and access management products.
14. Customers increasingly evaluated user-provisioning solutions as part of a broader identity and access management suite, depending on their specific requirements. This created additional challenges for user-provisioning vendors that are not part of a suite solution.
15. Four out of the five leaders in this Magic Quadrant offer user provisioning as part of an identity and access management suite.
16. Vendors with major product offerings other than user provisioning (for example, IBM Tivoli, HP, Siemens and Oracle) use those product license partnerships with customers and partners as competitive leverage to create opportunities for identity management, particularly in displacement strategies. This will have as great an impact on the future of the user-provisioning market as product features or system integrator partnerships.
17. Some of the user-provisioning vendors are already selling their solutions to internal service providers, illustrating a design and configuration that would allow a services offering for provisioning. Early indicators show that evaluations, particularly for SMBs, of user provisioning as part of broader software as a service (SaaS) offerings are occurring in major service provider firms, though significant legal and logistical issues must be resolved before offering it as such.
18. Though technical improvements in user provisioning continue, project and program complexity for large implementations is proving to be a challenge for customers, resulting in potentially long planning and deployment periods. Two distinct types of user-provisioning vendors exist: those that can address large-scale requirements, and those that can address SMBs (1,500 to 25,000 users) requirements. The first group can also address SMBs, but choose the large business market as the target market.
19. User provisioning will play a key role in the virtualization movement. This is especially true of network-based appliances that at one point were separately managed machines and are now consolidated into a single server and potentially introduce SoD issues. Concerns such as the control of who can manage the virtual server host and each of the guest partitions will be critical, as will be managing per-VM administrative accounts, protecting access to VM management tools and auditing all VM administrative activity.

Market Maturity

From 2005 to 2006, user-provisioning revenue as a percentage of total security software market share grew 12.3%, to \$738.7 million, up from \$658.1 million in 2005. User provisioning also accounted for about 8.9% of all security software.

User provisioning is entering an early maturity cycle with well-known vendors and well-defined suites, particularly where user

provisioning is concerned. The feature/function set for provisioning is second-generation, with most basic capabilities well-structured and configured. Gartner estimates that as of mid-2007, 20% to 25% of midsize to large enterprises worldwide, across all industries and sectors, have implemented some form of user provisioning, with another 25% to 33% evaluating potential solutions. Well-defined methods of implementing user provisioning solutions within enterprises remain elusive. This is beginning to change. The leading user-provisioning products today are effective in most (75% or more) situations presented by customers for the “basic” needs of provisioning, account workflow, identity storage, audit, reporting and integration with existing platforms and many common applications. The problem remains in properly defining the business challenge(s) user provisioning must address:

- Organizing the appropriate political support (in all its forms) within the enterprise to ensure a reasonable chance for program success
- Selecting an effective program partner (that is, consultant or system integrator) to lead the effort in a reasonable time frame, and that understands the business issues of user provisioning and the technical implementation concerns required to be successful
- Addressing critical issues in post-implementation customer environments related to fixes, integration or expansion

As a result of the estimated 25% of situations where user-provisioning implementations were less-than-effective, the user provisioning Hype Cycle for 2007 actually shows a slight decrease in maturity on the curve. This is meant to reflect the lack of progress made in:

Adequately addressing the problems above

Providing robust role management capabilities within the user-provisioning product

Addressing the SMB market with a suite and/or services option.

Market Immaturity

User provisioning has moved beyond an IT project implementation issue to a business program concern, one that may have broader implications across the enterprise or institution and requires broader communication across a broader constituency. As such, this has been the primary inhibitor to existing user-provisioning projects and the most common cause of failure. Vendors that recognize this need and are able to most effectively address it are leaders in user provisioning and will remain so. This remains a key criterion with equal weighting to market share or revenue.

A second area of concern for user provisioning has been that of role management. This is a life cycle process for managing roles within an enterprise, and is considered a vital step in user provisioning. The life cycle of role management consist of four phases:

Definition: The development of an initial role framework enables an enterprise to begin the definition phase of roles. The information required to construct the framework will exist in several areas throughout the enterprise as line-of-business and functional role definitions.

Building: This is the role mining, role discovery, entitlements discovery and role creation phases, which may require a tool or set of tools to enable an enterprise to build. Enterprises take the role and privileges framework already defined and using a tool can perform correlation analysis that may deliver a recommended role set (sometimes called candidate roles) based on actual target entitlement assignments. These candidate roles may be vetted with business owners to create a set of roles that will subsequently be automated through user provisioning or through the role management tools.

Maintenance: In this phase, fine-tuning is done for the constructed roles, as well as ongoing changes through system or controls. Regular review and approval are required during this phase for those changes. This step can be successfully executed most often if the enterprise is using automation; otherwise, the enterprise usually reverts back to a manual process that won't be used.

Compliance: The final life cycle phase involves verification, attestation (management's review and certification) and risk management steps for roles, supporting the growing proliferation of regulations and audits in that reports can be reviewed by management and the auditors to ensure that least privilege and segregation of duties are implemented.

Earlier editions of user provisioning did not account for role management. New vendors in the identity and access management market have been introduced as user-provisioning partners to supplement the user-provisioning process to ensure this customer requirement is addressed. Some user-provisioning vendors have some role management functionality as part of their portfolio.

A third area of growing maturity is user-provisioning audit and reporting. As compliance and regulatory needs grow more specific and are better defined, identity audit reporting continues to evolve to address the specific needs of the world user-provisioning community. This remains an ongoing process.

Characteristics of a Leading Vendor

Although the user-provisioning market is maturing and vendors from any of the quadrants could potentially address your needs as a customer, particular characteristics of a good candidate vendor exist in every occasion:

- **Good partners:** A good user-provisioning vendor has good implementation partners with proven histories of performance, with the ability to understand specific customer industry requirements and address them, and the nuances of those business segments, including the size. Some vendors have direct integration experience – be sure that depth of industry expertise is also there.
- **The ability to define an “end state”:** When embarking on an initiative as potentially complex as user provisioning, it is critical that the program be defined with metrics that can be measured and with a program that can have an end. This may sound obvious, but many early user-provisioning experiences have lasted years because of the inability to know when the end has been reached. There must be an end even to a business-critical implementation project such as identity management, or at least those phases of technology and process implementation, to enable the ongoing program to continue.
- **Coupling and uncoupling the suite:** A world-class user-provisioning vendor can sell you only user provisioning and the associated user-provisioning services (for example, identity audit and reporting, workflow) without requiring you to buy the entire identity and access management system that they sell. Integration is a good thing, but not when it is so tightly integrated that uncoupling for later purchase of a complementary tool is impossible.
- **Solution selling vs. making it fit:** A leading vendor will provide user provisioning as part of a packaged solution tailored to your stated requirements, rather than forcing your requirements to fit the product. The corollary of this is that you must have a clear and comprehensive requirements definition before any formal evaluation of specific tools. Although there must always be some practical compromise, the maturity of best-in-class solutions can look more like your business requirements rather than a vendor's technical specifications.
- **The post-implementation experience:** An increasing number of user-provisioning customers are experiencing what it is like as a customer of early user-provisioning systems. Some are not happy, and are already seeking another experience with competitors. Others have already moved to upgrades of the next generation with the existing provisioning vendor. The post-implementation experience, as a customer and as an upgrade customer, will say much about world-class user-provisioning vendors in this market.

This is not an exhaustive list, merely a representative one. It is relatively independent of vendor size or industry range in the user provisioning market, and can provide an opportunity for even the smallest vendor to excel in a comparative view of customer experience.

User Provisioning as Part of Suite vs. Point Product

Situations where customers might choose a user-provisioning suite vendor over a point vendor might include:

- Customers constrained by the number of vendors with which they can negotiate for a multitool identity and access management solution – of which user provisioning is one.
- A specific application or infrastructure requirement that specifies the product suite as optimal for integration with that application or infrastructure.
- A licensing or cost advantage achieved by owning products or using services from the suite vendor.
- An agreement with a provider of outsourced services to a client where a consolidated contract with a preferred vendor is more acceptable.

Situations where customers might choose a user-provisioning point vendor over a suite vendor might include:

- Policy-driven or IT concerns regarding vendor lock-in; that is, a “monoculture” for identity and access management solutions.
- Customers already have solutions for access management or component identity management solutions from a vendor whose user-provisioning solution they do not prefer.
- Cost, time of implementation or industry-specific options.

Although it's entirely possible, for example, to choose a user-provisioning product from one suite vendor even if you have (for example) an access management product from another suite vendor (point or suite), this practice is occurring less often for a number of reasons:

- Aggressive licensing often makes the provisioning solution from the same vendor as access management.
- Shared maintenance from the same suite vendor is often less expensive and easier to manage and receive.
- The growing maturity of the identity and access management market is equalizing many of the basic function and feature sets of the individual point solutions, lessening differentiation and negating some of the "best-of-breed" argument that is technically based.

Market Definition/Description

User-provisioning solutions address an enterprise's need to create, modify, disable and delete identity objects across heterogeneous IT system infrastructure, including operating systems, databases, directories, business applications and security systems. Those objects include:

- User IDs associated with each user
- Authentication credentials – typically for information system access, and then most often just passwords, but sometimes also for physical access control
- Roles – business-level, provisioning-level, line-of-business-level
- Entitlements, for example, assigned via roles, groups or explicitly to the user ID at the target system level
- Managing group membership, role assignment, from which entitlements may flow
- Managing explicit entitlements
- User profile attributes, for example, name, address, phone number, title and department
- Access policy/rule sets, for example, time-of-day restrictions, password management policies, how business relationships define users' access resources, segregation of duties

Key activities that are required for a successful identity management process include ensuring a complete audit trail of administration activities of these objects, and reporting on these activities for compliance purposes – regulatory, internal and business relationship.

Gartner distinguishes user provisioning from identity management in that user-provisioning products are a subset of identity management products. All user-provisioning products offer the following capabilities for heterogeneous IT infrastructures:

- Automated adds/changes/deletes of user IDs at the target system
- Password management functionality; for example, simplified help desk password reset, self-service password reset and password synchronization, including bidirectional synchronization (sold as a separate product by some user-provisioning vendors since they had their start there)
- Delegated administration of the user-provisioning system
- Self-service request initiation
- Role-based provisioning

- Workflow – provisioning and approval
- Human resources application support for workforce change triggers to the user-provisioning product
- Reporting of the roles assigned to each user and the entitlements that each user has
- Event logging for administrative activities

A comprehensive identity management suite may also have the following additional capabilities:

- **Segregation of duties:** Enterprises need to automate and manage application-level business policies and rules to identify SoD violations, quickly remove those violations from the application environment, and ensure that new SoD violations are not introduced in the course of the ongoing management and security administration of the application. Today, SoD tools exist primarily for ERP applications – ERP-specific transaction-level knowledge is required to successfully enforce SoD in these environments. However, a generic SoD framework is required to address all SoD application needs within the enterprise. Typically, a role is used as the container to segregate conflicting business policies within the application environment. Since the last User-Provisioning Magic Quadrant in 1H06, many user-provisioning vendors have delivered on this heterogeneous framework. It does not alleviate the need for an SoD for ERP product because these tools have extensive integration with ERP applications. User-provisioning vendors will continue to partner with the ERP vendors to deliver a complete SOD solution.
- **Role management for enterprises (RME):** Regulatory compliance initiatives are directing identity management efforts back to the role development drawing board. Therefore, the role becomes a very important control point that enterprises need to manage in a life cycle manner, just as they do an identity. Enterprises need the ability to automate processes to:
 - Define existing roles through role mining automation
 - Manage formal and informal business-level roles for any view of the enterprise, for example, location, department, country, functional responsibility, and so on and feed user-provisioning products to ensure that the link is made between the business role and associated IT roles
 - Manage the role through its entire life cycle – role owner, role changes, role review, role assignment, role retirement
 - Establish a process by which new roles being developed within the enterprise follow the same management process used for existing roles, and tie those new roles to the automated RME solution

A generic framework is required to address all RME needs. Most user-provisioning vendors are partnering with RME vendors. Some user-provisioning vendors have developed their own offering for RME, but none deliver the same breadth of functionality as the RME vendors.

- **Identity auditing reports:** Meeting regulatory compliance requirements of reporting on SoDs, roles, "who has access to what," "who did what" and "who approved and reviewed what" (referred to as the attestation process in auditing terms) for all IT resources is complex and expensive in the heterogeneous IT infrastructure. Reporting tools need to be in place that leverage

the user-provisioning authoritative repository and all other repositories used for the authentication and authorization process to produce SoD, role, “who has access to what,” and “who approved and reviewed what” reports that include the entire enterprise’s IT assets. In addition, centralized event logs for all identity management activities – those from the user-provisioning and access management products, as well as all systems where authentication and authorization decisions are being made in real time – are needed to do a proper job of reporting “who did what.” A new market called identity auditing is evolving; it addresses just the reporting needs of the enterprise. In this Magic Quadrant, we will evaluate the partnership that user-provisioning vendors are forging with this new market.

- **Resource access administration:** Not every enterprise manages access by roles, nor is it advisable to always do so. Rather, the need to administer access at the system/entitlement level is required for many users. Today’s user-provisioning products only provision users to existing roles/groups within a supported system; they do not go deep enough into each system to create and administer roles/groups and associated privileges, nor do they explicitly assign privileges to a user outside of the role/group structure. Also, user-provisioning products do not deliver an end-user or system view of IT resources and associated privileges. To do so, user-provisioning products need the view of the IT resource, system-specific knowledge built into their connector portfolio to administer and manage roles, groups and privileges, and a relationship between the identity and the IT resource to produce the required views. Today, these two functions are delivered via native system-level tools. The platform where most remote access administration capability is needed is Active Directory within Microsoft Windows. In addition, various mainframe-based Remote Access Control Facility (RACF) administrative tools enable you to provide remote access administration, administering access at the entitlement level within RACF (with greater ease than using native RACF commands and Interactive System Productivity Facility [ISPF] panels). Some user-provisioning vendors have remote access administration capability; others are partnering with Microsoft-specific vendors such as Quest Software and NetPro to deliver remote access administration capability.

As with the 1H06 User-Provisioning Magic Quadrant, no user-provisioning vendor provides all the identity management capabilities noted above. For most enterprises, additional products are required to do a complete job of identity management. SIEM tools can be used for “who did what” reporting.

The 2007 update to the User-Provisioning Magic Quadrant includes additional focus on ease of deployment, ongoing operations, and maintenance and vendor management. It also puts additional emphasis on marketing vision and execution of the participants and evaluates sales and advertising execution as part of the overall experience:

1. How do the user-provisioning vendors deliver core user-provisioning capabilities as an enterprise management system in support of an ongoing, changing business environment? Like last year’s Magic Quadrant, this year we evaluate how easy it is to change and maintain workflow and connectors, but we will be also evaluating software services (scripts) and other functionality such as integrating the user-provisioning product with the human resources application, building the authoritative repository.
2. Because user provisioning is a maturing market, we will also evaluate the vendor’s marketing and sales effectiveness, in terms of market understanding, strategy, communications and execution. We will evaluate a vendor’s organization for such services, its ability to change to reflect customer demands and its overall success as measured by customers.

Inclusion and Exclusion Criteria

Inclusion criteria

User-provisioning vendors are considered for the document under the following conditions:

- They support the minimum core user-provisioning capabilities across a heterogeneous IT infrastructure.
- Automated adds/changes/deletes of user IDs at the target system.
- Password management functionality.
- Delegated administration.
- Self-service request initiation.
- Role-based provisioning.
- Workflow – provisioning and approval.
- Human resources application support for workforce change triggers to the user-provisioning product.
- Reporting of the roles assigned to each user and the entitlements that each user has.
- An event log for administrative activities.
- Products must be deployed in customer production environments, and customer references must be available.
- Gartner considers that aspects of the company’s product, execution or vision are noteworthy.

Exclusion criteria

User-provisioning vendors that are not included in this Magic Quadrant may have been excluded for one or more of the following conditions:

- Vendors that were invited to participate, but did not reply to our request for information.
- Vendors that do not meet the inclusion criteria.
- Vendors that supply user-provisioning capabilities for only one specific target system, for example, Windows, iSeries and so on.
- Vendors with minimal or negligible apparent market share among Gartner clients, or with no shipping products.
- Vendors that are not the original manufacturer of user-provisioning products – this includes value-added resellers that repackage user-provisioning products that would qualify from their original manufacturers, other software vendors that sell identity and access management-related products, but don’t have a user-provisioning product of their own, and external service providers that provide managed services, for example, data center operations outsourcing.

Added

Vendors added

Bull Evidian
Quest Software

Dropped

Vendors dropped

nCipher

Other Vendors of Note

econet: www.econet.de

Based in Munich, Germany since 1994, econet has, since early 2006, entered the user-provisioning market with cMatrix, a service-management, service-oriented offering targeted to service providers primarily in the Europe, Middle East and Africa (EMEA) market. In many respects, econet's marketing and sales model is very similar to Fischer International. Early clients include Siemens and KPMG.

Imanami: www.imanami.com

Based in Livermore, California, Imanami's Directory Transformation Manager v3.0 serves as a data synchronization engine for an Active Directory environment through custom scripting, allowing Microsoft-centric enterprises to leverage their infrastructure to some extent. Clients include Cingular Wireless and Meryn's.

Omada: www.omada.net

Based in Denmark (with regional offices in London, England and California), Omada was established in 1999 in the predominantly Microsoft-centric user-provisioning market. In the past two years, they have made significant progress as a key Microsoft independent software vendor (ISV) in user provisioning with Omada Identity Manager. The solution does provide features in delegated administration, self-service access requests, SoD, workflows with approvals and compliance reporting. Clients include Bayer and Maersk.

Evaluation Criteria

Ability to Execute

Gartner evaluates technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT provider performance to be competitive, efficient and effective, and to positively impact revenue, retention and reputation. Ultimately, technology providers are judged on their ability and success in capitalizing on their vision. For user provisioning, ability to execute hinges on key evaluation criteria. The specific definitions of those criteria are as follows:

Product/Service: Core goods and services offered by the technology provider that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria. Specific subcriteria are:

- Password management, including shared-account/service account password management support
- User account management/role-based provisioning
- Management of identities
- Workflow: Persistent state, nested workflows, subworkflows, templates of common user provisioning activities, change management
- Identity auditing reports
- Connector management
- Integration with other identity and access management components
- User interfaces
- Configure, deploy, operate
- Role management for enterprises
- Resource access administration
- Impact analysis modeling for change
- Service Provisioning Markup Language (SPML) 2.0 support

Overall Viability (Business Unit, Financial, Strategy, Organization) Financials:

Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit and the likelihood of the individual business unit to continue to invest in the product, continue offering the product and advancing the state-of-the-art within the organization's portfolio of products. Specific subcriteria are:

- History of investment in division
- Contribution of user provisioning to revenue growth

Sales Execution/Pricing: The technology providers' capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales support and the overall effectiveness of the sales channel. Specific subcriteria are:

- Pricing
- Market share
- Additional purchases (for example, relational database management system, application server, Web server and so on)

Market Responsiveness and Track Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve, and market dynamics change. This criterion also considers the provider's history of responsiveness. Specific subcriteria are:

- Product release cycle
- Timing
- Takeaways

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities. Specific subcriteria are:

- Integrated communications execution
- Customer perception measurement

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on. Specific subcriteria are:

- Customer support programs
- Service-level agreements

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis. Specific subcriteria are:

- Training and recruitment
- Number of major reorganizations in past 12 months

Completeness of Vision

Gartner evaluates technology providers on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs, and competitive forces and how well they map to the Gartner position. Ultimately, technology providers are rated on their understanding of how market forces can be exploited to create opportunity for the provider. For user provisioning, completeness of vision hinges on key evaluation criteria. Those criteria are defined as follows:

Market Understanding: Ability of the technology provider to understand buyers' needs and translate these needs into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs, and can shape or enhance those wants with their added vision. Specific subcriteria are:

- Market research delivery
- Product development
- Agility to market change

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the Web site, advertising, customer programs and positioning statements. Specific subcriteria are:

- Integrated communications planning
- Advertising planning

Sales Strategy: The strategy for selling product that uses the appropriate network of direct and indirect sales, marketing, service, and

communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base. Specific subcriteria are:

- Business development
- Partnerships with system integrators
- Channel execution

Offering (Product) Strategy: A technology provider's approach to product development and delivery that emphasizes differentiation, functionality, methodology, and feature set as they map to current and future requirements. Specific subcriteria are:

- Product theme(s)
- Foundational or platform differentiation

Business Model: The soundness and logic of a technology provider's underlying business proposition. Specific subcriteria are:

- Track record of growth
- Frequency of restructuring
- Consistency with other product lines

Vertical/Industry Strategy: The technology provider's strategy to direct resources, skills, and offerings to meet the specific needs of individual market segments, including verticals. Subcriteria are:

- SMB support
- Industry-specific support

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes. Specific subcriteria are:

- Distinctive differentiation in feature or service
- Synergy from multiple acquisitions or focused investment
- Role management (discovery, modeling)
- Service-oriented provisioning

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product/Service	high
Overall Viability (Business Unit, Financial, Strategy, Organization)	standard
Sales Execution/Pricing	standard
Market Responsiveness and Track Record	high
Marketing Execution	high
Customer Experience	high
Operations	standard
Source: Gartner	

Geographic Strategy: The technology provider's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market. Specific subcriteria are:

- Home market
- International distribution

Leaders

Leaders are high-momentum vendors (based on sales and "mind share" growth) with emerging track records in user provisioning. Business investments position them well for the future. Leaders demonstrate balanced progress and effort in execution and vision categories. Their actions raise the competitive bar for all products in the market. They can change the course of the industry. Leading vendors should not be default choices for every buyer, however, and clients are warned not to assume that they should buy only from the Leaders quadrant. Indeed, leaders may not necessarily offer the best products for every customer project; however, they provide solutions that offer relatively lower risk and provide effective integration, with their own solutions as well as competitors.

Sun and IBM Tivoli (and now Oracle) continue to dominate the user-provisioning market. They have the largest installed bases, leading product capabilities and strong sales and marketing teams that have made them the winners thus far. Oracle has enhanced its Thor Technologies acquisition and the organizational force behind it and has actually moved slightly ahead of both Sun and Tivoli in terms only of vision, with an aggressive view of application-centric provisioning and service architectures. Although Oracle still lags behind Sun and IBM in total deployments and in the maturity of its partnerships because of its later arrival to the user-provisioning market, it has market momentum in the Leader quadrant and can surpass IBM and Sun within the next year if current growth rates and ratings remain the same.

Novell and Courion are new entrants to the Leaders quadrant. Novell has shown through its latest product release, latest management leadership focus and revived extensive partnership program notable results among customers. Courion's success in targeted markets such as healthcare coupled with their mature approach to role management as part of their portfolio has also earned it leadership consideration.

Challengers

Challengers have solid products that address the typical needs of the user-provisioning market, with strong sales, visibility and clout that add up to higher execution than niche players. Challengers are good at winning contracts, but they do so by competing on basic functions or geographic presence rather than specifically on advanced features. Challengers are efficient and expedient choices to narrowly defined access problems or for logical partnerships. Many clients consider challengers to be good alternatives to niche players or occasionally even leaders depending on the specific geography or industry.

Challengers in this Magic Quadrant all have strong product capabilities, but tend to have fewer production deployments than

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	standard
Marketing Strategy	high
Sales Strategy	high
Offering (Product) Strategy	standard
Business Model	standard
Vertical/Industry Strategy	high
Innovation	high
Geographic Strategy	standard
Source: Gartner	

leaders. Business models vary, as does overall product strength, marketing strategy and business partnerships. This has kept some from moving to the Leaders quadrant. CA has made considerable progress in developing a coherent vision for user provisioning and is poised to move into the Leaders category, building on a significant customer base.

Since 2006, European providers Beta Systems and Siemens have made good progress in user provisioning, with Siemens notably developing a compelling vision tied to its corporate strategy. HP has also made progress in vision and some aspects of execution. Microsoft has moved into the Challengers quadrant based on the acquisition of management vendor Alacris in 2006 and further work around its vision of an identity metasytem. BMC Software has faced challenges regarding vision and execution, though its customer base remains significant. M-Tech remains a viable challenger in the identity market for operational systems needs.

Visionaries

Visionaries are vendors that are distinguished by technical and/or product innovation, but have not achieved the record of execution in the user-provisioning market yet to give them the high visibility of the leaders or those that lack the corporate resources of challengers. Buyers should be wary of a strategic reliance on these vendors and should monitor the vendors' viability closely. Given the maturity of this market, visionaries represent good acquisition candidates. Challenger vendors that may have neglected technology innovation and/or vendors in related markets are likely buyers of visionary vendors. As such, these vendors represent a higher risk of business disruptions.

Visionaries invest in the leading/"bleeding"-edge features that will be significant in the next generation of products and that will give buyers early access to improved security and management. Visionaries can affect the course of technological developments in the market, but they lack the execution influence to outmaneuver challengers and leaders. Clients pick visionaries for best-of-breed

features, and in the case of small vendors, they may enjoy more personal attention.

In this Magic Quadrant, Sentillion and Fischer International have introduced leading-edge capabilities in healthcare and service provider markets, respectively, showing innovation and vision in technology as well as market execution, albeit on a small scale because of their scope and breadth. Although their market focus would normally earn a niche rating, their attention to innovation and customer experience is more mature than those found in other competitors.

Niche Players

Niche players offer viable, dependable solutions that meet the typical needs of buyers, especially in a particular industry or geographic region, but sometimes lack the comprehensive features of leaders or the market presence and/or resources of challengers. Niche players are less likely to appear on shortlists, but fare well when given a chance. Although they generally lack the clout to change the course of the market, they should not be regarded as merely following the leaders.

Niche players may address subsets of the overall market, and often do so more efficiently than the leaders. Clients tend to pick niche players when stability and focus on a few important functions and features are more important than a “wide and long” road map. Customers that are aligned with the focus of a niche vendor often find such providers’ offerings to be “best of need” solutions.

Avatier continues its solid performance from 2006 in its midmarket and Windows-centric focus areas. Good password management, rapid deployment and customer experience remain key differentiators that keep Avatier a viable player in the user-provisioning market.

Bull Evidian is a new entrant to the user-provisioning study. Well-known in Europe, the provisioning solution has adherents mainly in EMEA and addresses password management as a first priority, though the solution provides user provisioning and some role management functionality. Evidian’s position as a niche player is primarily because of its geographic coverage and need for expanded administrator features.

Quest Software is also a new entrant to the study. A well-known Microsoft Windows, application and database management company, the ActiveRoles solution represents a relatively new and focused offering for user provisioning primarily across Microsoft-centric environments, but with notable heterogeneous integration.

SAP’s acquisition of MaXware represents a major step for the software giant. MaXware is a well-respected European-based provisioning and data synchronization company for over a decade with hundreds of customers. SAP will use MaXware as a starting point for a broader user-provisioning offering.

Voelcker Informatik is a Berlin-based user-provisioning firm with an attention to detail and outstanding customer focus. The company has made substantial progress since the 2006 study and is poised to move into the Visionaries quadrant, primarily because of its unique approach to customer experience, being one of the smaller firms, and its mature, rich user interface.

Vendor Strengths and Cautions

Avatier Strengths

- **Avatier Identity Management Suite (AIMS) v.7.0 (January 2007) – Identity Station, Password Station, User Provisioning (Module)**
- Avatier is one of the pure-play vendors for user provisioning based on Microsoft .NET with MS-SQL for an audit repository and an innovative Web services connector architecture for heterogeneous integration across different platform environments. Since the 2006 Magic Quadrant, Avatier has moved to address some of the concerns documented, adding segregation of duties and attestation to identity audit reporting. The company has also introduced Identity Enforcer to fulfill the multilevel approval process workflow requirement to match assets and applications to business processes. The portfolio for user provisioning is completed with a solution set that addresses account termination (named appropriately enough as Account Terminator) to match Account Creator.
- Avatier’s roots are in password management for the SMB. Its customer base is overwhelmingly in that profile. Avatier’s partnerships reflect this. Within the U.S., Avatier sells AIMS direct. Internationally AIMS is sold through a number of midtier services and consulting partners, ranging from Continue in Germany to Iltics in Australia, to name two. Avatier does not have partnerships at this point with major system integration or consulting providers such as Deloitte, Accenture or LogicaCMG.
- Avatier’s strategy for the Identity Management Suite is based on a patent-pending approach that establishes the concept of “hybrid roles,” which are supposed to combine traditional template-based provisioning with individual privileges and assets selected from Avatier’s hierarchical Business Services Repository. Hybrid roles are then coupled with the company’s “Dynamic Workflow” to leverage the repository and organizational information for rapid deployment.
- Avatier also provides Enterprise Single Sign-On (ESSO) and integration capabilities with AIMS (the product), providing basic access functionality. Additional integration with some service management platforms such as BMC Remedy is possible as well. Except for its SOA-based approach to integration for connector management, AIMS does not adhere to SPML or any industry-specific standards related to identity management. Pricing for the solution is very competitive considering the markets Avatier targets.

Cautions

- Avatier must compete against large competitors such as Sun, IBM Tivoli and Oracle. Partnerships and value-added reseller (VAR) channel networks isolate and inhibit the ability to have access to customers. Although the company has made good progress, it will be increasingly difficult to gain the attention of decision makers at larger enterprises, where larger competitors enjoy more access and exposure.
- Avatier must also compete in proposals where the customer requests a bid for a suite that may include Web access management, directory/metadirectory services, or combinations of these components in addition to user provisioning. This requires partnering with a shrinking number of choices for vendors in the market and competing with aggressive licensing from suite competitors – possible, but challenging.

- Avatier is potential acquisition targets because of its size and product architecture, requiring that potential buyers consider the impact of new owners if such an acquisition occurs. History has shown this is not necessarily bad, but there may be delays in future product development as new owners absorb the acquisition, if it occurs.
- From a product perspective, AIMS needs to add additional support for customizable identity audit reports and additional workflow operations.

Beta Systems

Strengths

- **SAM Jupiter Product Suite v.3.4.3 (July 2006) – Workflow v.3.4.3, uConnect v.3.4.3, Password Reset v.2.1, Role Miner v.3.4.3, Log Audit Facility v.1.0, Virtual Directory v.8.4, Data Sync Engine v.8.3, Password Synchronization v.4.5, Enterprise SSO v.2.3.1**
- SAM Jupiter, originally developed by Schumann Security Software in 1994, was one of the earliest shipping “consolidated security administration” products. Schumann was sold to Systor, a Swiss consulting firm, in January 2000, then later to IT operations software vendor Berlin-based Beta Systems (an enterprise content management, identity management and data center infrastructure firm) in February 2003. The company also acquired Focal Point from Okiok in December 2005 for enterprise single sign-on. Although SAM Jupiter is a longtime mainframe-only offering, Beta Systems released a Java-based multiplatform version of SAM Jupiter in 2006.
- One of Beta Systems’ mission statements is the “security and efficiency for large business IT” by emphasizing service quality, legal compliance, information protection, automation and access control. The company’s target strategy focuses on 80% of market volume from Europe and the U.S., 25% in banking, insurance and IT services, with at least 20% of IT assignments on mainframe, z/OS and z/Linux platforms, reflecting their heritage.
- Unlike many of its competitors, Beta Systems’ customer distribution is relatively uniform across small, midsize and large customers in financial services, pharmaceuticals, transportation and other industries, primarily in Europe. Though most of its sales are direct, it has established partnerships (and, in some cases, reseller agreements) with integrators T-Systems, Accenture and Adinsec. Beta Systems also has a European-based VAR network that includes such resellers as Selesta and ASG.
- Having grown from mainframe roots, SAM Jupiter (now Java-based) has a long, experienced history of addressing role-based administration, with an ANSI-standard role-based access control (RBAC) implementation and granularity of administration and control. The product has some of the best “built-in” role management in the market, including a role-mining module. In June 2007, Beta Systems announced an alliance with Israeli-based Eurekify to complement its built-in role management delivery capabilities for full-cycle role management. From a standards perspective, Beta Systems is very active, providing SPML support for SAM Jupiter and taking a thought leadership role in the industry through active participation in standards bodies and councils and publishing papers.

- Beta Systems’ built-in role management provides support of unlimited role hierarchies, dynamic roles, segregation of duties and role mining. Robust resource administration control provides the ability to create/modify/delete groups in all target systems, including RACF. Target system attributes settings (like password interval, logon times and so on) are synchronized with role definitions. The company is also active in selling SAM Jupiter to service providers that host user provisioning for customers.

Cautions

- Although Beta Systems has been in user provisioning for many years, offering the solution on alternative platforms for provisioning is still relatively new and represents a marketing challenge and opportunity for the company.
- Beta Systems is well-known in Europe and has nascent regional partnerships there – more is required worldwide to compete actively in the volatile system integration and consulting services arena for user provisioning.
- SAM Jupiter does not take advantage of Web services within the architecture, and has no out-of-the-box attestation reporting support.

BMC Software

Strengths

- **BMC Identity Management Suite (BMC User Administration and Provisioning) v.5.5 (September 2006) – BMC Password Manager, BMC User Administration Manager, BMC Identity Compliance Manager, BMC Web Access Manager, Business Process Workflow**
- Since BMC Software’s acquisition of Calendra (January 2005) and OpenNetwork Technologies (March 2005), the company has sought to develop a comprehensive strategy for identity management and build momentum for one of the older offerings in the market (and one of the largest markets shares, dating back to the late 1990s with BMC’s original Control-SA user-provisioning solution). The company’s strategic vision that most influences user provisioning is discovery (asset and identity) and change management. Its market positioning with “business service management” has been largely responsible for early successes in the user-provisioning market with business decision makers and IT management. BMC was also one of the first companies to recognize and leverage the value of process-centric user provisioning applied to solving compliance and audit issues – again, with encouraging results.
- BMC acquired Calendra and OpenNetwork Technologies in an attempt to continue that momentum, broadening workflow, usability and access capabilities. Integration of those acquisitions proved challenging, however, during a period of organizational and marketing strategy changes. BMC became a study in contrasts. Although continuing to show leadership in the vision of how user provisioning could address business needs through service and change management, execution experienced challenges. A key agreement with Microsoft to use Active Directory and Identity Life Cycle Manager 2007 as intrinsic parts of the BMC’s .NET v.5.2’s user-provisioning architecture introduced in January 2006 ended in June 2007 because of less-than-expected customer interest and Microsoft’s own user-provisioning plans.

- Although BMC has developed relationships with key system integration and consulting partners such as BT INS, Accenture, Avanade, Ilantus Technologies, Certified Security Solutions (CSS) and Oxford Computer Group, those relationships are in the early stages and vary in depth by region. BMC is expanding its relationship with Accenture and reaching out to other international firms, such as Wipro, in the Middle East and Far East as its markets evolve. BMC's VAR channel partners include Dell/Ingram Micro and LogicTrends.
- BMC Identity Management Suite receives high marks as a technical solution for compliance reporting, a fully integrated business process workflow and flexible application environment support. Product integration with BMC Remedy IT Service Management to further strengthen the Information Technology Infrastructure Library-based business service management message is a differentiator. It has broad and active industry standards support and partners with Eurekify to extend its role management life cycle functionality.

Cautions

- The decision to cease .NET v.5.2 development has an impact on the perception of BMC's current technical vision for delivery, though completeness of business vision remains sound. It is not viewed as such internally by BMC, where resources were consolidated to a single line.
- BMC's primary competitors Sun and IBM Tivoli have more-extensive networks of system integrator partnerships worldwide. Of more concern, other competitors have developed sophisticated market positioning around service management themes for user provisioning and are now challenging one of BMC's main marketing strengths with communications campaigns targeted to early BMC customers contemplating upgrades;
- BMC continues to respond to customer requests for increased out-of-the-box integration with the change management database and for the inclusion of identity administration services through service request management to shorten the deployment timelines for these capabilities.

Bull Evidian Strengths

- **Evidian IAM Suite (Evidian Provisioning Manager) v.7.0.4 (March 2007) – Provisioning Manager, Approval Workflow, Identity Manager, Secure Access Manager, SSOWatch, Certificate Manager, Role Manager**
- Evidian is the independent French subsidiary of Groupe Bull, established in July 2000, focused on security and identity management. It is particularly well-known throughout Europe for the access management products SSOXpress and Secure Access Manager and has achieved a notable customer following with those systems. Evidian has used that established presence in identity management/access to gain a starting point in user provisioning. This includes established customers in the telecommunications, financial services and technology markets.
- Using the marketing theme of "the shortest path to identity and access management," Evidian has developed the IAM Suite and Provisioning Manager in an attempt to leverage its installed base of access management customers for user provisioning

and provide a business-process-oriented suite for new customers, primarily in EMEA. With the Evidian Customer Care and Expertise center, the company provides user-provisioning planning and implementation services for customers. Evidian also has alliances with Steria for some system integration, T-Systems in Germany and NexantiS in Japan for reseller opportunities. However, most sales are direct or through Bull.

- From a technical perspective, Evidian Provisioning Manager is known for its ease of deployment and associated support from Evidian Customer Care. It possesses strong heterogeneous support, broad adherence to relevant standards, and integration with Secure Access Manager. Most implementations for Evidian's user provisioning to date have leveraged Access Manager and SSOXpress. Although Evidian's Provisioning Manager is fully integrated with Evidian's identity and access management suite, it is important to note that the company is entering the market with the ability to deliver a stand-alone provisioning system where necessary.
- Evidian's current position in the Magic Quadrant is attributed primarily to its regional marketing focus, its later entrance into user provisioning as a pure market play (from access management administration) and some feature additions that will enable the system to address non-Web application and broader platform environments even more effectively. Evidian is definitely a competitive player in the European market and with focused international marketing and sales coupled with the outlined feature improvements can be competitive within the niche markets it addresses.

Cautions

- Evidian's user-provisioning solution has been marketed primarily in Europe, and directly by Bull Evidian. To be competitive with Siemens, IBM Tivoli and others will require broader partnerships and markets.
- The Evidian access management product line is overshadowing user provisioning from a marketing perspective, diluting the company's message about capabilities and successes.
- From a product perspective, triggering events from standard workflow inputs such as HR systems will require scripting or coding, that is, no graphical interface code generation assistance is provided.
- The connector management facility lacks add/modify/delete resource definition capabilities, the ability to modify access control lists, or map resources to users.
- The ability to clone user access is unavailable until the fourth quarter of 2007.
- No management sign-off/attestation reporting is supported in the identity audit reporting function.

CA Strengths

- **CA Identity & Access Management (CA Identity Manager) r.8.1 SP1 (October 2006) – OEM of WorkPoint (workflow) v.3.3.2, CA Identity Manager r.8.1 SP1**
- CA has had an interesting journey to its place in the identity management market universe. Its acquisition of Web access management solution Netegrity in November 2004 by default acquired Business Layers eProvision into the company, one of

the early business-centric provisioning solutions. CA already possessed the incumbent eTrust Admin. Once the slow corporate integration process was completed, in January 2006, it released Identity Manager Release 8.0 as a combined Java-based solution. Release 8.1 followed in October 2006.

- CA has a corporate vision known as Enterprise IT Management, which it defines as unifying and simplifying IT management to maximize business value. CA delivers identity management (and, hence, user provisioning) solutions to effectively govern, manage and secure IT as a transformational step. The company views user provisioning as part of a unified service model. The architecture is comprehensive; with a model for security information management and entitlement management that addresses a testing layer and a governance layer for risk and control management.
- CA plays an active role in most international standards associated with identity and security for user provisioning, supporting both technical and service management standards such as ITIL. For major integration and consulting partnerships, Deloitte, PricewaterhouseCoopers and Accenture are CA's primary choices. Mycroft and Logic Trends are also key VARs, though user provisioning for CA is predominantly a direct sales model. CA's identity management campaign is part of the CA "Manage, Govern and Secure" brand and is tied to a security awareness program of "Security Without Question." The company's improving customer and partner performance in the first half of 2007 indicates the "partner ecosystem" concept is having the desired cultural effect.
- CA Identity Manager stresses comprehensiveness of features and integration capability as its key feature set, followed by delegated administration capabilities, a robust Web services identity management interface, multiple open interfaces on the back-end for connecting to target systems and entitlement certification capability. Agreements are in place with Vaau, ID Focus, Eurekify and Aveksa to address role management issues. Identity Manager's use with CA Clarity for governance risk and controls reporting can also be a differentiator where such environments coexist.

Cautions

- CA is finally coming out of significant organizational changes that impacted consistent, linear product planning and marketing strategy for user provisioning. Improvements in customer and partner performance are significant in the recent six months, but it has caused some delay in messaging and delivery for the company.
- Although CA articulates an excellent vision and architecture in entitlements management, the execution in this area and in role management lacks depth and capability and requires partnering and customization.
- Customers would also like to see more Java-based connectors in the management library as well as the ability to create customer connectors via Web services application program interfaces. FIPS 140-2 support is also requested for potential government clients.

Courion Strengths

- **Courion Enterprise Provisioning Suite (AccountCourier v.7.60 (v.7.70 as of June 2007) – AccountCourier, AccountCourier RDK, PasswordCourier, RoleCourier, ComplianceCourier, CertificateCourier**
- Courion enters the Leaders quadrant with Account Courier v.7.60. The company has successfully combined a critical mass of customer wins against suite competitors by combining a lower total cost of ownership (TCO) model and ease of administration, a series of innovative technical updates that include integrated role management and modification of its marketing and sales plans to include a growing VAR channel network. Courion has also sought to broaden its industry presence in healthcare by challenging Sentillion. This, coupled with strong leadership and effective communications, has driven 2006 to 2007 user-provisioning revenue for a profitable company at a rate higher than the industry average.
- Courion was one of the first user-provisioning vendors to tie the vision of addressing business compliance and regulatory requirements with identity administration and identity audit reporting solutions. Much of the company's success beyond basic password management came from the ability to successfully articulate key business concerns that user provisioning could address and, through effective marketing to business decision makers (as well as CIOs), to close sales, first in the SMB markets up to 30,000 users, then gradually moving to larger customers. Courion's primary target-sized audience, however, remains the small-to-medium business customer up to 75,000 users, where 80% of its existing customers reside. Unlike Sentillion, Courion's target audiences include not only healthcare, but also government, financial services and manufacturing.
- Courion's vision in a very competitive market is to provide a low services-to-license ratio solution to user provisioning, resulting in long-term low costs for operations. To do that, the design leverages existing data stores such as Microsoft Active Directory or other identity repositories. The toolsets for workflow-to-business alignment and advanced compliance reporting for such areas as attestation and segregation of duties are best in class.
- Courion's has extended integration capabilities with Citrix for enabling Citrix Presentation Server provisioning, as well as similar capabilities with authentication providers such as RSA, Gemalto and ActivIdentity. The company also has significant IT service management integration capabilities with vendors that include BMC's Remedy, HP's Peregrine and IBM's MRO. Courion's standards presence is also strong, as is its move to using service-based architectures as potential delivery mechanisms for next-generation product.

Cautions

- Courion's competition is learning to more effectively market the compliance story of user provisioning to the business decision maker, neutralizing some of the company's earlier advantage. Courion will need a new differentiator for business just to be heard, particularly with larger competitors that already have boardroom influence.

- Courion is the only point product provider in the Leaders quadrant. For customers requesting suite proposals, this requires the company to partner with a shrinking set of Web access management, directory or other identity component point providers to offer an equivalent product set. While this may not be a technical issue, it is increasingly becoming a licensing disadvantage in larger deals.
- Although the VAR channel network is an improvement, Courion still does not have the global reach of major competitors in terms of top-tier system integration partnerships. To compete effectively, some partnerships in strategic markets must exist to achieve a critical mass of customers' accounts.
- Courion's identity audit reporting system could still be improved with more out-of-the-box reports, and reports available for creation and management by end users.

Fischer International Strengths

- **Fischer Identity Suite (Fischer Provisioning) v.2.4 (December 2006) – Fischer Workflow & Connectivity Studio, Model Connector, Fischer Password Manager, Fischer Provisioning, Fischer Policy Manager, Fischer iComply, Fischer DataForum, Fischer iFly, Fischer High Privilege Account Management**
- Although newer user-provisioning vendors have entered the market since Fischer International in May 2005, none has been quite as unique. Fischer moves from the Niche Players quadrant to the Visionaries quadrant in this year's study because of its execution on a vision of providing user provisioning through a partner model as an identity management service. It represents an advanced, visionary delivery method most competitors must (and, in some cases, do) address as the market demand evolves.
- Fischer's market premise is focused: enable service providers (whoever they may be, including customers themselves) to offer user provisioning as a profitable line of service, and in any delivery model – perpetual, on-premise, hosted and SaaS. To do this, Fischer's sales model is entirely through midtier service partners. The company operates today predominantly in North America, though expansion is planned. A relationship with Eurekify provides role management services where needed, addressing one of the concerns from the 2006 report. Considerable progress has also been made in attestation reporting and SPML support, two other areas from that report.
- Fischer's technical architecture is a lean, Java-based SOA framework that allows a rapid, configurable delivery model for providers. It has allowed the company to keep pricing low and aggressive. Fischer has attracted enough attention to build a small, but growing, base of customers who are contemplating user provisioning and other identity management services in various delivery models – including, for example, SMBs reluctant to deploy and maintain their own user-provisioning solution.
- Fischer Identity Suite offers a flexible, simple, cross-domain framework with nonstop operations support, high-privilege account management, and extensive connector management. It has very strong cross-industry standards support, as you would expect for a system positioned as a service delivery platform, resulting in cross-interoperability across diverse systems. For a “lean” implementation, the solution is surprisingly featured.

Cautions

- Compared with its competitors, Fischer is a small company. It remains heavily dependent on its partner network for visibility and support, so its success in this market depends in turn on its partner relationships and the ability of its product to continue to deliver satisfactorily for those partners – a regrettable codependency.
- Fischer's partners are primarily service providers that are also system integrators rather than large-scale system integration and consulting firms. The battle for much of the user-provisioning market share is shifting into the hands of partner system integration and consulting firms. Competitors with key partnerships with such firms will have greater chances of broadening market share at a faster rate.
- Fischer remains a regional solution rather than international – the global presence is needed for the same reasons as strategic partnerships.
- Although the lean service framework is effective for implementation, customers are seeking additional features from Fischer Identity Suite, including high availability load balancing built into the suite, alternate language support, and additional metrics for service providers and open-source frameworks. These updates are planned to occur during the second half of 2007 through the first half of 2008.

HP

Strengths

- **HP Identity and Access Management (HP Select Identity) v.4.1 (December 2006) – Select Identity, Select Audit, Select Access, Federation**
- Like Oracle, HP is one of the more recent entrants into the competitive identity management market, choosing carefully and selectively the companies, technologies and alliances it believes would provide a viable and competitive offering that is also complementary and compatible with corporate philosophy and strategy. HP acquired Select Access from Baltimore Technologies in July 2003, TruLogica in March 2004 and TrustGenix in December 2005. TruLogica became Select Identity, HP's user-provisioning solution to policies, workflow and identity audit reporting. This, in turn, ultimately became part of the solution HP now calls the Identity Center.
- HP's Identity Center is part of HP's market strategy known as business technology optimization, a hybrid business/technology TCO and planning alignment framework. Identity Center actually encompasses the entire suite of Select Identity, Select Audit, Select Access and Select Federation. Select Identity provides the functions of provisioning, password management, delegation/self-service, audit and reporting, and attestation and remediation workflows.
- HP bases Select Identity's key differentiator on something known as the Service Model, the ability to abstract users and roles from provisioned resources and provide a management grouping capability, thus providing management of roles, rules, inheritance, multiple roles, cross-organizational/functional roles, forms and workflows. To complement Select Identity's role

management capabilities, HP partners with Vaau and Eurekify for role mining as of mid-2007. The company is very active in standards efforts and is considered a thought leader in future developments regarding identity management design.

- HP Consulting & Integration provides the majority of services required to plan, configure and install Select Identity and its component offerings. Other key partnerships include Deloitte and BearingPoint, depending on the industry segments addressed. The percentage of participation of those partners is growing. HP is also using these and other partnerships as resell channels – representing a small but growing ratio of sales. The VAR network includes such names as KPMG and Alphanet, and is growing. Like IBM Tivoli, HP has a strong international presence and leverages its own and partnership services for a balanced customer reference mix.

Cautions

- Unlike Oracle, HP has not been as aggressive with its identity and access management suite, choosing a more focused marketing approach to larger customers. This has not proven as successful in building market share as HP's peers, and has the added risk of giving the impression to some customers that the company does not consider the Identity Center strategic to HP's interests.
- Although HP partners with external system integrators such as Deloitte and BearingPoint, HP now needs to leverage more extensively those relationships beyond its own HP Consulting & Integration.
- Customers would like to see more development capability integrated in Select Identity, as well as an overhaul of the Business Services model of the product for 2008 and rapid development add-ins in the workflow processes for proof-of-concepts and pilots.

IBM Tivoli Strengths

- **IBM Tivoli Identity Manager v.4.6 (July 2005), TIM for z/OS (December 2006), TIM Express (February 2006) – Tivoli Identity Manager, Tivoli Directory Integrator v.6.1.1**
- IBM Tivoli is recognized worldwide as a major player in (among other areas) system management, and has successfully expanded that image in identity and access management. It is also one of the more experienced, having entered the market by acquisition beginning in 1999. Its network of tiered global partnerships (system integrators, VARs, technical partners) and its own global consultancy and services organization are experienced in both breadth and depth for identity and access management. IBM Tivoli's reach into business boardrooms and public-sector decision tables is unquestioned, giving it a decided advantage over competitors.
- IBM Tivoli's recent acquisition of Consul, a major z/OS security administration and audit vendor, has resulted in the addition of Tivoli Compliance Insight Manager, broadening its portfolio and strengthening its identity audit offering for addressing compliance and audit needs. IBM's additional acquisitions (for example, Internet Security Systems, WatchFire) further display its intentions to broaden the integration of Tivoli Identity Manager's core provisioning, workflow, audit and reporting capabilities to the overall security infrastructure, as well as the application development environment.

- From a marketing and sales perspective, IBM Tivoli has a formidable foundation. The Tivoli brand is well-known as part of IBM's "On Demand Business" global campaign and is further refined under the security program message of "Assess, Defend, Access and Monitor." Product management is part of the Tivoli Product Development Model, which emphasizes external certifications and "voice of the customer," and contains considerable customer feedback as part of that model. Additional emphasis of governance, risk and compliance, as well as opening a new front for SMBs with the release of Tivoli Identity Manager Express, is also part of the plan for marketing.
- As a product, Tivoli Identity Manager supports all major platform environments for deployment. Further, product offerings have expanded to include support for the z/OS platform as of December 2006 and a specific product offering for SMBs, Tivoli Identity Manager Express, in February 2006.
- Provisioning and approval workflow technologies are sound and full-featured, and connector libraries are robust, as is the generation kit for unique connectors. Password management functions and delegated administration are competitive with established market players. Deployment, scheduler and rule generation functionality provide a comprehensive starting point for businesses.
- As an option, certificate management capabilities through third-party integration are capable and complete. For role management, IBM Tivoli has established partnerships with a number of vendors in this market, including Eurekify, Bridgestream, SecurIT, Bhold and Vaau to enhance role life cycle management capabilities and continue providing core SoD support.

Cautions

- IBM Tivoli's breadth and depth generate complexity challenges in the company's desire to address complex issues for clients. Tivoli's approach to addressing customer requirements in project planning has sometimes generated lengthy initiatives. This can be managed with strong customer leadership to curtail "scope creep."
- Although Tivoli Identity Manager pricing is generally competitive, pricing models, alternatives and discounts can be complex and difficult to understand.
- Tivoli Identity Manager needs to address user provisioning for administrative and shared accounts as well as standardize audit reporting across shared user-provisioning infrastructure.

M-Tech Strengths

- **M-Tech Identity Management Suite (ID-Synch) v.4.2.1 (February 2007) – ID-Synch, P-Synch v.6.3.1, P-Synch/SSO v.4.3.0 beta, ID-Certify, ID-Org, ID-Access, ID-Archive v.4.3.0, ID-Telephony, ID-Telephony/Bio**
- M-Tech is a Canadian-based, privately owned company since 1992 initially known in identity management circles for its P-Synch password management offering. The company has created a modular architecture to deliver M-Tech Identity Management Suite v.4.2.1, with ID-Synch providing the ability to automatically provision new users, extend self-service access requests to business users, and manage authorizations with built-in workflow. Examples of other components include

ID-Org (an organization chart generation tool), ID-Certify (for audit/compliance attestation reporting) and ID-Access (for Windows role management).

- M-Tech's vision is based on the concept of user life cycle management, which has four phases: manage the profiles and rights of users; support passwords and solve access problems; terminate access rights; and hire employees and contractors. Each phase requires one or more of the modules the company has designed, with ID-Synch being involved in manage, terminate and hire. According to M-Tech, ID-Synch attempts to address automation, self-service, consolidation, delegation and fulfillment business processes with implementation of its user provisioning, workflow and audit functionality.
- M-Tech has a professional services team to offers design, implementation and training services to customers. It also has system integration and consulting partnerships with IBM, ACS and CompuCom, as well as reseller relationships. In addition, reseller relationships exist with service providers such as CSC, EDS and Perot Systems. Relationships are extended with Vaau and Eurekify for role management and Approva for SAP governance, risk and compliance integration and reporting. This Microsoft Windows-based platform has contributed to M-Tech's partnership with Microsoft. M-Tech also has SPML support and is relatively active in international standards for identity and security.
- Key strengths of the product include self-service login ID reconciliation to enable users to map their logins to a global profile; access certification to clean up dormant/orphan accounts and find/remove "stale" privileges; enable self-service workflow to request resources (accounts and group memberships) quickly; and to trigger and automate authorization workflows. Customers report that it is easily configurable, lowering implementation costs and making it a good choice for outsourcing and managed service providers that need fast, multiple deployments.

Cautions

- Although M-Tech's partner relationships with service providers are good, its system integration and consulting alliances can be improved. To compete successfully with leaders in user provisioning, more alliances with top-tier partners will be required.
- For simplicity's sake, M-Tech should consider a rewrite and consolidation of the modular architecture approach for greater flexibility, to ease future integration concerns and to simplify future product management.
- The product needs a simpler setup for automated user administration and identity synchronization as well as support for alternative platforms for the identity cache and for system configuration (Oracle, MSSQL, DB2).

Microsoft Strengths

- **Microsoft Identity Integration Server v.1.0 (April 2007) – Management Agent SDK, Identity Manager, Setup Component, Help Desk Password Reset, Self-Service Smart Card Pin Change, Certificate Life Cycle Management**
- Microsoft is the company that customers and competitors watch for potential changes in the identity and access

management market. Few have more influence. For 2007, Microsoft moves from niche player to challenger status, but for mixed reasons. Progress has been made in market share for Microsoft's component tools in user provisioning. Active Directory and the collaborative applications provided by Microsoft that use the infrastructure of Active Directory have steadily grown in the past 18 months in size and importance in the enterprise. Identity repositories held in Active Directory have been increasingly designated as authoritative and become critical components of identity infrastructures for synchronization and provisioning purposes. Microsoft's incorporation of card management provider Alacris (acquired in 2005) brought about additional capabilities in credential management. Microsoft also contributed significantly to the thought leadership surrounding the identity metasystem and the future of identity management, particularly for consumers and considerations of privacy and governance.

- Microsoft markets user provisioning under "Identity and Access Solutions," which it defines as a set of platform technologies and products designed to help organizations manage user identities and associated access privileges. This messaging is further refined into identity life cycle management (where user provisioning is sold), information protection, federated identity, strong authentication and directory services. From a business perspective, Microsoft still emphasizes operational efficiency and compliance as key drivers for its identity solutions, followed by heightened security and enabling business success.
- To deliver its solutions, Microsoft has its own integration and consulting business, but also depends on a number of system integrators and consultants globally, with such names as Avanade, Unisys and Oxford Computer Group being particularly experienced. Microsoft also has key ISV relationships with Danish provider Omada and French security and identity provider Evidian. This relationship network in identity management also extends to prominent vendors such as Quest Software and Gemalto at a number of levels, including technology cooperation, standards support and alliances.
- From a technical perspective, the heart of Microsoft's offering remains metadirectory synchronization through Microsoft Identity Integration Server (MIIS) 2003 today. Microsoft's Identity Life Cycle Manager (ILM) 2007 (just released) is the successor of MIIS and the next-generation technical foundation on which to build its user-provisioning services. The majority of implementations evaluated and the basis of this report are MIIS.
- Microsoft remains the absolute (startup and initial) price leader, providing implementations of basic provisioning and identity audit reporting at one-half to one-third the price of leading competitors. The product provides deep integration with Active Directory, a metadirectory join engine providing a single view of user attributes across a Windows enterprise, and a means to identify out-of-policy states and perform attribute conversions from authoritative sources.

Cautions

- Microsoft views user provisioning as a "build" engagement with Microsoft "library" Toolkit and experienced developers (for example, workflow capability comes through BizTalk, with Visual Studio required for complex workflow and rule support, and Unix support comes through Microsoft Services for Unix). The toolkit components come from different Microsoft product

lines and are woven together to provide user provisioning, workflow, password management/reset and identity audit reporting.

- Microsoft's user-provisioning solution requires a pricing model that takes into account life cycle maintenance costs of a customized solution using its component technologies or a partnership solution using its partner program to bring provisioning, workflow, password management and audit reporting together. The price quoted is still the best in the market, but must have these factors calculated into the equation.
- As with other competitors (SAP, IBM Tivoli, Oracle), Microsoft product planning prioritizes Microsoft-centric customer requirements for user provisioning first, and will continue to address any existing or future solution feature set development that way. For Microsoft, this is particularly important to protect potential encroachment into System Center or enhanced Windows. Customers should be aware that it can affect the degree or timeliness of heterogeneous support;
- Microsoft MIIS and ILM do not support SPML.
- There is no role management or out-of-the-box reporting of any kind, although customers can use their existing reporting products to get access to the data in the MS-SQL database and partnerships are available for role management.

Novell Strengths

- **Novell Identity Manager (Provisioning, Password Self-service, Roles Assurance, User Application, Design & Documentation/Modules); Novell Access Manager (Federation, SSL VPN, Web Server security); Sentinel From Novell; Novell Secure Login; Novell Identity Assurance Solution**
- Novell is a study in contrasts. This is a company that evolved its identity and access management suite entirely from within, with no acquisitions, but doesn't use that fact as an architectural or competitive marketing advantage. This is also a company with a historical heritage in building partnerships worldwide to ensure its solutions have outlets, yet it is one of the few large competitors without world-class system integration or consulting partners focused on identity management. Despite these contrasts, Novell has combined a best-in-class product upgrade, a focused upper-management team, an extensive midtier partner network and a global market segment sales strategy that has moved it to the Leaders quadrant in 2007.
- Novell is no stranger to the identity business. It envisions an "identity fabric" that: is active, manageable, pervasive and vendor "agnostic"; overlays the network fabric and requires an element and addressing scheme; extends RBAC, policy and compliance monitoring throughout a network environment; and enables full integration of disparate identity-based systems.
- Novell's product strategy for the identity fabric and identity and access management centers on addressing unified policy and compliance management through provisioning management, security and compliance, the framework for Identity Manager v.3.5. It is this common horizontal architecture that is the heritage of organic construction and has provided the company with development and integration advantages. Some key

features for this release include a resource toolkit for rapid deployment, as well as policy simulation and project validity checking; provisioned resource recertification/attestation reporting and other RBAC extensions; and matrix organization, anonymous user and SSO credential provisioning support. Novell also has partners with Bhold, Eurekaify, EngiWeb and Vaaun for role management where needed.

- Novell's presence in the SIEM market with the Sentinel 6 product also enables customers to correlate Sentinel log information of "who accessed what" with Novell Identity Manager's log information of "who has access to what," providing additional forensic capabilities when needed.
- Novell has built a network of smaller, regional integration and consulting partners such as Carefx and Novacoast in the U.S., Hitachi and Fujitsu in Japan, and Softchoice in Europe. Many of these same partners are resellers as well. However, Novell has not created strategic relationships with world-class system integration and consulting firms like its competitors. The company is active in international standards work with the role it plays in Linux, security and identity. Novell Identity Manager supports SPML.

Cautions

- Partnerships: Novell's primary competitors have established one or more agreements with world-class system integration and consulting partners. This will become more important in 2007 to 2009 as the market begins to consolidate and experience grows in value.
- The SMB market (1,500 to 25,000 users) is becoming increasingly important, as is the means by which it is addressed. Flexibility of service offering and targeting marketing to this size market and specific market sectors will become increasingly important as competition increases.
- Although specific elements of Novell's segmentation market strategy that allowed it to achieve leader status are good, overall market strategy for identity and access management is not comparable in messaging, depth and coverage to competitors, and will require revision and better execution if Novell hopes to make this entry in the Leaders quadrant more than temporary;
- From a technical features standpoint for larger customers, the product could use better high-availability solutions, including improved failover for engine and drivers and load sharing/balancing across multiple engines.

Oracle Strengths

- **Oracle Identity and Access Management Suite (Oracle Identity Manager) v.9.0.3 (February 2007)**
- Oracle is recognized worldwide as a major player in database systems and enterprise applications, and has been busy cultivating that image in identity and access management. It entered the market later than most of its competitors, with acquisitions of Phaos (May 2004), Oblix (March 2005), Thor Technologies (December 2005) and OctetString (December 2005). The company has been busy establishing and cultivating a network of global partnerships (system integrators, VARs, technical partners) such as Deloitte, Accenture, KPMG and Wipro, and its own consultancy and services in user

provisioning have developed valuable experience during the past 18 months of deployments.

- Oracle's reach into business boardrooms and public-sector decision tables is pervasive, providing an additional advantage over competitors. Oracle's continued investment in the identity and access management area at all levels will continue to increase as it seeks to aggressively increase its market share of identity and access management customers.
- Oracle's identity and access marketing is cornerstone to its overall global security marketing campaign, which emphasizes data protection, privacy and a holistic data security architecture. Oracle is uniquely positioned to use its presence in enterprise applications (for example, PeopleSoft, Siebel), application platforms (for example, Oracle Applications Server), application development (for example, Fusion Middleware) and database systems for cross-selling opportunities with identity and access management. An aggressive multifaceted communications plan coupled with an accelerated sales program has created momentum for the company, leading to a growth rate in customers several times that of the general market and providing the company with what it lacked in 2006 – credible customer references for a worldwide market.
- Rapid growth has not come without a cost, however. Initial implementation experiences as reported by customers of the nascent Oracle services team and later by early system integrator relationships were less than favorable. Those have since been rectified, and Oracle has moved ahead quickly to build a credible experience network within and with partners.
- Oracle possesses the most comprehensive vision for user provisioning. It not only recognizes the importance of addressing basic infrastructure issues that are part of security management involving workflow, audit and reporting of access history for compliance, but also extends that vision upward into management of risk as part of a governance model for information security and downward as part of a support system for the management of authorization across multiple application systems. Oracle's strategic vision for identity and access management is a natural extension of its strategic vision as a corporation, and makes the company a competitor with momentum.
- The recent product release from Oracle has several new enhancements, including improvements in the connector library with the introduction of generic technology connectors as well as an enhanced adaptor factory. There is also support for localizations for 10 languages as Oracle Identity Manager moves fully into the international arena. Graphical wizard additions have also contributed to greater ease of use for several of the interactive components.

Cautions

- Oracle's system integrator and consulting relationships are still evolving and are quite new in many areas of the world, so expect some inconsistencies in performance as the network matures.
- Oracle's entry into the SMB market shows promise, but is still evolving as a competitive reaction to similar movements by IBM Tivoli and established business by smaller competitors. Some work is still required in positioning and feature selection for the offering.

- Although Oracle's technology components for identity administration (user provisioning, workflow, audit and reporting, and so on) are equivalent to several leaders in identity and access management, there are still some inconsistencies in integration “look and feel” and reporting that are normal considering their relative newness as a suite provider. Look for more streamlining in 2008.

Quest Software Strengths

- **Quest ActiveRoles Server v.6.0 (September 2006) – ActiveRoles Server, ActiveRoles Quick Connect v.3.5, Quest InTrust v.9.5.1, Quest Reporter v.6.0, ActiveRoles AccessManager v.1.0, Vintela Authentication Services v.3.2**
- Although Quest Software is new to this Magic Quadrant, the company is no stranger to the user administration market. A major supplier of (among other solutions) Windows management products, ActiveRoles v.6.0 is Quest's entry into user provisioning for enterprises. A case can be made that Quest actually provides user provisioning as a feature set of several Windows, application and database management solutions (as do most identity and access management competitors), and is sometimes used as a “supplementary” solution with larger provisioning implementations that fail to address Microsoft and Linux-centric administration as effectively .
- Quest Software's marketing approach is predominantly direct sale, though it does possess system integrator relationships with IBM Global Services, EDS and Dell, which also participate in reselling. Quest's strategy for user provisioning centers on its skill and understanding of Active Directory administration, as well as the integration synergies for the administration of Windows and Unix/Linux identities found in their acquisition of Vintela in 2005.
- ActiveRoles is primarily a solution for Microsoft-dominant SMBs of up to 50,000 users, which account for almost 90% of Quest's current sales. However, since the system is integrated with the MIIS environment, by default it is capable of supporting heterogeneous provisioning, albeit within a Microsoft architecture. Quest also uses other tools from its Windows management portfolio such as Quest InTrust, Quest Reporter to provide identity audit reporting capabilities for compliance and audit reporting of user provisioning, and Quest Password Manager for password management and self-service capabilities.
- From a customer perspective, initial reports indicate good deployment experiences, and positive reports on user interfaces and workflow. Quest's “QuickConnect” feature also shows particular promise from initial feedback as well. Pricing is competitive and Quest's brand and reputation should provide opportunity as it improves the product and market share.

Cautions

- ActiveRoles is Quest's first user-provisioning offering. As such, the component features do not have a uniform look and feel and some features (for example, QuickConnect) are not yet fully intuitive for customers.
- The Quest brand is closely associated with Microsoft. If ActiveRoles wishes to be considered as a heterogeneous offering, positioning and messaging, followed by active

communications, will be required to ensure customers are aware of its multiplatform capabilities.

- ActiveRoles is well-suited for SMBs, but has fewer customer references in large industry segments above 50,000 customers. More will be needed if Quest is to be considered as more than a niche player,
- Partnerships on a significant scale matter as you move into larger customer segment opportunities because of complexity issues associated with those customer requirements. Quest requires one or two Tier 1 partnerships if ActiveRoles is targeted to different customer segments.

SAP (MaXware)

Strengths

- **SAP (MaXware); SAP NetWeaver Identity Management v.8.0.687 (Note: SAP MaXware did not participate in providing research information for the Magic Quadrant. Its positioning in the study was estimated based on existing industry information and it was included in the study based on the significance of the acquisition – see the Recommended Reading section.)**
- By acquiring MaXware in June 2007, SAP seeks to improve its identity and access management capabilities rather than to compete against established identity and access management suite vendors. This move underscores a new approach to a maturing user-provisioning market, that of application providers enhancing provisioning capabilities for their solutions and providing deeper integration with role and authorization management requirements. SAP has been a leader in fine-grained authorization management with its portfolio of products, and MaXware will enable it to enhance provisioning, synchronization and audit capabilities of that portfolio.
- MaXware is a vendor that started in the metadirectory market and evolved its offering over more than a decade into (among other capabilities) a Java-based user-provisioning product with some Web services support functionality. Its identity audit reporting capabilities include LAMP support, an open-source application development platform for Linux, Apache, MySQL and PHP (also known as Hypertext Preprocessor). MaXware requires customization for attestation reporting through templates. MaXware does provide SPML support and is active in most standards efforts, considering its use of open-source in its architecture.
- MaXware's Identity System has been renamed as SAP's NetWeaver Identity Management. This confirms Gartner's original premise regarding SAP's purpose for the acquisition, that is, to maximize NetWeaver's identity services capabilities primarily for SAP customers. The key features of NetWeaver Identity Management include: a provisioning and workflow engine; user self-service and password management; a reporting, auditing and logging capability; and a metadirectory and identity store.
- SAP also offers NetWeaver Virtual Directory Server for and NetWeaver Data Synchronization Engine as additional component technologies for addressing more-complex user provisioning, integration and federation needs in an identity and access management program.
- SAP has incorporated MaXware into its marketing, sales, communications and training plan and network, as well as its

partnership program as of mid-2007. It will take some time to fully assimilate and integrate these technologies and processes with NetWeaver and to align with the symmetry of governance, risk and compliance systems from SAP's acquisition of Virsa to achieve the full advantage of the acquisition.

Cautions

- SAP's agenda for user provisioning is specific to SAP. Although the company will support other platform and application identity management needs, the product planning and focus will be to address SAP application portfolio and integration requirements first.
- SAP is in the process of re-evaluating close partnerships with identity and access management product providers such as Siemens, which have performed tight integration with SAP's portfolio to provide user provisioning, workflow and audit functionality. Expect little impact in the short-term – acquisition impacts take time.

Sentillion

Strengths

- **Sentillion proVision v.2.4 (May 2007) – Provisioning Manager, BridgeWorks, BridgeBuilder for Provisioning**
- Sentillion remains dedicated and focused on the healthcare industry. This has remained the focus of the company since its original appearance in Gartner's study as a niche player in 2006, though it offers healthcare-centric SSO and virtualized remote access services as well. During 2006 and 2007, Sentillion has shown innovation in its singular approach to healthcare-based user provisioning, providing a broader vision for how the complex needs of identity administration for the healthcare profession should be addressed. This has occurred primarily through the latest changes in proVision v.2.4, the continued use of Sentillion's open-source community IdMPower to share among its members provisioning software adapters for clinical and nonclinical applications, and leveraging existing Microsoft-centric customer infrastructures. This has resulted in the move of Sentillion to the Visionaries quadrant.
- The healthcare industry has complex role relationships and delegated administration needs. Sentillion's strategy for user provisioning is built on the concept of "purpose-built" healthcare, and addresses role-based, fine-grained provisioning. Sentillion's SSO solution represents the leading sale, and the starting point for a user-provisioning opportunity in customer environments. Most implementations can be classified as SMB in terms of user seats, though the complexity of role environments in healthcare often dictates longer deployment cycles and higher costs. Sentillion still relies almost entirely on direct sales channels, though CTG Health Services is a system integration partner in North America. Additional system integration partnerships are planned for international expansion.
- Although the focus on healthcare has initially been good for Sentillion, it has come with a price. Adherence to standards such as SPML is not viewed as a priority in healthcare IT shops, and is therefore not a priority for Sentillion. HL7 Clinical Context Object Workgroup support is for the SSO and Single Patient Selection offerings, but isn't particularly valid for other industries. Sentillion also has no plans to date to support Web services standards, though services architectures are

considered part of a longer-term road map as a result of their use of Microsoft infrastructures.

- Sentillion has developed a small, but growing, base of hospital and healthcare facility customers that have served as the basis of its success for user provisioning and a large installed base for its other solutions. Some organizational adjustments have been made: a restructured Web site and renewed emphasis on healthcare customers as competition intensifies.

Cautions

- Sentillion still remains one of the more expensive solutions to implement, primarily because of the complex nature of user provisioning in the healthcare profession. While some of this is beyond Sentillion's control, steps should be taken to continue to reduce the costs of planning and implementation.
- An increasing number of competitors (for example, Courion, Siemens and Novell) are developing specialized and price-competitive offerings for healthcare and challenging Sentillion's dominance in this market. Without continued agility and differentiation, Sentillion will face significant challenges.
- The lack of additional significant business partnerships (for example, system integrators, consultants, VARs) to broaden its reach is hurting Sentillion's opportunities to counter larger competitors in this market.
- Provisioning Manager still lacks graphical tools for automating bridge development and configuring provisioning manager, as well as an embedded reporting and management dashboard.

Siemens Strengths

- **Siemens DirX Identity v.8.0 (April 2007)**
- One of the largest and most diverse corporations in the world, Siemens is one of the few vendors in the identity and access management market that did not create its user-provisioning offering via acquisition, but through internal development – although it did acquire its current Web access management component from Okiok in March 2006. During a recent restructuring, responsibility for identity and access management within the company was repositioned under the Medical Global Solutions product house. From there, Siemens has a focused program of leveraging the formidable strength of its sales channels (for example, Building Technologies for physical security integration, Enterprise Communication, IT Solutions and Services, Medical) to target specific industry segments, such as healthcare, public sector (government) and the enterprise.
- Earlier in Siemens' experience with the identity and access management market, partnerships were limited because Siemens Enterprise Communications provided extensive reach in EMEA for integration needs. That has changed. Siemens now has relationships with BT Global Services, T-Systems, CSC and HWS, and is exploring other opportunities. It also has some small VAR relationships outside of Siemens Enterprise Communications and has built some solution relationships with Secude and Nexus, though the company still depends on its own divisions for the bulk of resell capabilities.
- Siemens' key differentiators include a strong strategic relationship with regionally adjacent software giant SAP. SAP

has selected Siemens as a preferred partner for integrated identity management with SAP NetWeaver, R/3, mySAP ERP and mySAP HR. This integration extends to user provisioning, user interfaces, assessment and certification.

- Differentiators in the DirX product itself include: A robust connector library that is part of the architecture's metadirectory history; a role management feature set that has advanced (that is, role hierarchies, SoD, context-based role assignment or parameterization) functionality found in role management vendors competitors are partnering with today, though it does not include such functions as role mining and role discovery; and a series of packaging and portfolio editions that enables Siemens to match specific industry requirements to solutions sets (for example, healthcare, physical security).

Cautions

- Although Siemens is well-known in Europe in user provisioning, identity management customer references outside of that region still aren't as numerous as with its competitors.
- Although Siemens has taken steps to expand its base of system integration support outside of Siemens Enterprise Communications, it remains the dominant provider. Other options are limited.
- The product still needs some additional capabilities identified by customers, including: additional connectors for clinical applications and health information systems; attestation reports as part of the identity reporting system; and role mining capabilities.
- Although Siemens has strong engineering and design expertise, it lacks executive penetration in most industry segments with a positioning and messaging story related to the business purposes of identity and access management – areas relative to risk management, governance and audit controls that can enhance the existing SAP relationship and propel its identity management solutions into the boardroom.

Sun Strengths

- **Sun Java System Identity Manager v.7.1 (May 2007)**
- From its acquisition of Waveset Technologies in December 2003, Sun built a user-provisioning solution ultimately chosen as the leader in Gartner's first Magic Quadrant in 2006. That is true for this report as well. Sun has created a combination of an effective technical platform, strong marketing, diverse and experienced partnerships for delivering the solutions coupled with a broad, rich array of customers on which to derive existing licensing revenue and references.
- In July 2006, Sun reorganized its identity management unit under the newly formed Software Infrastructure Business, along with SOA/Business Integration and Application Platform. Several key authors of Sun's original identity marketing and product strategy left in 2006, so much of the decision making is now under new leadership. However, momentum in Sun's market is being cultivated, with resulting increases in sales, service and support head count as well as corresponding revenue and customer increases, albeit at a slower tempo than 2005 and at slower rate than the overall user-provisioning market. This is primarily because of the type of deals that Sun has traditionally won and the shift in availability of those deals, as well as increased competition.

- Sun's strategy is to provide the identity solution for high-scale extranets, and many of the company's earliest and most successful deals have been with large-scale global customers in industries such as telecommunications and multinational enterprises. Sun also has a strategic commitment to open source, with open-source versions of its user-provisioning software and active leadership roles in the open identity community. The company has also proposed a road map that includes deploying Sun Java System Identity Manager as a set of consumable Web services for the next-generation system.
- Sun's acquisition of identity deployment automation vendor Neogent in October 2006 helped refine its portfolio of rapid implementation capabilities. The Sun Partner Advantage Program is a model for coverage of consulting, system integration, VAR and ISV needs for user-provisioning offerings, particularly for large-scale vendors.
- Identity Manager v.7.1 provides a consolidated installation and administrative interface for auditing and provisioning, further simplifying an intuitive product. The end-user interface has been revamped with enhanced controls, and the workflow system has been updated and possesses enhanced debugging capabilities. With these and improvements in identity auditing and reporting, the system remains a best-in-class offering. Partner solutions for role management include alliances with Bridgestream and Vaau.

Cautions

- Sun's loss of several key members of its identity market strategy team in 2006 and some reorganization inertia have resulted in the perception of a loss of mind share momentum, as well as market momentum, though the reorganization structure and positioning make good business sense.
- The year 2007 is pivotal for Sun. Shifts in the type of user-provisioning customer deals, the nature and type of competition, the gradual equalization of the technical feature and function set for user provisioning, and the apparent reduction in marketing and some sales momentum are combining to create a significant threat for the company. If it cannot show differentiation and flexibility against strong and agile competitors during the next six to 12 months, then it will represent the apex of the company's growth in the Magic Quadrant.
- Sun user-provisioning solutions for mainframe-centric and Microsoft Windows-centric customers aren't as compelling as some of its competitors' solutions. In a maturing market, these customers are becoming more important to all competitors.

Voelcker Informatik Strengths

- **Voelcker ActiveEntry v.3.1 (April 2007)**
- Founded in 1994, Voelcker Informatik AG is a prime example of how agility is usually found in smaller, focused enterprises that have high-touch opportunities with customers. Having built a loyal following in public-sector, financial services and technology firms, the company also has close ties with European-centric integrators T-Systems and Computacenter. A charismatic CEO has led a small team of skilled developers and

support staff to create and maintain a surprisingly detailed .NET and Mono-based platform that addresses all the critical requirements of user provisioning and couples that with a highly configurable framework to customize the system quickly and deliver a competitive TCO. Voelcker's key market premise is to deliver this platform with a customer focus and attention to program detail not found with larger competitors.

- This has resulted in some success for Voelcker in situations where costs are severely constrained (for example, education and government, particularly city government) and in cases where initial project proposals by competitors have gone awry because of design miscues or poor program management. The company's dual .NET/Mono architecture particularly appeals to institutions where heterogeneous platforms are pervasive and budgets are small, or infrastructures are Microsoft-centric. The company has traditionally been successful in SMB markets where this configuration and demand was common in Europe, though recent implementations have moved into larger accounts.
- The ActiveEntry architecture leverages Active Directory and Certificate Life Cycle Management extensively. Workflow and Rule Designer are tightly integrated and have rich features, and the connector library is adequate. ActiveEntry's integration with SAP is extensive, supporting SAP ERP by: provisioning accounts, roles, profiles and so on to SAP Systems and SAP portals; using SAP HR as an authoritative source for employee data; and SoD analysis for SAP roles.
- Voelcker follows international standards carefully and has developed ActiveEntry to be SOA-ready, which is one reason why deployments can occur relatively quickly and deployment costs can be kept low.

Cautions

- No one wants to say that "size matters," but Voelcker Informatik must compete against multinational competitors such as Siemens, IBM Tivoli and Bull Evidian even in its own region of the world. Partnerships and VAR channel networks isolate and inhibit the ability to have access to customers. Although the company has made progress and been profitable thus far, it is increasingly difficult to gain the attention of decision makers as feature equalization enables decision makers to choose more commonly seen vendors.
- Voelcker must also compete in proposals where the customer requests a bid for a suite that may include Web access management or combinations of other identity and access management components in addition to user provisioning. This requires partnering with a shrinking number of choices for vendors in the market and competing with aggressive licensing from suite competitors – possible, but challenging.
- The maturity and usability of the product sets make Voelcker a potential acquisition target, requiring that potential buyers consider the impact of new owners if such an acquisition occurs. History has shown this is not necessarily bad, but delays in future product development may result as new owners absorb the acquisition, if it occurs.
- Voelcker is still primarily a European provider, with (at present) few resources for international expansion.

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

Acronym Key and Glossary Terms

CMF	content monitoring and filtering
EMEA	Europe, the Middle East and Africa
ESSO	enterprise single sign-on
FIM	federated identity management
ILM	identity life cycle manager
ISPF	interactive system productivity facility
ISV	independent software vendor
LDAP	Lightweight Directory Access Protocol
MIIS	Microsoft Identity Integration Server
RACF	remote access control facility
RBAC	role-based access control
RME	role management for enterprises
SaaS	software as a service
SIEM	security information and event management
SMB	small and midsize business
SOA	service-oriented architecture
SoD	segregation of duties
SPML	Service Provisioning Markup Language
SSO	single sign-on
TCO	total cost of ownership
VAR	value-added reseller
VM	virtual machine
VMM	virtual machines monitor

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets, skills, etc., whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability (Business Unit, Financial, Strategy, Organization): Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit to continue investing in the product, to continue offering the product and to advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales support and the overall effectiveness of the sales channel.

Market Responsiveness and Track Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements, etc.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the Web site, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling product that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including verticals.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.