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# Enterprise Single Sign-On SOS

*The Critical Questions
Every Company Needs to Ask*

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## INTRODUCTION

Whether prompted by the compliance requirements of HIPAA or GLBA, the growing need to strengthen IT security, or mounting user frustration due to forgotten passwords, more and more organizations are thinking seriously about implementing Enterprise Single Sign-On (ESSO). According to Giga Research analyst Steve Hunt, "Enterprise SSO works well and makes sense. It is a secure, cost effective tool for adding value to an organization. It would be wise for vendors to implement it today."

But when organizations look at the ESSO marketplace, they may feel the need to send out an SOS. There is a growing number of ESSO vendors offering a diverse array of solutions each with its own capabilities, associated costs, resource requirements, deployment needs, and implementation times. The lack of a common approach to delivering ESSO makes it a challenge for organizations to compare the relative merits of ESSO solutions.

No single ESSO solution can be right for every company. So how do you know which one best suits your business, its size, your budget, or your desired implementation schedule?

This white paper is intended to make the ESSO evaluation process simpler and faster by identifying the critical questions you need to ask ESSO vendors as you evaluate their solutions. These questions are organized into four key ESSO topics: application support; deployment; ongoing management; and additional features, tools and services. By asking these questions and comparing vendor responses, you'll get a clearer picture of the capabilities and strengths of each ESSO solution, as well as its requirements and associated costs. Once you're armed with that information, you'll be well on your way to choosing an ESSO solution that keeps your organization's assets more secure, and your people more productive. The right ESSO solution will also deliver a quick and significant return on your investment.

## APPLICATION SUPPORT

By definition, an "Enterprise Single Sign-On" solution has to do just that; it must provide SSO access across the enterprise. While you may deem ESSO only essential for some of your applications and users, an ESSO solution must still offer you the option of supporting all applications and all users at all locations all the time.

That's a tall order when you consider the complexity of today's corporate IT environments, the growing number of devices people use to access their applications, and the globally-dispersed nature of many organizations. These environments often include legacy applications that have been modified and updated over years or even decades. Some have client/server applications that split processing chores between desktop workstations and departmental servers. And increasingly, organizations are using Web-based applications owned and run by third-party vendors. Users are accessing these applications from a variety of locations using everything from wired PCs to wireless laptops to personal digital assistants (PDAs).

Some of the most important questions to ask ESSO solution providers involve application support. That's because a sizeable portion of the cost, resource requirements, and implementation time of an ESSO solution depend on how that solution handles the process of ESSO-enabling an application. Generally speaking, the more application modifications, customization, and workstation installations are required to ESSO-enable each application, the longer it will take to deploy, the more resources will be required, and the more it will cost.

### *How many ESSO-enabled platforms does the solution cover "out of the box?"*

> Applications use many different technologies, including Java, Visual Basic, C++, Windows, the Web and numerous host emulators. Are your applications "well-behaved" in terms of code design or will they pose a challenge to the ESSO solution? Applications may be accessed remotely or via terminal services. Have these applications and users been considered?

### *Does the solution require development of custom connectors for ESSO-enabling certain applications?*

Back-end connectors can be complex and may require changes to the application code. Are you prepared for this, and do you have access to the source code of your applications should this be required by an ESSO solution?

### *What happens when providers release new versions of applications? Will scripting be required?*

Do you have to continually update every client, or does the solution handle it automatically? Script-based ESSO solutions may create the need for a dedicated resource for changes, and maintenance of the script library. Does the ESSO solution require the scripts to be managed? If so, how are they distributed to the desired users and groups?

### *What skill-level is required to do the scripting? How long will it take? Days? Months?*

Some scripting languages are common, others are proprietary, and some solutions may not require scripting at all. Do you have the necessary skills in-house, or will you need to call the vendor each time a script change is required? Total cost of ownership and schedules will also be impacted by this.

### *What are the costs associated with ESSO-enabling additional applications?*

Most organizations change constantly. Applications will be added, modified, updated, and deleted. The ESSO solution should consider the dynamic nature of the organization. Costs could include scripting, connector integration, and testing, distributing and enabling the new application, as well as support and collecting feedback on use and satisfaction.

## DEPLOYMENT

Few technologies have as direct and widespread an impact on an organization's business and IT environments as ESSO, since an effective ESSO solution must be comprehensive and flexible, with the ability to touch virtually all users and all applications, at your discretion and timing. That's why it is essential to understand all the factors and requirements involved in deploying any ESSO solution.

First, there are the logistical aspects of deployment to consider. Before you can make an informed ESSO decision, you need to know whether deployment will be an all-or-nothing, flip-the-big-switch, enterprise-wide affair or something more incremental. This will affect your resource requirements, not only for the deployment itself, but also for help desk staffing and other IT initiatives that are taking place concurrently.

You also need to consider the impact on users. No deployment – no matter how technically flawless – can be considered a success unless users consider it a success. You need the goodwill and support of users to deploy ESSO successfully, and that goodwill and support can evaporate quickly if users experience any glitches or inconveniences during deployment. Users are particularly sensitive about adopting any "solution" that may require them to change their preferred ways of working or the way in which they interact with their applications.

If a solution requires even minor changes to user behavior, then training is necessary – and training can be a major expense when you're deploying a solution enterprise-wide. For example, many organizations have not yet upgraded from Windows 98 solely because the re-training costs were prohibitive.

### *Can the solution be deployed in an incremental, phased approach?*

All or nothing solutions may not suit your user needs, your staff capabilities, or your support budget. Does your organizational structure lend itself to a phased enterprise rollout? Can you use your directory groups or other means as a simple mechanism to segregate the user population?

### *What is the impact of deploying the solution on users?*

Many solutions may change the desktop look and feel for the user. Will there be a new launch bar, or client-side interface that users need to manage themselves? Is your help desk prepared for the calls resulting from the new interface? How complex is the user interface, and what level of technical skill does your typical user possess?

### *Does the solution require user training?*

Changes to the user workflow and desktop will drive the need for end-user training. Without it, the ESSO project may fail due to lack of cooperation and user rejection.

### *If so, how much user training is required and what is the best way to deliver that training?*

Training will likely focus on the changes to the user workflow and processes, and will also include the escalation and help process. How much of day-to-day ESSO will users need to manage for themselves and how much will be automated?

### *Does the solution require users to modify the ways in which they interact with their applications?*

How is each application launched today? Will this be changed as a result of ESSO, and if so, how difficult will it be for users to adapt? Will new accounts be required or can the ESSO solution interact with existing directories and application accounts?

### *How is password policy handled?*

Are there applications for which it makes sense to have the ESSO solution handle password changes automatically? If so, is the solution flexible enough in terms of the types and formats of passwords it can generate? Do certain back-end systems have unique or difficult password policy requirements and how will these be addressed?

## ONGOING MANAGEMENT

Ideally, you and your organization should be able to enjoy the benefits of your ESSO solution for years to come. Whether or not you do will depend largely on three factors: how easy it is to administer and manage the solution; how readily the solution can adapt to changes, additions, and updates; and the costs associated with these activities.

Organizations are dynamic entities, constantly in flux. New employees are added. Current employees leave. People change jobs and move from one facility or department to another. Facilities open, close, and relocate. On top of all of these changes are the inevitable changes to technology. You can expect to add new applications that will need to be ESSO-enabled. Your existing ESSO-enabled applications will most likely be updated regularly. And your ESSO solution itself will no doubt be modified and enhanced over time to fulfill new needs or provide new capabilities.

You need to understand the management ramifications of all of these changes, including the workloads associated with each one and the skill sets and number of people required to perform them. Can some tasks be undertaken by a lower-level administrator or is a skilled programmer or networking expert necessary? Can a particular change be handled remotely or must it be performed on-site? Getting answers to the questions below will provide you with a clearer understanding of how the ongoing management of each ESSO solution will affect your staff and users.

The answers will also provide clues to the ongoing management costs of each ESSO solution. The more resources that are needed, the more time it takes, and the greater the skill sets required to perform ongoing management tasks, the greater the cost. Needless to say, these are recurring costs that will become a continuing component of your yearly maintenance and overhead expenses.

### How long does it take to ESSO-enable a new application?

What is the likelihood of changes, adds, and deletions? Do changes require hours, days or weeks to be made? You will need to plan your total ESSO maintenance budget accordingly.

### How many IT people are needed to maintain the ESSO solution?

Will management of the solution include the help desk or can it be managed successfully by the IT staff?

### What tasks are required to administer the ESSO solution?

Will programming be required? How difficult is it to set up policy, add users and run reports? Can the system notify administrators when certain events occur?

### What skill sets are required to handle administration?

Are current staff members equipped to perform these tasks? If so, what impact will the requirements of ESSO administration have on their ability to fulfill their other, primary responsibilities? If not, will you need to hire additional staff or re-train people?

### Can administrative tasks be performed remotely?

How complex is the interface? Can it be run from a browser or is a management console installation necessary? Are there delegated administration options for different administrative roles?

### Does the ESSO solution include tools to update users automatically?

How is the ESSO software updated in the field? Must users be directly involved in the updating process? How will this be managed? How will changes to policy and ESSO applications be managed and distributed?

### How does the ESSO solution deal with security patches?

Does the upgrade process require downtime? If so, what systems will be affected and for how long? Are the updates trusted and are there safeguards in place to avoid installing malicious code? What systems will need to be patched and where are they physically located?

## ADDITIONAL FEATURES, TOOLS AND SERVICES

Most likely, you want an ESSO solution because you want to strengthen desktop security and protect your application and data assets, as well as perhaps meeting regulatory compliance requirements. You may also want to implement a strict password policy that you will be able to enforce easily. However, your long-term satisfaction with your ESSO solution may also depend on the additional features, tools and capabilities it provides your IT organization.

Some features, such as easy integration with other identity management technologies, including biometrics, digital certificates, tokens and smart cards, enable you to further strengthen and tailor your security environment. Other features, such as failover and scalability, ensure that your ESSO solution is robust enough to function through system failures and grow with your needs.

With the proper tools and capabilities, you can gather critical data on application usage, user compliance, and more. An effective ESSO solution will help your IT team keep track of which applications are being accessed, by whom, how often, and when. Your ESSO solution should also include reporting capabilities to help you put raw data into perspective and present it to others.

*Can the ESSO solution be integrated easily with other strong authentication modes, such as biometrics, digital certificates, tokens and smart cards?*

Different groups of users may be required to use different authentication modes based on a policy. Is this accommodated by the ESSO solution? How difficult is it to add an authentication mode later? Is additional hardware or software required?

*Does the ESSO solution account for failover?*

How is this handled? Enterprise applications must be reliable. ESSO can only provide a benefit while it is working for the users. Redundancy, failover, backup and disaster recovery are important considerations when looking at ESSO solutions. Where is the ESSO equipment located? What is the downtime estimate in the event of a system failure?

**How important is scalability?**

This term usually applies both in terms of future growth and the addition of new users and applications. How difficult will it be to add more users into the ESSO solution over time? Does it make sense to leverage the user directory as a source of information for ESSO users as they are added, modified, and/or deleted?

*Does the ESSO solution allow IT to track which users are accessing which applications?*

Regulatory compliance drives the need for user access reporting. What information is gathered by the system and how easy is it to access? Can you audit user activity across every application and every desktop?

*What flexibility does the ESSO solution provide to build a password policy you can easily enforce?*

Or can the ESSO solution easily adapt to your existing policies? How is the ESSO session behavior determined? Is it via policy, and if so, how is the policy set and distributed and to whom does it apply? Are policies tied to PCs, or users? Can one or more password and session policies be created to reflect your organizational policies based on groups and roles? Do you currently have password and authentication policies or will they be created when you deploy ESSO?

*Does the ESSO solution support shared workstations?*

How does this work? Many PCs are shared by multiple users, particularly in dynamic settings, such as healthcare clinics. Does the ESSO solution support fast logon, fast logoff and user switching? What happens to the applications one user is running when a different user needs to access the shared PC? How does authentication work between users and how long does it take to switch users?

## CHOOSING THE RIGHT ESSO SOLUTION FOR ALL THE RIGHT REASONS

Once you've asked the right questions – and gotten answers that meet your needs – the benefits of an effective ESSO solution will be much broader than stronger desktop security. By minimizing the risk of unauthorized access to critical business applications and confidential customer information, ESSO will help protect your organization from data theft, industrial espionage, sabotage, and all the legal consequences and unwelcome press coverage that can damage an organization's reputation, brand equity and stock valuation.

From an internal perspective, the right ESSO solution will have a practical and immediate impact on several common identity management-related issues. It will put an end to user complaints about the difficulty of complying with strong password policies. At the same time, by reducing password-related help desk calls and attendant delays, ESSO can improve enterprise productivity and reduce help desk resource requirements.

Finally, there is also a direct and ongoing financial benefit to implementing ESSO. According to industry analysts Burton Group, "Estimated cost per help desk call is $25 to $50, and typically 35% to 50% of all help desk calls are related to passwords." At that rate, the right ESSO solution can pay for itself quickly – and generate continued savings – even at small to mid-sized companies.

*Begin your investigation today. Use the attached checklist to prioritize the necessary components for your successful ESSO implementation. Then begin to ask your questions. When doing so, be sure to inquire about Imprivata's OneSign®, the industry's leading enterprise single sign-on appliance. OneSign provides an easy, intelligent and affordable solution for IT organizations that need to quickly and effectively solve password security and user access issues. For more details, visit www.imprivata.com or contact us at 1-877-ONESIGN or 1-781-674-2700.*

*A solution that transparently strengthens security, protects data assets, improves productivity, pays for itself and delivers an ongoing return on investment? You may never need to send out an SOS again.*

## ESSO SOLUTION CHECKLIST

Since every organization's requirements are different, some of the questions we've covered may be more critical to your needs than others. Therefore, we've provided this checklist to help you prioritize the questions and to choose the right solution.

| ESSO SOLUTIONS CHECKLIST QUESTIONS | PRIORITY 0-4 |
|---|---|
| | 0 = not a +priority |
| | 4 = high priority |
| *Application Support* | |
| How many ESSO-enabled platforms does the solution cover "out of the box?" | |
| Does the solution require development of custom connectors for ESSO-enabling certain applications? | |
| What skill-level is required to do the scripting? How long will it take? Days? Months? Will scripting be required? | |
| What happens when providers release new versions of applications? Do you have to continually update every client, or does the solution handle it automatically? | |
| What are the costs associated with ESSO-enabling additional applications? | |
| Can the ESSO solution handle all the password needs of the application including not only application logon but also critical password changes? | |
| Does the ESSO solution impact the run time behavior or performance of your application? | |
| Is there a logical process for ESSO-enabling applications? Are there integrated tools to help with testing and diagnosing ESSO problems? | |
| *Deployment* | |
| Can the solution be realistically evaluated or piloted without disruptive changes to a production environment? | |
| Can the solution be deployed in an incremental, phased approach? | |
| What is the impact of deploying the solution on users? | |
| Does the solution require user training? If so, how much user training is required and what is the best way to deliver that training? | |
| How is password policy handled? | |
| *Ongoing Management* | |
| How many IT people are needed to maintain the ESSO solution? | |
| What skill sets are required to handle administration? | |
| Can administrative tasks be performed remotely? | |
| Does the ESSO solution include tools to update users automatically? | |
| How does the ESSO solution deal with security patches? | |
| *Additional Features, Tools and Services* | |
| Can the ESSO solution be integrated easily with other strong authentication modes, such as biometrics, digital certificates, tokens and smart cards? | |
| Does the ESSO solution have built-in redundancy? How is this handled? | |
| How important is scalability? | |
| Does the ESSO solution allow IT to monitor which users are accessing which applications? And, to implement ESSO policy by user and by groups? | |
| What flexibility does the ESSO solution provide to build a password policy you can easily enforce? Or can the ESSO solution easily adapt to your existing policies? | |
| Does the ESSO solution support shared workstations? How does this work? | |

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