Web Services Management and Identity Management

Market trends and new opportunities for Developers

A white paper by Lehigh and Sagamore

Introduction	**1**
Breaking out of the spiral	**1**
Compelling reasons for you, your business, and your clients	**2**
Current market trend: Big fish, small fish	**4**
Big fish: the food chain at work	**5**
What a Developer can do now to prepare	**6**
Summary	**6**
Resources for Developers	**8**
Newsletters	**10**
Forums	**8**
Webinars and seminar events	**9**
Archived webinars	**10**
Resources	**11**

Introduction

In our recent research, Lehigh and Sagamore have been frequently hearing about the dilemmas faced by developers once the applications they have been working on have been passed on to their IT Operations groups.

The typical scenario goes something like this:

A couple arrives home from a romantic night on the town. Settling back with a vintage bottle of merlot and listening to the latest R&B CD in a candlelit living room, it's 11.30 pm, and the night's still young. Then, a mobile phone rings, and the developer hears a panic-stricken Operations voice on the other end.

"We've got an application failure. People are calling in to our help desk. We can't even begin figure out what the problem is. The downtime alone is going to cost us big time!"

As it turns out, the problem wasn't in the program logic but rather in the application platform.

Is this developer doomed to a similar event in the next release?

Not really. As in any cloud there is a silver lining. We believe there are market dynamics at work now that the developer can seize for himself and add to his tool box of skills. Further we have identified two technology areas where we believe this will provide the developer with added value to his company or clients. This paper will address those trends, briefly define the technology areas and provide some links where the developer can get a start learning more.

Breaking out of the spiral

Getting back to our story, what if that developer had been able to provide the hooks to connect into the management system that Operations uses. If the right hooks had been built into the application in the first place, there would have been no need for Operations to send it 'back over the wall' to be fixed in the wee hours of the morning.

Based on our work, bench developers, application project managers, and application architects understand that designing manageability into applications during initial development is far easier than trying to fit them in later on. In fact, many already have experience designing for manageability from the very start and know it is the right approach. However, many developers have told Lehigh and Sagamore that their applications end up re-engineered after the fact and always under duress, despite their attempts.

Applications today are typically distributed, complex, and integral to the enterprise. For example, fault analysis now often involves gathering and reporting information across many applications, services, and platforms. And as applications grow increasingly more complex, so do their manageability needs and this certainly accounts for the majority of the stories we're hearing.

Application manageability, in our terms, refers to an application's abilities to supervise and administer. In practice, this means that IT operations can deploy and configure an application, monitor its health and performance, predict and reduce failure, and analyze, correct, and report failures. At the business level, this means that enterprise users can do more than just monitor: they can control and respond to the application's operation based on management data received.

We believe that the developers who are able to create manageable applications are the ones who will have a leg up on colleagues as some new trends begin to emerge and believe that businesses value this for the efficiency it brings to their data centers. Based on Lehigh and Sagamore's research to date, we see new opportunities for developers who are able to create manageable applications. Those that do will create more value for their skills portfolios and increase their value in the marketplace. Specifically, we see two major areas for these skills:

- Web services management
- Identity management

Compelling reasons for you, your business, and your clients

Based on our research, Lehigh and Sagamore's observations are that by creating manageable applications, developers, their development teams, and their end users can streamline projects and provide improved IT management. And that means less post-release involvement by applications developers.

- Less downtime: Poor visibility into critical applications and services may lead to application failure and more downtime for the enterprise.

Recent reports have confirmed our contention. In a survey by Contingency Planning Research at the 2003 JavaOne Conference, 74% of respondents experienced regular application failures, about half of which lasted at least three hours.

Furthermore, a recent IDC study of 14 enterprises documented significant, measurable benefits from implementing management solutions and showed:

- 49% reduction in time to identify and fix downtime incidents
- 79% reduction in server downtime
- 74% reduction in overall downtime

When an application or service goes down, the developer's access to high quality information about the root cause means faster application restoration. But good application manageability moves beyond firefighting. It puts out the flames by helping IT operations proactively identify and solve application problems, minimising issues that could cause downtime.

Less back-end developer involvement
Environmental, rather than application logic, failures actually cause a significant percentage of all failures. But when IT operations can't determine the fault, the developer and the application can get the blame and a defect report filed against it. Enhanced error reporting helps IT operations quickly and accurately diagnose problems. As a result, there is less need for back-end developer intervention, as well as fewer spurious defect reports.

More flexible field operations
By exposing an applications capabilities to external control, the developer helps IT operations and end users capitalise on the application in the ways that best fit their needs. This means that the development team will receive fewer enhancement requests and late night call-outs, and the result is more satisfied end users.

For example, let's imagine that an application has a performance problem. Fixing it will require tweaking a configuration parameter. Now imagine that IT operations can fine-tune the application at runtime based on a management control that the application exposes. Because the developer doesn't have to solely make the change, additional time and effort is saved, and again, and users are happy.

Tighter coupling of business processes with IT operations
Because enterprise IT operations are no longer independent from business processes, the benefits of manageable applications extend across the enterprise. Take the perspective of business management as an example: simple manageability can tell IT operations when the database goes down. But advanced manageability can warn that a business will lose $20,000 in orders for each hour that the database is down. Armed with this information, the business manager can adjust business processes to maximise profit.

More efficient IT operations
The IT operations team is the central player in application manageability. And IT operational costs link directly to the effectiveness of application and service manageability. With good tracking capabilities, IT team members can quickly identify and resolve a performance problem. They can also better identify problem components after a failure.

The IDC study also showed that the use of management solutions improves IT efficiency (scalability) by 26% and IT productivity – time for task – by 54%.

Better recovery
IT operations can better recover from problems when needed, as well as simplify application provisioning and configuration.

Creating applications that perform better, increase user satisfaction and profit, and require less post-release involvement from developers makes sense. Numerous application management technologies are available in the industry today. Developers can find ones that suit their needs and help take what they're already doing to a higher level.

Current market trend: Big fish, little fish

As Web services become pervasive and critical to business operations, the task of managing them and implementations of the Web services architecture will be imperative to the success of business operations in two ways.

- **Management of Web services**
  In this case, defined as a set of capabilities for discovering the existence, availability, performance health, usage, control and configuration of resources within the Web services architecture.

- **Identity management**
  Manageable Web services architecture implementations need to be secure, including support for authentication, authorisation, integrity, and confidentiality.

The current market trends are strongly entrenched in Web services management and identity management. There is a strong shift by vendors to supply developers with ways to not only develop successful applications, but to build manageability into them as well right from the outset.

In his 'Report: XML and Web Services Security,' ZapThink analyst Jason Bloomberg believes management technologies and standards will be key to igniting the Web services market, and are set to reap vendors some $9.2 billion by 2007. Their Q4 2002 research report found that the current $30 million Web services management market will balloon as businesses adopt more standards and technologies to help them compete.

Big fish: the food chain at work

There are several major vendors who are now moving to expand their portfolios with tools for Web services management and identity management. Hewlett-Packard, IBM, Computer Associates, and BMC all offer different approaches for Web services management and identity services management.

Today, the marketplace for Web services management is comprised of companies such as Infravio, Blue Titan, Confluent, Oblix, and AmberPoint. They offer point solutions, but fail to easily connect with large enterprise management vendor products.

Lehigh and Sagamore has observed that the food chain is at work here, with a consolidation of vendors underway. For the last six to twelve months, major enterprise management software vendors like IBM and HP have been acquiring point solutions companies in order to build out their solution offerings. This will make it increasingly difficult for the remaining point solution vendors to survive without close integration with the large vendor's management platforms.

For example, in Q3 and Q4 of 2003, Hewlett-Packard completed the acquisitions of Talking Blocks and SelectAccess, solidifying their offerings of application services management platforms and identity management technologies. HP also announced the introduction of new standards for Web services management, further providing the means to make Web services practical for enhancing developers' skill sets, generating revenue, and/or reducing costs.

In addition, Lehigh and Sagamore has found that only a few major management software vendors like HP can also deal heterogeneously with .NET and Java/J2EE application platforms. This company is more pragmatic about their management solutions, so developers can choose their appropriate application platform and has tools and technologies for both.

This means that developers who take advantage of the new tools coming to market will be well positioned to apply them for increased manageability of their applications.

What a developer can do now to prepare

For developers who want to seriously increase their skills sets, improve their knowledge base, enhance their portfolios, and successfully release trouble-free applications, there is an extensive collection of resources currently available.

Based on conversations with numerous developers, Lehigh and Sagamore recommends a number of things that can be done right now in order to learn more about these technologies:

- Trade magazine articles
- Obtain the latest white papers and case studies on Web services management and identity management
- Participate in online forums
- Subscribe to industry newsletters and journals
- Participate in webinars and seminars
- Attend tradeshows and other industry events.

Lehigh and Sagamore's own research has turned up no clear portals focused on the concepts of engineering management into application. To help the reader's own Internet surfing, this paper includes a list of links we found. Developers can find a wide range of resources, ranging from trade articles to vendor knowledge libraries to help them find out more about Web services management and identity management. There are a number of free newsletters, white papers, and case studies, as well as numerous organisations and web sites that are valuable sources of information, a sample of which are included.

In addition, these topics of Web services management and identity management will be examined in greater detail in upcoming white papers. Developers who have been reading this paper are invited to obtain the next in the series as they become available.

Summary

In order to deliver high quality applications, developers will be designing their applications for manageability. Those applications that can support management and operations at release into production will see far less implementation problems because they can be diagnosed and resolved with less involvement from the developer's perspective.

Armed with the new tools for Web services management and identity management, developers can then create better applications which will not require troubleshooting after deployment, thereby helping both the development and IT operations teams. These new tools will also add to skill sets and greatly enhance their portfolios for future success.

With manageability already built into their applications, there would no longer be the need for Operations to send it back over the wall to be fixed in the wee hours of the morning.

Resources for Developers

Trade articles and further information

Adaptive Management – Learn more about the full range of hardware, software, services, and support solutions from HP, developers can directly connect operational and infrastructure activities to optimised service delivery.
http://managementsoftware.hp.com/solutions/sol_0001.html

ebizQ – Online web site that focuses on business integration, providing the most comprehensive and timely information available on vendors, products, market directions, best practices, and any other industry element that comes into play.
http://www.ebizq.net

EEMA Web Services Special Interest Group – David Shoaf, Chairman
The European Forum for Electronic Business (EEMA)
https://www.eema.org/interest/interest.asp?ID=27

HP "Adaptive Enterprise" – Learn more about business strategy and business processes into the underlying applications and infrastructure to fuel business success.
http://h71028.www7.hp.com/enterprise/cache/6842-0-0-0-121.aspx

HP Developer Portal – an extensive collection of developer information, resources, and solutions.
www.devresource.hp.com/post.html

HP Enterprise Resource Library – offers the latest news, case studies, white papers, leadership articles, and more.
http://h30046.www3.hp.com/libsearch.php?regioncode=WW&langcode=USENG

Resources for Developers – continued

Liberty Alliance – A consortium of more than 160 technology and consumer-facing organisations formed to establish an open standard for federated network identity.
http://www.projectliberty.org

LooselyCoupled.com – web site that provides news, commentary, resources, and services for planning, deploying, and managing loosely coupled business process automation.
http://www.looselycoupled.com

Oasis – organisation that drives the development, convergence, and adoption of structured information standards in the areas of e-business, web services, etc.
http://www.oasis-open.org/home/index.php

SearchWebServices.com – source for up-to-the-minute news, trends and emerging technologies for Web services professionals.
http://searchwebservices.techtarget.com

W3C – The World Wide Web Consortium commits to leading the technical evolution of the Web. In just over seven years, W3C has developed more than fifty technical specifications for the Web's infrastructure.
http://www.w3.org

WS-I – The Web Services Interoperability Organisation is an open industry effort chartered to promote Web Services interoperability across platforms, applications, and programming languages.
http://www.ws-i.org

Webinars and Seminar Events

Visit www.hp.com/go/inventiveonline to register for the following live sessions or archived recordings:

Developing Web Services with Open Source and Eclipse **February 12, 2004**
Speaker Chris Peltz
Time 09:00 am PT (17:00 pm GMT)
Duration 90 minutes
Abstract / speaker biography
Register

Using XML Schemas Effectively in WSDL Design **March 31, 2004**
Speaker Mark Secrist
Time 09:00 am PT (17:00 pm GMT)
Duration 60 minutes
Abstract / speaker biography
Register

HP Event Center – learn more about upcoming HP Events
http://h30046.www3.hp.com/libsearch.php?regioncode=WW&langcode=USENG

Who am I, who are you? Making an issue out of identities and an Identity Technologies and Services Interest Group meeting – Two-day Seminar **March 24-25**
Location La Defense, Paris, France
Information https://www.eema.org/event_R.asp?FirstParam=138

Implementing Web Service – managing the risks – Two-day Seminar **April 20-21**
Location Barcelona
Information https://www.eema.org/d_dates.asp

Archived Webinars

.NET web services management and security – online session abstracts from HP
http://www.presentationselect.com/hpinvent/detailsl.asp#177

Developing for manageability with HP OpenView and the BEA WebLogic platform – downloadable online session abstracts available
http://www.presentationselect.com/hpinvent/detailsa.asp#170

Manageability: a developer's concern – downloadable online session abstracts available
http://www.presentationselect.com/hpinvent/detailsa.asp#160

Newsletters

HP Developer News – provides news about technical information, downloads, products, and educational programs from HP and its partners. Also contains archived issues.
http://www.devresource.hp.com/drc/newsletters/subscriptions.jsp

Developer Newsletters – a collection of newsletters for the developer
http://www-106.ibm.com/developerworks/newsletter

M-pulse – online magazine that provides web-based appliances and e-services give developers what they need when and where they need it.
http://www.cooltown.com/mpulse/0104-index.asp

Forums

http://devresource.hp.com/forums/index.jspa

http://devresource.hp.com/drc/columns/col0402.jsp

Resources

Buzbee, Bill and Dubravac, Stephen. **Why build manageable applications?** HP Developer Portal forum discussion.
www.devresource.hp.com

Cecere, Marc and Leganza, Gene. **IT Trends 2004: Enterprise Architecture,** Giga Research, 2003.
http://www.gigaweb.com/content_display/popup/1,,PubID=RIB-122003-00003.html

Ferengul, Corey. **Web Services Management Update,** ZDNet Tech Update, 7 January 2004.
http://techupdate.zdnet.com/techupdate/stories/main/Web_Services_Management_Update.html

Gaughan, Dennis. **HP Introduces the Adaptive Management Platform,** AMR Research, 2002.
http://www.webmethods.com/analyst_report_detail_cmb/1,2625,2715,00.html

Harris, Steve and Macdonald, Rob. **Moving to ASP.NET: Web Development with VB.NET.** Berkeley, California: Apress, 2002.

Koetzle, Laura. **HP Kills Two Birds with Talking Blocks,** Forrester Research, Inc., 2003.
http://www.forrester.com/ER/Research/Brief/0,1317,32480,FF.html

LaMonica, Martin. **Web Services Shakeout Looming,** CNet News.com. 20 January 2004.
http://news.com.com/2100-7345-5143586.html

Longworth, David. **Fit for Web Services Management,** LooselyCoupled.com
http://www.looselycoupled.com/stories/2003/fit-wsm-infr1217.html

Mears, Jennifer and Dubie, Denise. **HP to Become More Adaptive,** Network World and NetworkWorldFusion.com, 12 June 2003.
http://www.nwfusion.com/news/2003/0512hp.html

Management Solutions for the Adaptive Enterprise, HP white paper, June, 2003.

Manoj, **Seth, Introduction to Web Services Management,** Developer.com.
http://www.developer.com/services/article.php/1583511

Murray, Justin. **Designing Manageable Applications,** Web Developer's Journal.
http://www.webdevelopersjournal.com/articles/design_man_app/

Primost, Stephen. **Locking IT Down: Anatomy of an Identity,** ZDNet Tech Update, 30 January 2004.
http://techupdate.zdnet.com/techupdate/stories/main/Lock_IT_Down.html?tag=tu.arch.link

Wilkoff, Nicholas, et al, **Report on Technology Innovation: Q1 2004,** Forrester Research, Inc., 2004.
http://www.forrester.com/ER/Research/Brief/0,1317,33676,00.html

ZapThink – **Identity Management**
http://www.zapthink.com/cluster.html?id=security

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