SIGMA SOLUTIONS

Vol. 11 No. 1

# SigmaUptime

# Creating IT Flexibility

HP's FlexNetwork architecture unifies network 'silos' to increase flexibility for today's virtual, media-rich and cloud environments.

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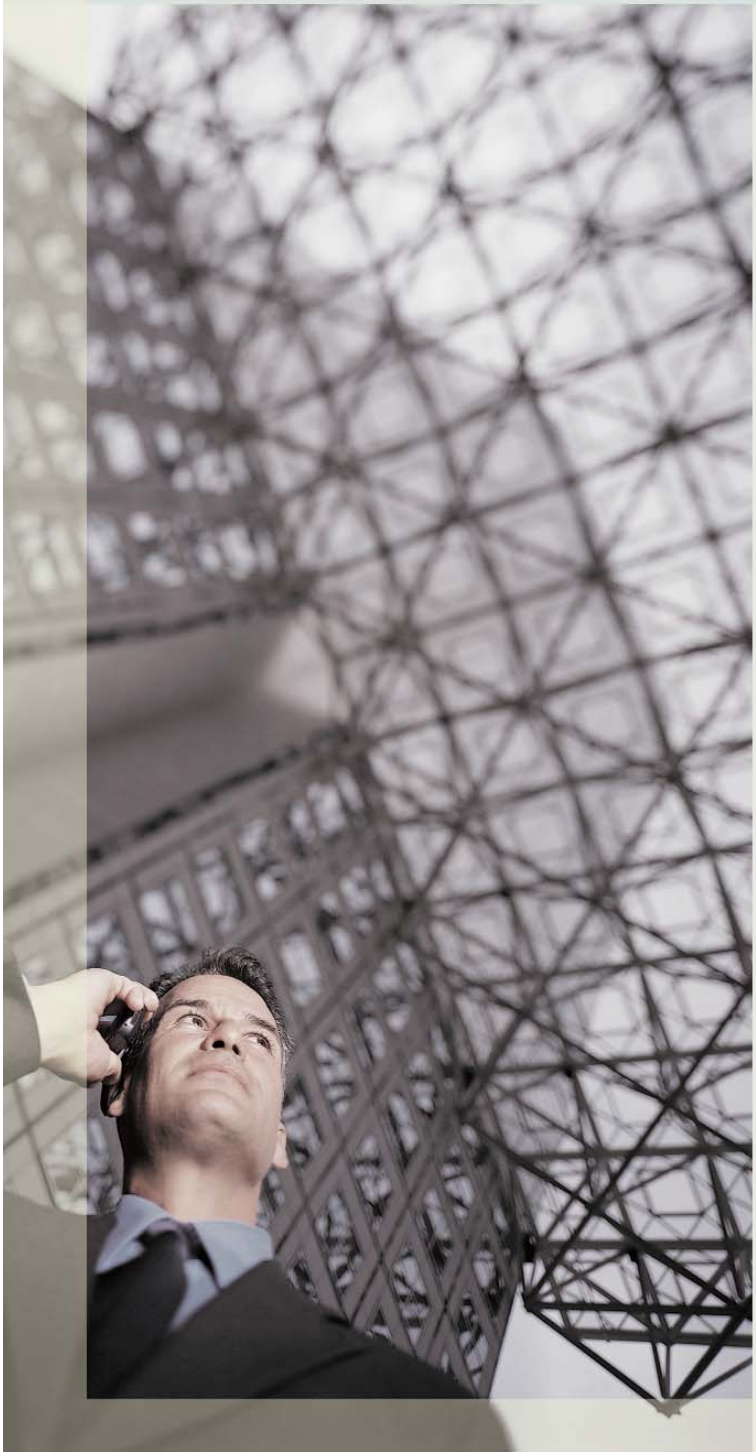
# Focus on your business



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Editorial Correspondence:
7360 East 38th Street, Tulsa, OK 74145
Phone (800) 726-7667 • Fax (918) 270-7134

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# Creating IT Flexibility

HP's FlexNetwork architecture unifies network 'silos' to increase flexibility for today's virtual, media-rich and cloud environments.

Flexibility is the mantra in today's data center. IT organizations are under increasing pressure to increase agility and scalability to support accelerated business change and unprecedented data growth. Virtualization and cloud computing technologies aid in this effort, but many organizations are grappling with a more fundamental obstacle: the network itself.

Legacy networks were not designed for the rapid pace of change in today's data center. Built on proprietary technologies, the traditional network is hierarchical and inflexible, with multiple platforms, layers, operating systems and management consoles. Security is typically bolted on rather than built in.

Now HP has introduced the HP FlexNetwork architecture, a unified architecture for the data center, campus and branch. A core component of the HP Converged Infrastructure, the HP FlexNetwork architecture converges network silos by ensuring that protocols are implemented consistently across all networked devices throughout an enterprise. As a result, organizations are able to simplify and speed service delivery across the data center, campus and branch, driving increased agility and innovation.

"HP networking solutions are enabling next-generation data centers by reducing complexity and costs while delivering predictable performance, high availability and comprehensive management," said Jon Chappell, Sigma Competency Center Manager, Sigma Solutions. "HP's FlexNetwork architecture delivers the scalability, security and management enterprises need to fully harness the power of virtualization, mobility and cloud computing. It enables organizations to deliver new applications and services faster, and with lower total cost of ownership."

## The FlexNetwork Architecture

Single-vendor, proprietary approaches to networking drive up costs and complexity because different architectures are required at each point in the network, including data center, campus and branch. This lack of convergence makes it difficult to roll out new applications and services.

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The HP FlexNetwork architecture unifies the network through three modular building blocks that share a common management layer. FlexFabric is the core of HP's FlexNetwork architecture. FlexFabric is a virtualized, high-performance, low-latency interconnect that consolidates protocols to streamline deployment and management. Ethernet and storage networks are combined in a wire-once, virtualization-aware fabric that can easily scale and adapt to changing workloads. FlexFabric simplifies data center infrastructure with converged network, compute and storage resources across both virtual and physical environments to accommodate hybrid cloud computing models.

The other two building blocks, FlexCampus and FlexBranch, extend the FlexNetwork architecture beyond the data center. FlexCampus improves performance, lowers latency and increases security for identity-based access of multimedia content across converged wired and wireless networks. FlexBranch simplifies networking and security at the branch, integrating best-of-breed technologies for service delivery.

"The HP FlexNetwork architecture is open, adhering to standards across the modular building blocks that make up the architecture," Chappell said. "It also is scalable from the remote site to the data center, with industry-leading vulnerability detection that automatically builds standard security policies consistently into the virtual and physical infrastructure. The new level of flexibility from the HP FlexNetwork architecture enables clients to focus on preparing their organizations for the demands of the future."

## Better Management, Fewer Tiers

Most data centers support multiple networks for servers, storage and virtual machines. Yet many IT managers still lack the tools needed to effectively manage today's combined physical and virtual infrastructure. HP's FlexManagement solution — the HP Intelligent Management Center (IMC) — provides a unified, "single-pane-of-glass" view into physical and virtual networks across data center, campus, branch and cloud.

HP IMC version 5 software is designed to accelerate service delivery, simplify operations and boost network availability. It automatically discovers virtual machines, virtual switches and their relationship to the physical network, overcoming the challenges of managing increasingly virtualized service-oriented data centers.

"The HP Intelligent Management Center is a powerful, flexible platform that brings together physical and virtual network management and monitoring across all the modular building blocks of the HP FlexNetwork architecture," said Chappell. "HP IMC version 5 simplifies operations with status indicators for networks, workloads and virtual machines. Complete fault-management, flexible centralized reporting and change management further streamline administration."

HP IMC version 5 manages the entire HP Networking portfolio as well as more than 2,600 network devices from more than 35 vendors. HP IMC helps clients mitigate the risk of migration from proprietary legacy networks to the open, standards-based HP FlexNetwork architecture.

HP networking also enables organizations to collapse their network architectures from three to two tiers to reduce the data center footprint, decrease latency, improve overall performance and simplify operations. A two-tier architecture is also better suited to highly virtualized data centers and cloud computing environments.

## Built-In Security and More

Data center application workloads are increasingly virtualized, and many legacy security solutions only protect physical environments supporting single workloads. The HP Secure Network provides unified, core-to-edge network protection, while HP TippingPoint security automatically and consistently applies security policies to virtual machines across an enterprise.

"HP has created a scalable network security framework that provides consistent, unified security across physical and virtual network infrastructures," Chappell said. "The HP TippingPoint Intrusion Prevention System platforms provide high levels of real-time protection through automated, in-line traffic inspection for both physical and virtual machines. Centralized management offers simplicity and reduced costs."

Faced with IT sprawl, the complexity of multitier deployments and increasing demand for virtualization, organizations can turn to the HP FlexNetwork architecture to simplify their networks and prepare for demanding, service-oriented computing models such as cloud, mobile computing and virtualization.

"Organizations need to be flexible in order to ensure success and competitive advantage. Yet many enterprises continue to maintain highly inflexible network infrastructures that limit their ability to respond to business change," said Chappell. "The HP FlexNetwork architecture is a standards-based solution that allows organizations to reduce costs and management challenges today while preparing their organizations for the future. The HP FlexNetwork architecture transforms legacy networks through convergence and simplification, enabling organizations to deliver innovation, speed and performance."

# CHANGE
## *the rules of networking*

HP FlexNetwork is the only converged networking architecture that spans from the virtualized data center to the virtual workplace for cloud, multimedia, and mobile services with integrated security solutions.

It is the only end-to-end networking architecture that solves legacy network challenges by delivering the scale, security, and manageability needed for cloud-based, video-centric, mobile applications.

Contact **Sigma Solutions** to learn more about leveraging FlexNetwork to bring existing network investments forward, reducing total cost of ownership today while preparing your organization for the future.

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# Text Appeal

## *Subset of business intelligence helps organizations extract insight from social media, blogs and other sources of text-heavy unstructured data.*

The first public opinion poll probably was taken shortly after the Neanderthals learned about fire: "Thag like wooly mammoth burned or raw?"

Throughout history, humans have attempted to aggregate the opinions of many individuals in order to gain insight into social, political or economic issues. Since the early 1900s, the business world has formalized such efforts into market research techniques for gathering information about brands, markets and customers. However, the traditional tools for conducting such research are no longer adequate in a Web 2.0 world.

With email, blogs, text messages, peer-to-peer networks and various social media platforms, consumers have unprecedented avenues for communicating, interacting and sharing their experiences and opinions — positive or negative — regarding any product or service. This activity is generating text-heavy unstructured data at a rate so accelerated that it overwhelms attempts to manually monitor all the information.

To stay abreast of what is being said about their brands across these channels, more organizations are implementing text analytics, one of the fastest-growing areas in the business intelligence (BI) realm. Also known as text mining or sentiment analysis, these applications use various mathematical, statistical, linguistic and pattern-recognition techniques to allow automatic analysis of unstructured information as well as the extraction of high-quality, actionable data.

### Market Growth

Analysts say adoption of text analytics technology and applications has begun in earnest, and is expected to be rapid over the next few years as both vendors and enterprises invest in addressing a variety of business opportunities. Software and service revenues for text analytics now total $835 million globally with anticipated annual market growth rates of 25 percent to 40 percent expected, according to Seth Grimes, an analytics strategist with Washington D.C. consultancy Alta Plana Corporation.

"Text analytics helps forward-looking organizations gain new insights into customers' perceptions, motivations and plans — whether the goal is to boost customer satisfaction, product quality and sales or to reduce churn," said Grimes.

Text analytics has been a recognized IT sector for more than 15 years, yet it remains one of technology's best-kept secrets. Long utilized in the publishing, research and scientific communities to structure and extract meaning from both long- and short-form communications, text analytics is capturing the attention of enterprises and contact centers. Although the market is fragmented, the prevalence of social media is driving increased enterprise interest.

### Range of Uses

Organizations are utilizing text analytics for search and retrieval, multichannel analytics, document tagging and publishing, market research, threat detection and reputation management. E-discovery and regulatory compliance are two areas in which there is expected to be extensive application of text ana-

lytics in the near future. Associated with these are the areas of bankruptcy settlements, due-diligence processes, and the handling of data rooms during a takeover or a merger.

The range of uses continues to expand as companies invest in text analytics to structure their social media communications and as vendors invest to enhance their applications for usability, support and robustness. Industries at the forefront of text analytics usage include automotive, education, e-commerce, financial services, government, high technology, insurance, retail, social media and telecom.

"Any organization contemplating or currently implementing a social media strategy should be thinking about how text analytics can help achieve their goals," said Donna Fluss, president of DMG Consulting, a strategic advisory firm specializing in contact centers. "There is an enormous opportunity for companies to differentiate themselves by utilizing text analytics or text analytics-enabled applications and sentiment analysis to capture and structure data on what is being said about them, over what channel, when and by whom."

## Words to the Wise

Text analysis differs from traditional search tools that require a user to know what he or she is looking for. Text analysis attempts to discover information in a pattern that is not known beforehand, through the use of advanced techniques such as pattern recognition, natural language processing and machine learning. By focusing on patterns and characteristics, text analysis can produce better search results and deeper data analysis, thereby providing quick retrieval of information that otherwise would remain hidden.

"The business insights that can be mined from customer conversations are every bit as valuable as financial data to large corporate brands," said Ian Bonner, CEO of text analytics vendor Attensity. "Making sure that data is both highly accurate and easily accessible is a top priority for any organization that wants to leverage customer conversations as a business asset."

While current solutions tend to focus on the English language, some text analytics applications can handle other languages. Due to large investments by the U.S. government, languages such as Arabic, Farsi, Urdu, Somali, Chinese and Russian are well covered. Vendors with the most mature solution sets include Attensity, Basis Technology, Clarabridge, Lexalytics, SAS, Temis and ZyLAB.

"The global nature of today's consumer is forcing companies to think more broadly about a universal view of their customer, looking across cultures, time zones and media," said Darren Jaffrey of Clarabridge, which recently upgraded its product to include French and Portuguese natural language programming.

It might have been fairly easy to establish a consensus of opinion in Stone-Age society, but modern man often must sift through an overwhelming amount of information to gain accurate insight. Text analytics helps by processing massive amounts of unstructured information and presenting it as structured data that can be more easily analyzed and understood.

"Text analysis can help organizations better understand their communities of customers, fans, advocates and colleagues by surfacing commonly used phrases," said Cliff Figallo, editor and moderator of Social Media Today. "Revealing the juxtaposition of key terms across hundreds or thousands of posts and conversations would reveal deeper levels of shared experience and sentiment. It would also bring more understanding of disagreement and conflict within communities, telling organizations how to better address and serve people with varied attitudes toward an organizations products and services."

## 'Voice of the Customer' Programs Expanding

Nearly two-thirds of companies that have implemented formal "voice of the customer" (VoC) programs say these programs have been a success, according to a recent report by Temkin Group. VoC programs utilize text and sentiment analysis applications to identify what customers are saying and doing and, in turn, where companies should focus their attention.

"Voice of the customer programs are critical components of many customer-experience efforts. These programs help companies operate with a customer-centric view of their business," said Bruce Temkin, author of the report.

The report analyzed VoC data from 192 companies with $500 million or more in annual revenues. While VoC programs are gaining in popularity, the report found that most efforts still lack maturity, with most companies generally scoring poorly in their ability to detect insights about customers and design solutions based on the insight.

The report identifies five levels of maturity for VoC programs: Novices, Collectors, Analyzers, Collaborators and Transformers. Only 2 percent of the companies ended up with the highest maturity rating, Transformers, while 46 percent were in one of the two lowest levels of maturity.

"VoC programs are evolving rapidly. It's no longer good enough to simply send out a survey to customers. Companies need to tap into a wide number of insights and continuously take action on what they find," said Temkin.

# Strategic Technologies for 2012

*Tablets, apps, cloud among key IT industry trends cited by analysts.*

Gartner, Inc. has highlighted top technologies and trends that will be strategic for most organizations in 2012. Gartner defines a strategic technology as one with the potential for significant impact on the enterprise in the next three years. Factors that denote significant impact include a high potential for disruption to IT or the business, the need for a major dollar investment, or the risk of being late to adopt. These technologies impact the organization's long-term plans, programs and initiatives.

Six top strategic technologies for 2012 include:

**Media Tablets and Beyond:** Users can choose between various form factors when it comes to mobile computing. No single platform, form factor or technology will dominate and companies should expect to manage a diverse environment with two to four intelligent clients through 2015. IT leaders need a managed diversity program to address multiple form factors, as well as employees bringing their own smartphones and tablet devices into the workplace.

**Mobile-Centric Applications and Interfaces:** The user interface in place for more than 20 years is changing. Windows, icons, menus and pointers will be replaced by mobile-centric interfaces emphasizing touch, gesture, search, voice and video. Applications themselves are likely to shift to more focused and simple apps that can be assembled into more complex solutions.

**Contextual and Social User Experience:** Context-aware computing uses information about an end-user's or object's environment, activities, connections and preferences to

improve the quality of interaction with that end-user or object. A contextually aware system anticipates the user's needs and proactively serves up the most appropriate and customized content, product or service. Context can be used to link mobile, social, location, payment and commerce. Through 2013, context-aware applications will appear in targeted areas such as location-based services, augmented reality on mobile devices and mobile commerce. On the social front, the interfaces for applications are taking on the characteristics of social networks. Social information is also becoming a key source of contextual information to enhance delivery of search results or the operation of applications.

**App Stores and Marketplaces:** Application stores provide marketplaces where hundreds of thousands of applications are available to mobile users. Gartner forecasts that by 2014, there will be more than 70 billion mobile application downloads from app stores every year. This will grow from a consumer-only phenomenon to an enterprise focus. With enterprise app stores, the role of IT shifts from that of a centralized planner to a market manager providing governance and brokerage services to users and potentially an ecosystem to support entrepreneurs. Enterprises should use a managed diversity approach to focus on app store efforts and segment apps by risk and value.

**Big Data:** The size, complexity of formats and speed of data delivery exceeds the capabilities of traditional data management technologies. It requires the use of new or exotic technologies simply to manage the volume alone. Many new technologies are emerging, each with the potential to be disruptive. Analytics has become a major driving application for data warehousing and the use of self-service data marts. One major implication of big data, however, is that in the future users will not be able to put all useful information into a single data warehouse. Logical data warehouses bringing together information from multiple sources as needed will replace the single data warehouse model.

**Cloud Computing:** Cloud computing is a disruptive force that has the potential for broad, long-term impact in most industries. While the market remains in its early stages in 2011 and 2012, it will see the full range of large enterprise providers fully engaged in delivering a range of offerings to build cloud environments and deliver cloud services. Enterprises are moving from trying to understand the cloud to making decisions on selected workloads to implement on cloud services and where they need to build out private clouds. Hybrid cloud computing, which brings together external public cloud services and internal private cloud services, as well as the capabilities to secure, manage and govern the entire cloud spectrum, will be a major focus for 2012.


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# 5 REASONS CUSTOMERS CHOOSE SIGMA SOLUTIONS

**S** **TRENGTH** – Sigma has an unmatched ability to respond to customer needs due to our scale, locale and experience in the data center. We are small enough to deliver local, personalized service yet large enough to handle highly complex project requirements.

**I** **NNOVATION** – Our goal is to help customers leverage IT solutions to streamline business processes, drive innovation and reduce time to market. To that end, Sigma delivers technologies from industry-leading manufacturers coupled with consulting and engineering services that maximize business value.

**G** **UIDANCE** – Our customers turn to us for expert solution design and project governance services that accelerate the success of their IT initiatives. Sigma mitigates our customers' risks through our experience and commitment to excellence in everything we do.

**M** **ANAGEMENT** – Sigma is uniquely positioned to serve as a single point of contact for full lifecycle management, maintenance and support of converged and integrated technologies. Our expertise across the data center and strong relationships with industry leaders enable us to quickly resolve problems in today's complex IT environment.

**A** **GILITY** – Sigma's comprehensive services enable our customers to partner with one technology provider for solution design, implementation and ongoing service. Sigma serves as the focal point for initiatives incorporating diverse technologies and multiple IT disciplines.

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