

Whitepaper 2016

EXTRACTING THE FULL VALUE OF THE CLOUD

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EXECUTIVE SUMMARY



The cloud is big and getting bigger—and it's happening very fast as more enterprises move elements of their IT infrastructures to the cloud and get their software via cloud subscriptions, instead of traditional licensing options.

The result, according to the IT research firm Forrester is an upcoming period of hyper growth, fueled by a cloud value proposition that is compelling today and will be even more compelling tomorrow. According to Forrester, “the gulf between the cost efficiencies that can be had from the cloud and what is possible on-premises or through other outsourcing and hosting options will widen dramatically.”¹

As more enterprises embrace the cloud, the business cases for cloud services are evolving as well. Initially, the justification for using the cloud centered on financial return. Now, enterprises recognize that the greater value of the cloud is in the way in which it supports a transformation to more agile, innovative business models.

This whitepaper is structured for business leaders evaluating enterprise cloud services, and uses real-world customer experiences to examine the business impact of the cloud:

IT Innovation: The cloud empowers innovation by relieving IT teams from the burden of managing applications, infrastructure, and desktops and enables them to focus on creative solutions to business challenges.

Application Delivery: Because cloud services streamline IT operations, reduce the stress placed on budgets, and remedy the concerns of server space, storage, and networking, IT teams can more quickly implement their ideas.

Increased Employee Efficiency: Employees can capitalize on the IT team's innovations to perform their roles better, creating a sustainable business advantage in today's fast-paced marketplace.

¹ http://blogs.forrester.com/james_staten/14-04-24-cloud_computing_enters_its_second_stage_hypergrowth_ensues

CLOUD ROI : NOT JUST ABOUT THE NUMBERS

“...with each new innovation that IT teams introduce, the organization continues to reap the benefits.”

Enter a decision-making, technology discussion with virtually any business leader or IT professional and the conversation quickly turns to the subject of ROI and lower total cost of ownership (TCO). However, the adoption of cloud services is changing the way organizations think about ROI—the benefits extend far beyond tangible hardware and software savings.

Cloud computing often shifts the burden of capital expense (CapEx) to a “pay-as-you-go” model for IT infrastructure. As many recognize, the outcome of this model is a conversion of upfront CapEx to a less-burdensome operational expense (OpEx), productivity and cost savings associated with provisioning and managing infrastructure, and a reduction of costs associated with data center space, power, and cooling.

But, while lower TCO is a powerful driver in the migration to cloud computing, early adopters are reporting that the cloud’s impact on innovation is significantly greater

than that sparked by lessened financial commitments, and is beyond the scope of traditional ROI calculations.

By shifting the focus of IT from time-consuming operational chores (managing infrastructure and supporting applications), cloud-enabled delivery models and services free-up time for IT innovation and strategic thinking.

These cloud benefits often generate new application delivery models and tools that empower employees to be both more efficient and effective, fueling business success (Figure 1). In many instances, organizations continue to realize these benefits well beyond the initial implementation. Often, such benefits gain momentum and continue to expand throughout the organization as additional applications, services, tools, and technologies migrate to the cloud. Therefore, with each new innovation that IT teams introduce, the organization continues to reap the benefits.



Figure 1. Marked business growth and successes are more effectively realized with a combination of IT innovation, cloud-enabling technologies, application enhancements, and enhanced user satisfactions and productivity.

TECHNOLOGY CREATIVITY AND INNOVATION: THE CIO TAKES A SEAT AT THE BUSINESS STRATEGY TABLE



Traditionally, IT departments led the charge to design and build systems to last a lifetime. Their focus was on technology, and enterprise organizations relied heavily on them to manage the technological advances.

Today, a fundamental shift is taking place in IT infrastructure planning: as IT itself becomes more consumerized, giving employees direct access to powerful devices and applications, the focus of the IT organization has shifted from the nuts and bolts of implementing specific technologies to managing information and orchestrating the way in which users access and employ data. This makes the work of the IT organization more integrated and aligned with business strategy—focused on finding new ways for the organization to take advantage of all the new technology options that are available.

As IT decision makers look for new ways to deploy innovative IT services cost effectively, cloud-based solutions are increasingly one of the alternatives. Ironically, the benefits of managed cloud services often appear first in IT organizations themselves.

With traditional infrastructure, IT teams can quickly end up spending the majority of their time reacting to requests for servers

and storage, and managing application infrastructure and desktops. Cloud services liberate IT teams from persistent emergency responses, making time for innovation and operational improvements. To illustrate, the IT team at a rapidly growing North American insurance company uses a managed cloud service to quickly provision infrastructure on demand for test and development. The time to fulfill requests has decreased from weeks to minutes, and moving the applications to production takes just a few clicks. Furthermore, costs for test and production servers have decreased by more than 40 percent since managed cloud services were first implemented.

As with traditional managed or outsourced services, some IT professionals may first be worried that cloud computing is going to drive companies to function with smaller IT staffs. In reality, most organizations benefit from a spark of innovation and considerable operational improvements; a stark contrast to maintaining old standards. If done correctly and used strategically within an organization, the IT department can transition from being an internal cost center, focused on maintaining current performance, to a strategic business driver and profit engine.

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STREAMLINING AN IT INFRASTRUCTURE:

CASE IN POINT

The logo for Datacon, featuring the word "DATACON" in a bold, blue, sans-serif font. The letter "D" is stylized with a large, curved opening on its left side. A small red dot is positioned above the letter "N".

NaviSite's NaviCloud® platform has allowed Datacon to dramatically reduce its time to market with new products while also reducing the need to expand its engineering team, thereby cutting costs. Customer satisfaction has also improved due to the improved responsiveness and greater reliability of the NaviSite infrastructure.

One of the leading suppliers of web portals in the Netherlands, Datacon specializes in the delivery, support and hosting of solutions based on SharePoint, Kentico, EpiServer, Telbase and other web services solutions.

Datacon typifies how a company with demanding IT requirements can obtain entirely new levels of agility and flexibility by relying on cloud services.

Over the span of 15 years, Datacon has seen its business rapidly evolve with customers now demanding the roll out of new portals faster than ever. As its business expanded, Datacon found that the bottleneck in meeting customer needs was not coding and programming but the time required to source and implement the server infrastructure in its three data centers. As each new customer was brought on board, dedicated hosting was set up. For any one customer, it could take up to six weeks to plan the hardware, negotiate with vendors, build the server and software and bring in specialists for areas

such as the security firewall. Not only did the long provisioning cycle frustrate customers, it represented a costly resource investment that kept Datacon from focusing on its key differentiator: delivering high quality software and services.

Datacon now relies on NaviSite for hosting and acquiring infrastructure on demand as its needs evolve. Datacon found that NaviSite adopted a partnership approach rather than a simple, client-supplier relationship, enabling the company to share business plans and future product direction, while working closely with NaviSite's team to get the best fit for its immediate and future needs. Seasonality is a major issue for Datacon and as hardware needs go up and down, engineers now have a simple NaviCloud® portal they can use to rapidly allocate new resources to any one application.

APPLICATION ENABLEMENT: MEETING THE NEEDS OF ENTERPRISES AND END USERS

With cloud computing, developers can afford to be more creative than before, when every experiment required cost-justifying permanent infrastructure.

As IT professionals focus more resources on supporting strategic business initiatives, cloud computing offers new and creative ways to service both the organization and the end-user.

With cloud-based development, they now have a new means to manage application lifecycles within the enterprise. The ability to create and use application templates, in addition to a virtual application appliance, can dramatically improve reactions to dynamic business needs. IT professionals know that they can provision the needed amount of compute, storage, and networking resources in minutes—just the right amount; nothing more or less—and can turn off these provisions just as easily. With cloud computing, developers can afford to be more creative than before when every experiment required cost-justifying permanent infrastructure.

Organizations are becoming increasingly reliant on delivering virtually anywhere, anytime access to critical resources for end-users on almost any device. Users are demanding that applications be developed quickly and flexibly, potentially requiring IT to enable agile application development and delivery mechanisms or risk being viewed as an impediment to productivity and innovation.

These requirements are driving additional needs for performance, stability, and scalability. At all levels of the enterprise, application availability and performance is paramount. Cloud computing provides an important bridge between the development cycle and deployment. With inherent resiliency provided by high availability and performance managed by automated resource load leveling and scheduling, cloud computing provides the operational capacity to match the agility of development. Figure 2 contextualizes the influence of cloud resources through the lenses of finance, operations, and innovation.

IT often has an abundance of applications available “in the cloud” and offered via a Software-as-a-Service (SaaS) model—the success of Salesforce.com is but one of many examples. Rather than building from scratch or customizing an off-the-shelf package, IT has new options to integrate into the corporate application suite. With this menagerie of applications, IT faces new integration challenges as they become increasingly modular, distributed, volatile, and interdependent.

APPLICATION ENABLEMENT: WITH THE RIGHT HOSTING, END USERS SEE THE DIFFERENCE



We made a material change to our systems environments and end users essentially didn't realize. That's a strong indication that the plan was well designed and executed."

Lloyd Dawson
Vice President of IT, PSC

As a leading provider of specialty maintenance services and technology for the United States' energy infrastructure, PSC prides itself on being technology-driven.

Years ago the company made the decision to rely on a managed services provider for infrastructure and applications hosting. But over time, outages became common and support was frequently unavailable or unable to provide timely resolutions. When in the aftermath of a virus outbreak PSC discovered that its anti-virus software had been misconfigured, company executives decided to find a new provider and, after an extensive search, signed on with NaviSite.

Initially, PSC transitioned several of its business-critical systems including its Oracle Applications and Microsoft Exchange. Right away, PSC noticed the difference. "We made a material change to our systems environments and end users essentially didn't realize," said Lloyd Dawson, PSC's Vice President of IT. "That's a strong indication that the plan was well designed and executed."

PSC selected Navisite's NaviCloud® Managed Cloud as its primary cloud-enabled hosting solution, with NaviCloud® Self-Service Cloud supporting its smaller test and development environments. NaviSite facilitated PSC's transition from Microsoft Exchange 2007 to 2010 and provided an email security and archiving service via Mimecast, a trusted partner.

As a company, PSC has seen the benefits of moving to NaviSite: system availability is now in the four to five nines range. Over a 30-month period, PSC experienced only 20 minutes of intermittent email service outages, and the cause was rapidly addressed, according to Dawson.

Overall, end-users at PSC benefited the most from the transition, realizing improved performance across the board, specifically in regards to their Citrix remote access environment. "Our systems are faster, more reliable and calls to our service desk have gone down," said Dawson.

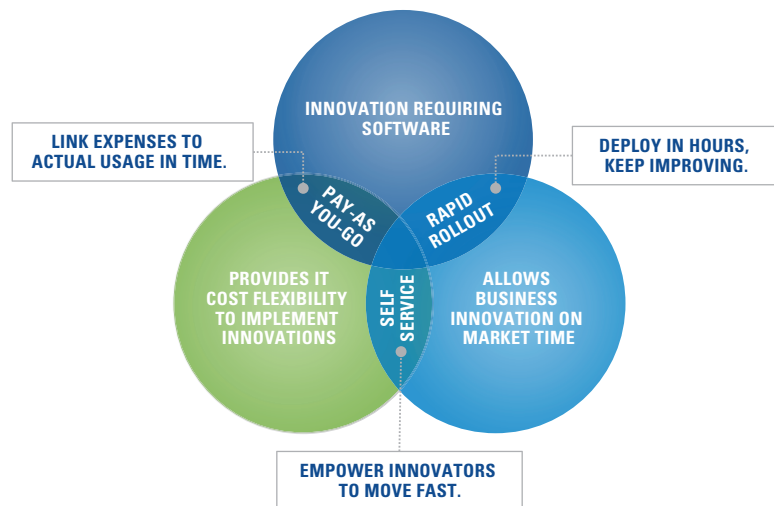


Figure 2. The benefits of cloud services extend into multiple facets of business innovation, leveraging essential vehicles such as a Pay-as-You-Go billing model, rapid rollout capabilities, and self-service resources and controls.

PRODUCTIVITY GAINS: INCREASE EMPLOYEE EFFICIENCY AND EFFECTIVENESS

An IT team that saves time by using a managed cloud service might invest the reclaimed time to implement new applications which were not previously available to a business unit, or perhaps to support a marketing campaign which was otherwise deprived of IT services.

Cloud computing enables IT to directly address the needs of end users, providing a variety of both employee benefits and business value. Employees benefit from the new agile applications and feature upgrades that IT teams can deliver, while enterprises can accelerate many business processes and improve overall corporate communication and collaboration.

GREATER MOBILITY WITH VIRTUAL DESKTOPS

Increasingly, employees are becoming more regionally distributed, with an estimated 29 percent of global information workers using multiple devices to access an array of applications, often from multiple locations.² To address potential challenges born from increased enterprise mobility, many organizations are pursuing technologies and solutions which facilitate unprecedented accessibility to critical resources from a diverse set of endpoint devices. To accomplish this, many organizations are turning to cloud-based desktop virtualization, or Desktop-as-a-Service (DaaS). With virtual desktop cloud services, employees' applications and data are not held on their

personal device's hard drive, but rather hosted on virtualized servers in the cloud. Employees benefit from a seemingly borderless ability to work virtually anywhere, on nearly any device, with the same experience as they would have on office terminals. Additionally, corporate IT can be satisfied that corporate data and information is not as easily lost or stolen when compared to its previous storage on potentially at-risk physical devices—very little is actually residing on a physical device outside the four walls of a corporation and the data centers it employs for its administration, computing, and data storage needs.

By empowering remote and mobile employees, cloud-based virtual desktops can also support business continuity, limiting the adverse effects, on employees and other susceptible resources, of inclement weather, disasters, or a pandemic. Employees can work off-site using virtually any device at-hand, such as a home PC or tablet, and still realize a Windows desktop experience with access to the applications they need most.

² Workforce Personas and the Mobile App Gap" Ted Schadler et al. Forrester Research. November 4, 2013

THE ROI FROM DESKTOP-AS-A-SERVICE IS SIGNIFICANT

For many, some of the principal benefits of a DaaS solution include: limiting IT commitment to managing and troubleshooting operating systems and applications on hundreds or thousands of devices, often requiring physical access to the device itself; lower licensing costs; lower capital costs for thin or zero clients; and a roughly 10-year—rather than three-year—life expectancy for thin clients as compared to workstations.

As cloud services undergo this period of hyper growth and more companies realize their value in meeting enterprise and end user needs, a fuller view of the value of the cloud's potential also comes into sharper focus.

While the cloud certainly can be used as a point solution, as the strategic view encouraged in this publication has hopefully made clear, managed cloud services have the potential to be the gift that keeps giving—a platform from which your business may innovate for continuous improvement.

SECURE REMOTE ACCESS

SUPPORTING A DIVERSE DONOR BASE



"NaviSite handles everything at the back of the house that our team doesn't want to worry about. They deliver the security and comfort our team needs to be able to focus on the projects that are critical to our business growth."

Patrick O'Sullivan
Head of IT, SVCF

Silicon Valley Community Foundation (SVCF) is the largest community foundation in the world, with more than 1,700 philanthropic funds and \$6 billion in assets under management. SVCF concentrates on the Northern California counties of San Mateo and Santa Clara through its Community Impact division, but also helps support charities around the world, providing its donors with professional investment management of their charitable funds, a full range of consulting services and expert guidance.

One thing that SVCF does not focus on is IT, having long ago made the decision to rely on a managed services provider. But after a period of rapid growth, SVCF's head of IT, Patrick O'Sullivan, became concerned over performance and scalability issues and began the search for a new provider that ultimately led to NaviSite.

A top concern for SVCF was security. O'Sullivan and his team wanted a highly secure platform that donors could use to access their information and direct their

philanthropic investments—a need that was directly addressed by NaviSite's DaaS solution. As part of the overall transition to the NaviCloud® platform, a virtual desktop environment was created leveraging DaaS and transferring the organization's Blackbaud ERP platform to the NaviCloud® platform. The project was a broad undertaking for O'Sullivan and his team, as SVCF was one of the first within the community foundation network to implement the Blackbaud suite in a fully virtualized environment.

SVCF relies on NaviSite to manage and support day-to-day IT operations and to ensure the platform runs smoothly. "NaviSite handles everything at the back of the house that our team doesn't want to worry about," said O'Sullivan. "They deliver the security and comfort our team needs to be able to focus on the projects that are critical to our business growth."

CONTINUOUS BUSINESS IMPROVEMENT

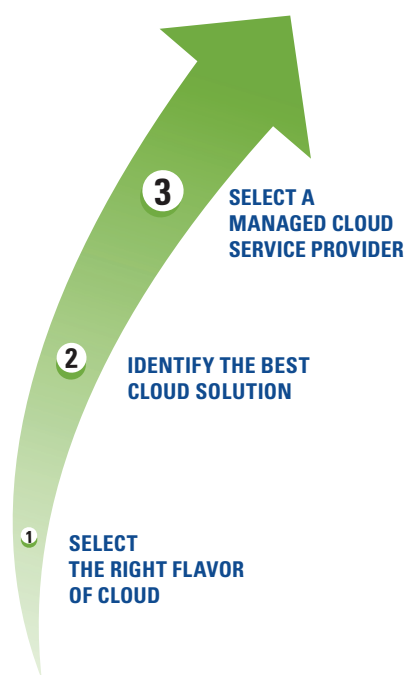
Having solutions that help to accelerate the business by relieving burden...is crucial to business success.



Rather than simply filling a niche for another purpose-built technology, managed cloud services are an enabler for business transformation. Conversely, the choice not to embrace the cloud can make businesses sluggish when compared to competitors. In these highly competitive times, speed, efficiency, and time-to-market are critical for enterprise organizations. Frequently, the firms that can streamline operations, increase productivity, and leverage their strengths as dynamic organizations are more readily able to differentiate themselves in the marketplace. Having solutions that help to accelerate the business by relieving burden—rather than slowing it down with additional impeding technologies—is crucial to business success.

As organizations adopt more cloud services—IaaS, PaaS, SaaS, DaaS, managed application services, among others—the benefits multiply. Each cloud-based solution becomes substantially more effective as it builds upon the impact generated by the incremental cloud resources. Additionally, employees and professionals are being exposed to cloud and cloud-like solutions almost daily. As a result, the ramp-up time for adopting and understanding corporate cloud-based tools is significantly less than that seen with traditional corporate technologies.

BEGINNING THE JOURNEY TO THE CLOUD



Start your journey to the cloud with some internal business reviews to help drive the following decisions:

1. SELECT THE RIGHT FLAVOR OF CLOUD FOR YOUR BUSINESS

Reservations about the cloud generally refer to public cloud services. Public cloud services are usually used for non-business-critical applications that do not require controlled latency or special security precautions.

Enterprise cloud services, such as those offered by NaviSite's NaviCloud® platform, provide the necessary safeguards for mission-critical applications, often fully satisfying businesses concerned about compliance and security standards. Cloud service providers offer a variety of pricing models to most appropriately accommodate a variety of business models and governance requirements. In contrast to pricing based on the number of virtual machines engaged, many organizations prefer pricing based on actual resources consumed (NaviSite's model).

2. IDENTIFY THE BEST CLOUD SOLUTION FOR YOUR BUSINESS

Many organizations begin their journey to the cloud with IaaS or SaaS, including Oracle eBusiness applications and Microsoft messaging applications or Office 365. Others begin with virtual desktop solutions—such

as DaaS. Regardless of which cloud solution is adopted first, for many enterprises the key to success is to identify the best strategy for your particular business.

For some, the ideal cloud implementation scenario begins with something that is a green field addition to your infrastructure, like adding cloud storage or deploying DaaS for contract workers. For other businesses that are struggling with traditional applications, moving a non-mission critical application to a cloud environment may provide the fastest benefit to IT and employees. Each business will be different, so it is important to do a thorough review of your environment and identify the areas that make the most sense to implement cloud solutions first, without losing track of future growth and opportunity.

3. SELECT A MANAGED CLOUD SERVICE PROVIDER WITH A STRATEGIC CLOUD VISION

Variety is certainly not a problem when it comes to cloud computing options available today. Despite the lingering perception that all clouds are equal, cloud strategies and solutions can vary extensively. Any enterprise interested in adopting cloud services should carefully examine the options available through the lens of their unique business and technical requirements, all while staying cognizant to the overall needs of the business.

BEGINNING THE JOURNEY TO THE CLOUD

(CONTINUED)

Some questions to consider when evaluating service providers include:

- What is their cloud services roadmap?
- Do they offer multiple flavors of cloud that can all work together?
- Do they offer SLAs for latency?
- Do they offer SLAs for availability?

The following are especially important for transaction-processing applications:

- How do they ensure security of your data, information, and technology?
- What if the data center fails?
- Will your applications be disrupted when they upgrade servers or switches?

It is important to understand service providers' approaches and philosophies on how the cloud will evolve and, additionally, how easy it can be for your business to add new cloud services, as required. This illustrates one of the most notable and intrinsic benefits of the cloud: flexibility and scalability in-step with the changes of a dynamic business.

BEGINNING THE JOURNEY TO THE CLOUD:

CASE IN POINT



“Every dollar I spend comes from sales or our membership team; I’m trying to keep costs contained from a technology perspective so we can focus efforts on membership,” said McLaughlin.

Member satisfaction is at the heart of AAA Western & Central New York’s operations. The organization prides itself on delivering top-notch customer service for its customers 24/7, regardless of location or time of day. This means that they cannot have anyone—regardless of their location—have a less than perfect user experience. So for AAA, keeping technology running reliably 99.9 percent of the time is imperative to ensuring that the organization is providing exceptional customer service.

AAA Western & Central New York had previously worked with NaviSite’s parent company Time Warner Cable to build a fiber optic virtual private network which was configured to allow data traffic to flow without going through a central hub. This design provided them with an extremely reliable, high performance network infrastructure. When AAA began looking at NaviSite they knew being part of the Time Warner Cable family would prove valuable.

Joe McLaughlin, VP of IT for AAA Central & Western New York, is quick to explain that the move to NaviSite was made for reliability and not for cost-savings. However, he notes that as a result of working with NaviSite, he

is no longer burdened with having to look at purchasing additional servers or refreshing hardware each year.

“Every dollar I spend comes from sales or our membership team; I’m trying to keep costs contained from a technology perspective so we can focus efforts on membership,” said McLaughlin. “When we looked at the numbers, we realized we would need at least two more full-time staff to keep the reliability of our network at the levels that we have by using NaviSite. So while our costs didn’t go away, they are predictable each month, and we’re now able to react quickly if we need to add or remove a server.”

“NaviSite has a roadmap where they can clearly articulate about expanding their current services and exploring new services,” says McLaughlin. “They have been open in expressing where they want to go in the future, and, they have asked for our input on any areas they should explore. For me, it signals that they think of us as a long-term partner. I don’t have to think about best-of-breed technology for my customers; I can trust that NaviSite will do that.”

CONCLUSION

The cloud market is experiencing exponential growth as companies in every sector move to hardware and software solutions that are hosted and delivered over the Internet. Forrester Research, Inc. expects the market for public cloud to reach \$191 billion in 2020—as clear an indication as any that cloud services will play a foundational role in corporate IT.

Cost, price, and ROI are always going to be part of the decision process for selecting any new technology or service—cloud or otherwise—no matter how popular the solution may be. The key to achieving the most value from cloud investments, however, requires looking at both traditional ROI (e.g., impact on CapEx and OpEx) as well as the role that cloud services will play in enhancing the business' ability to operate, to service customers, to innovate, and even to adopt other technologies in the future.

IT and the technologies IT deploys are now, more than ever, direct contributors to enterprise success. This creates the need to invest in the latest technologies and services, ultimately leveraging the flexible scalability and cost benefits that are intrinsic to the cloud. Andrew Bartels, Forrester Principal Analyst Serving CIOs, asserts that “CIOs should start considering cloud as a



core deployment option within their formal budgets.” By consistently evaluating the cloud's place in the business as requirements and operations change, a more accurate return on investment is established well beyond that provided by any ROI calculator which fails to acknowledge the extent of the cloud's influence. Now, each individual enterprise must determine when and how they want to leverage all that the cloud has to offer and find the best cloud partner to help achieve and accelerate the real business benefits of the cloud.

The key to achieving the most value from cloud investments, relies on not looking solely at the role it will play in the organization



ABOUT NAVISITE

NaviSite, Inc., a Time Warner Cable Company, is a leading international provider of enterprise-class, cloud-enabled hosting, managed applications and services. NaviSite provides a full suite of reliable and scalable managed services, including Application Services, Cloud Desktop Services, Cloud Infrastructure Services and Hosting Services for organizations looking to outsource IT infrastructures to help lower their capital and operational costs. Enterprise customers depend on NaviSite for customized solutions, delivered through an international footprint of state-of-the-art data centers.

For more information about NaviSite services, please visit www.navisite.com.

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