



Brochure

Empower your data

Acquire and retain customers with HPE solutions



Hewlett Packard
Enterprise



Table of contents

Today's speed of business demands IT modernization

Business intelligence and why it matters

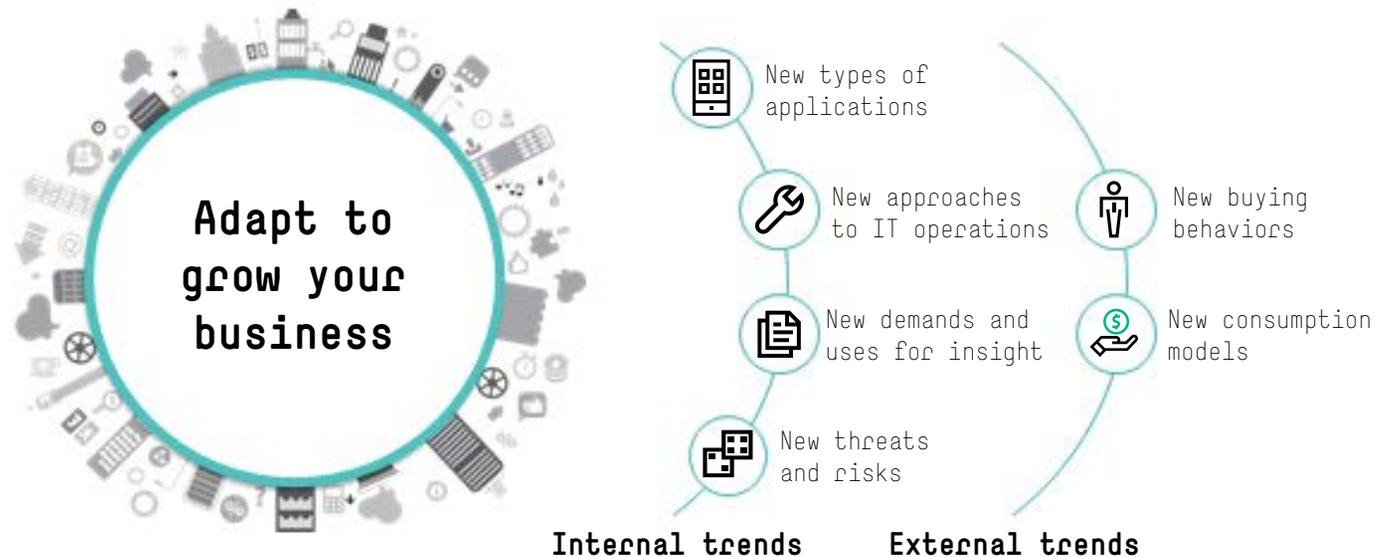
HPE products power business intelligence

Why HPE for Business Intelligence

Today's speed of business demands IT modernization

Technology has revolutionized how business is done, resulting in new opportunities and challenges. In today's hyper-connected world, technology is being leveraged in new ways that revolutionize entire industries at a pace and scale never seen before. With the opportunities afforded through mobility, Big Data, and cloud computing, the ability to respond to market changes and turn an idea into a new product, capability, or even industry has never been easier. In order to remain relevant in today's world, your business must learn to adapt. A highly leveraged place to start is increased focus on your customers. By better understanding your existing customers and what it will take to attract new ones, you can adapt your company to this new business environment.

Trends affecting today's business world



Brochure

Acquire and retain customers to grow your business

Businesses of all sizes have always worked to acquire new customers and retain existing ones. You want to grow your business and expand your market share by attracting new customers. However it can cost 4 to 10 times more to acquire a new customer than it does to actively maintain existing customers. Expanding the amount of business you get from an existing customer can increase revenue at a lower cost.

While it may seem obvious that finding and keeping customers is important, it has become increasingly more difficult to do so. The market has evolved rapidly in the last few years and customer expectations and buying patterns have changed. Today's customers are different.

- They learn about products from new sources such as blogs and social media.
- They comparison shop for pricing online.
- They engage with your businesses anytime, anywhere and from any device.

Realities faced by business today

So, what does it take for your business to acquire and retain customers today? Data analytics can be used to gain business intelligence to improve customer service and increase product quality. It can also be used to identify new market opportunities and for launching targeted sales campaigns that are based on customer preferences. Sadly, many companies are facing these realities:

- Lack of timely visibility to key customer data
- Limited exposure and understanding of your customer's buying behaviors
- Grappling with customer demands for new buying methods such as mobile devices and mobile engagement
- Inability to analyze and gain insight into your existing customer data or information gathered from non-traditional external sources, such as social media

Empower your data for better business intelligence

IT technologies focused on analyzing customer data for better business intelligence can help you to overcome these challenges. We see three key ingredients as critical to the successful implementation of any data analytic solution.



Time—The speed of business today requires that decisions be made quickly to address the demands of a dynamic market. An IT infrastructure must have the performance and capacity to analyze data in near real time.



Data—The beneficial business insights are dependent upon gathering, storing, and analyzing the data in real time. Storage capacity and performance both need to be optimized to achieve these results. The amount of data that you accumulate will grow exponentially and your storage must have the scalability to support this growth and to provide the performance you need.



Technology—Scalable, powerful, flexible, and reliable IT technologies are all required to empower this new style of decision making. As you rely more on the information generated through this business intelligence, it becomes critical that the technology work as one

integrated solution that can grow with you in compute performance, storage capacity, and network bandwidth. Also, high availability and data protection should be part of any implementation plan.

Our value

Hewlett Packard Enterprise provides servers, storage, and network solutions that are affordable and are easy to implement. These technologies are designed to work as an integrated solution that reduces risk and improves your time to business value. HPE products have the power to quickly analyze large volumes of data and return actionable results in near real time. They can grow as your business expands and offer high availability options to ensure uptime.

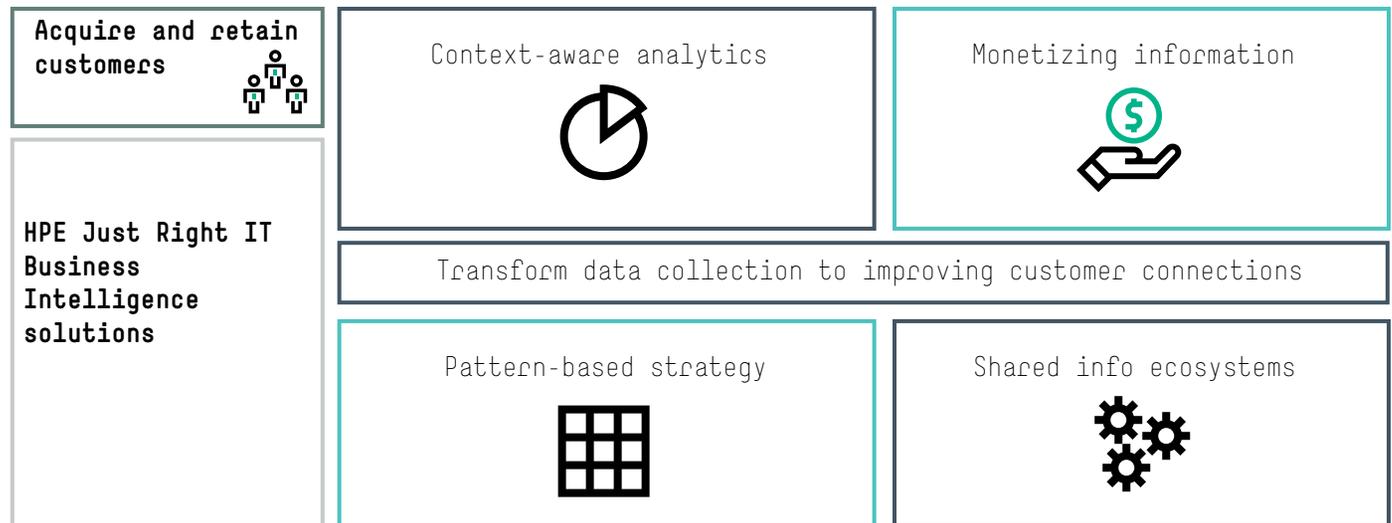
Navigating this eBook

Designed to assist decision makers with the responsibility to acquire and retain customers, this eBook addresses the value that HPE products, solutions, and services deliver for data analytics and business intelligence. You can explore the contents of this eBook either by flipping through the pages or clicking any of the navigation buttons that can be located in the box icon in the lower left hand corner and in the table of contents.

Business intelligence and why it matters

Today, technology has made it possible for you to know your current customers and new potential ones in a much more intimate way. You are already capturing a great deal of data about your customers with each transaction that occurs. By turning this data into actionable business intelligence, you can learn what products they prefer, how they purchase them and how you can engage them. You will be in a better position to offer them other products that you know will meet their needs. When you also analyze the type of information that exists throughout social media, you can use this same personal approach to reach out to new customers offering your products that meet their needs. You can harness the power of analytics to build actionable information that can help you to acquire and retain customers.

Harness the power of analytics



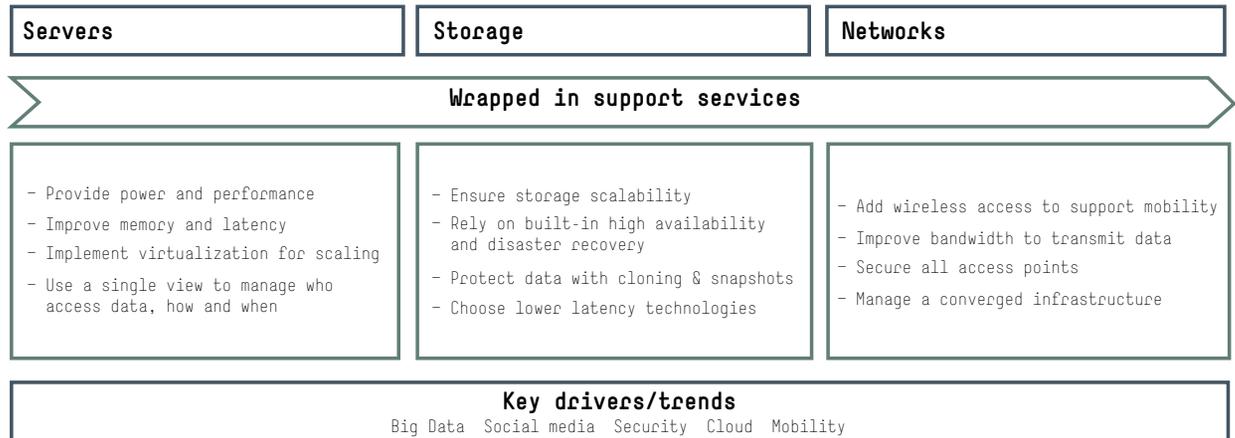


HPE products power business intelligence

HPE products help you to empower business intelligence by providing the speed to deliver timely results, with data scalability, flexibility, and reliability. To design an infrastructure that can support the real-time analytics required for business intelligence applications, it is important to implement storage, network, and compute platforms in ways that are optimized and secured to handle the volume, variety, and velocity of data coming in. HPE products meet these requirements and can power business intelligence solutions for you.

HPE Just Right IT products are designed for customers like you that require enterprise-class capabilities but do not need the size or scale of a large data center. This portfolio of servers, storage, networking, software, and services form a robust foundation to support solutions that help optimize workloads, support market expansion, improve customer experiences and personalization. The following products and bundled solutions are part of the HPE Just Right IT family.

HPE provides the strong technology infrastructure required for business intelligence applications



Brochure

Compute resources optimized for analytics

HPE ProLiant Gen9 powered by Intel® Xeon® processors provide the performance that business intelligence requires to deliver your business the results in a timely manner. For analytics, servers with lower latency technologies provide greater benefits. Also, Microsoft® SQL takes advantage of the in-memory processing needed to support real-time business intelligence. Available in rack, tower, and blade form factors, the ProLiant servers offer:

- Up to 25% faster performance¹
- Up to 18% increase in capacity²



¹ HPE ProLiant Gen9 servers deliver up to 25% faster performance (due to Intel® E5-2600v4 chip). 2TPC and TPC-H are trademarks of the Transaction Processing Performance Council. TPC-H results show the HPE ProLiant DL380 Gen9 Server with a non-clustered result of 678,492 QphH @ 1000 GB and \$0.64/USD QphH @ 1000 GB with system availability as of July 13, 2016; See tpc.org/3320. The TPC believes that comparisons of TPC-H results published with different scale factors are misleading and discourages such comparisons. Results as of March 31, 2016; see tpc.org for more information. Performance gains may vary.

² Intel E5-2600v4 processors have up to 22 cores versus the E5-2600v3 processors which had 18 cores

When you deploy your business intelligence workloads on the HPE ProLiant Gen9 servers, you can boost business results by getting things done faster and more efficiently. HPE ProLiant Gen9 servers are optimized for multiple workloads to ensure that multiple users can perform simultaneous analysis. HPE offers the broadest portfolio of servers to accommodate your business needs today, whether you are starting out (ProLiant 10 series servers), growing your business (ProLiant 100 series servers), or expanding your business (ProLiant 300 series servers), HPE has the right server for you.

Business use case: Enable real-time Big Data analytics

A cloud services company provides Infrastructure as a Service (IaaS) to a variety of customers that depend upon business intelligence to differentiate their products and services. Among the different clients are retail customers that rely on behavioral analytics to understand their customers, security companies that need to analyze communication patterns, and digital agencies that want to track and improve campaign success. All of these customers demand high performance and scalable servers to process these analytics in real-time.

The problem was that the IaaS provider had an aging server infrastructure that could not meet these performance and scalability needs. In addition, IaaS providers need to look to remove cost at any level to stay competitive. With HPE ProLiant Gen9 servers, they have been able to deliver significant price/performance advantages. The IaaS provider has realized a 35% increase in net energy efficiency that translates into better competitive pricing for their customers. Business Intelligence also demands performance and scalability. The HPE ProLiant Gen9 servers provide a 70% increase in performance, unmatched scalability and reliability that has fueled their business growth.

Brochure

Storage tuned for analytics

As you accumulate data points on more customers, your storage requirements change. You will begin to experience enterprise-level database challenges around managing and protecting your ever increasing data. HPE Storage solutions easily handle data growth with high performance, simple management, scalable, and highly available storage at an affordable cost.

- **Simplicity.** HPE Storage balances cost and performance with Virtual Storage Arrays that provide simple management for virtualized environments, scalable performance, and high availability. It is a fully functional, enterprise-class storage that is priced right for smaller systems. It can be implemented on a pre-configured array or can be purchased as software that can reside inside a customer's servers.
- **Performance.** If you need SAN-level performance to perform data analytics on larger amounts of data, the HPE MSA 2000 storage family is the right answer. The latest generation of the HPE MSA storage offers best-in-class performance with built-in flash capacity that comes standard with the MSA, which is ideal for accelerating performance-intensive applications. It allows you to easily and economically support large numbers of users and store growing volumes of files such as documents, images, audio files, and videos.



Brochure

• **Protection.** As you rely more on this new type of business intelligence, the importance of protecting that data increases. High-availability technologies can help eliminate downtime and prevent queries from failing. The ability to protect with snapshots and replication in the storage array helps to improve uptime. Also, ensure that your data is available with fast backup and restore capabilities. HPE's StoreOnce Backup is a disk-based backup platform that outperforms comparable systems at a lower cost, delivering up to 2x the restore performance of the competition, 4.5x faster backup and 5x faster recovery.³

Business use case: Data Warehouse Fast Track Reference Architecture Reference Architecture

Business Intelligence workloads have much more read activity than write activity, predominantly with reads during queries and heavy writes during loads. While both queries and loads are important when designing a balanced BI solution, there is generally more sensitivity to performance during query analysis than during data loads. The primary design criterion for a BI deployment is performance—specifically the throughput that can be achieved through the storage subsystem—with the ultimate goal being to achieve a balance of compute and storage resources. The HPE MSA 2000 storage family delivers and maintains levels of scalable performance for BI workloads requiring this type of sequential data access.

As an example of these capabilities, HPE in partnership with Microsoft tested and validated Data Warehouse Fast Track Reference Architecture (DWFT) Reference Architecture configuration. The SQL Server 2016 DWFT provides a framework based on a balanced approach to implement a symmetric multiprocessor-based architecture (SMP). The goal of the DWFT Reference Architecture is to achieve an efficient resource balance between the database processing capabilities of SQL Server 2016 and the hardware throughput, using proven performance and scalable data warehouse workloads.

The solution combines HPE ProLiant DL380 Gen9 Server connected to an HPE MSA 2040 storage array. The configuration is optimized for BI workloads and is rated for up to 22 TB of compressed data to provide a Microsoft-certified SQL Server 2016 DWFT solution. The results highlight how HPE can deliver a DWFT Reference Architecture for Microsoft SQL Server 2016.

For Microsoft SQL Server 2016 and other BI platforms, HPE MSA 2040 provides the proven storage foundation that is easily managed, very reliable, highly affordable, and highly scalable.

³ HPE StoreOnce 6500 with Catalyst backs up data 4.5x faster than the EMC DD990 with Boost

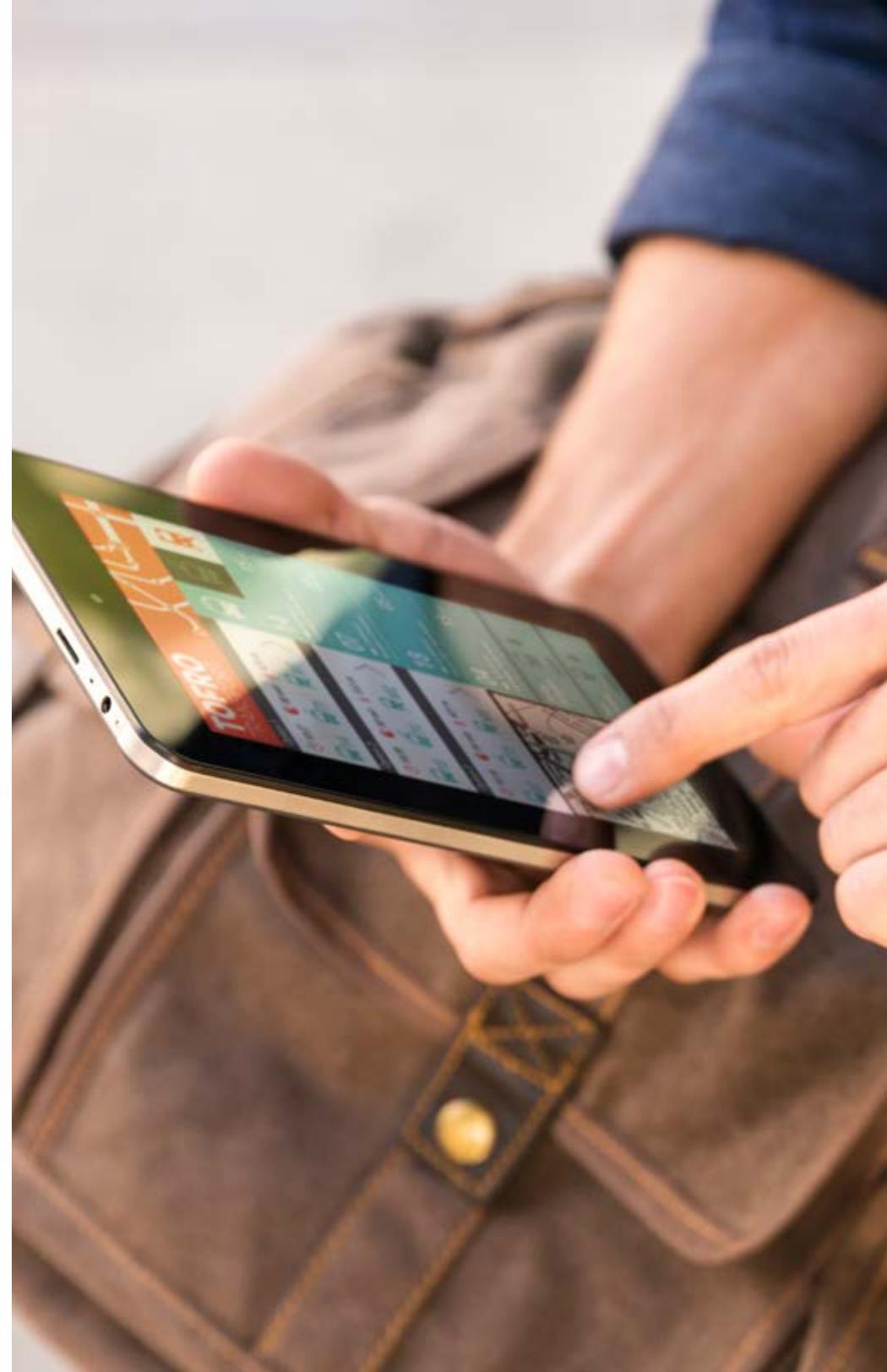
Brochure

High bandwidth network with security for users on the go

Business intelligence means not only creating new actionable information, but making it accessible by anyone who needs it at any time from any device. You can realize better performance, reliability, and scalability with HPE networking products. We offer a flexible, adaptable portfolio of wired and wireless networking products that provide a path to grow without added cost or complexity. As your business grows and networking demands increase, HPE standards-based switches, routers, and wireless access points can plug and play into existing networks without a forklift upgrade.

- **Connectivity.** The Aruba 2900 series, 3810, and 5400R switches deliver high performance, low latency, and adaptive power consumption so the network can support the media-rich, bandwidth-intensive applications your business demands. We help to protect your investment with these SDN ready switches that can add advanced functionality. You can scale the network to meet future demands and reduce ongoing support costs.
- **Wireless with security.** To expand your reach and enable faster access from anywhere add wireless network functionality with Aruba Instant Access Points. Included with Aruba Instant Access Points is a no-cost management interface that provides visibility into the network. It allows you to control employee and guest device access with role-based access and web content filtering while delivering up to 36% faster performance than the competitors at high density.⁴

⁴ Based on Aruba Instant 225, Internal Aruba upstream and downstream performance testing as well as single client and multiple client test for high density environments, April 2016





Business use case: improve customer experience

A professional sports team wanted to improve the game day experience for anyone attending the event by providing reliable and consistent Internet access for mobile devices. Today's spectators expect to be able to access social media, text friends, and access fan sites such as fantasy leagues. Fast network performance and ease of connectivity are important for these fans.

The problem was how to provide this access in an older facility that did not have the network to support it. The solution relies on Wi-Fi and beacon technology from Aruba Networks that were installed in the older facility. Beacons in the stadium send out a Bluetooth® signal that can be received by a user's Bluetooth-enabled device running either iOS or Android, but users have to opt-in to communicate via a special stadium app. It allows fans to watch instant replays and order food directly from their mobile devices. While enabling this connectivity, the team also gains access to the fans' behaviors and preferences. Special game day promotions or seat upgrades can be offered. By combining the convenience of home Internet access with the excitement of the stadium experience, the team will improve attendance and increase sales of concessions and merchandise.

Brochure

HPE Flex Solutions for business intelligence

HPE also offers you another choice for deploying your business intelligence system preconfigured integrated solutions called Flex Solutions.

Whether you are just starting out, building momentum, or expanding your business there is an HPE Flex Solution with Microsoft SQL BI that will meet your needs. These configurations of servers, storage, and networking are designed to simplify the process of configuring and implementing business intelligence. They maximize hardware savings through higher capacity utilization and improve operational efficiencies. HPE Flex Solutions scale seamlessly and cost effectively so you will always have the capacity and performance you need, when you need it. These integrated solutions offer on-board storage, easy scaling of nodes, fault tolerance, and high availability.

Start with SQL BI Edition to leverage specific BI Components for smaller server analytic driven applications and scale to Enterprise Edition for a comprehensive solution for business intelligence that includes enhanced reporting, deeper and more powerful analysis, rich data modeling, master data management capabilities, and full integration with Microsoft Office.

HPE Flex Solutions with Microsoft SQL BI enable robust decision making and near real time performance.

- Achieve better quality decisions using multiple sources of business data (i.e., Oracle, DB2, text files, etc.) for analysis and reporting.
- Empower decision makers with self-service reporting with Enterprise level BI solutions.

- Communicate reports rapidly by sharing with colleagues using Microsoft SharePoint.
- Quick user implementation and less training with no need to use other databases and learn new query languages because of seamless integration with in-memory OLTP and Microsoft Business Intelligence.
- In-Memory (BI) Analytics: Process billions of rows in seconds.⁵
- The MS SQL BI Flex Solution is capable of hosting multiple MS SQL instances and supporting over 400 concurrent users with no reported hardware bottlenecks.

HPE Pointnext

HPE Pointnext is an innovative IT service built to make IT support simple. HPE Pointnext can help you build a support plan to avoid unplanned downtime. Other capabilities include on-site repair, proactive maintenance service, guaranteed time to repair, and remote support tools. Work with your HPE authorized business partner and HPE Pointnext Services on a delivery, implementation, and support plan that is customized to meet your unique requirements.

HPE Financial Services

HPE Financial Services offers a variety of financial plans that can help buy back old technology, pay as you grow and flexible payment schedules. We can develop a plan that will match your budget to your business intelligence deployment plans.

⁵ Microsoft, "SQL Server 2014 & the Data Platform"



Why HPE for Business Intelligence

Grow your revenue, increase profitability, and gain market share by reducing the time to business value with HPE proven integrated products and solutions. HPE products and solutions described above include the three key ingredients that are required for a successful business intelligence system: Time, Data, and Technology.



Time—HPE servers, storage, and networking are designed to work together to provide the increased performance that enables faster time to decision making at a lower relative cost.

- HPE's ProLiant Gen9 servers are designed with faster compute, memory, and I/O performance that data analytics require.
- Match the server with the right HPE storage and networking to provide the capacity and bandwidth.



Data—As you become more dependent on the business intelligence provided by this solution, you will place a greater emphasis on the availability of the technology. Data protection and backup/restore capabilities become critical components of your environment.

- High-availability technologies such as HPE array based snapshots and replication can help eliminate downtime and prevent queries from failing.
- Include HPE backup/restore products to improve your uptime that can help you provide a higher level of customer service.



Technology—As your business grows, you will accumulate more customer data. Any solution should be designed with the scalability and flexibility to support this anticipated growth.

- HPE Just Right IT products are designed for customers like you that require enterprise-class capabilities but do not need the size or scale of a large data center. Our portfolio of servers, storage, networking, software, and services form a robust foundation to support solutions that help optimize workloads, support market expansion, improve customer experiences and personalization.



Next steps

- Contact your authorized HPE reseller: findapartner.hpe.com
- Brought to you by HPE and Intel:
hpe.com/info/justrightit-grow



Sign up for updates



© Copyright 2016–2017 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

Intel, Intel Xeon, and the Intel logo are trademarks of Intel Corporation in the U.S. and other countries. Microsoft is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries. Oracle is a registered trademark of Oracle and/or its affiliates. Bluetooth is a trademark owned by its proprietor and used by Hewlett Packard Enterprise under license. All other third-party trademark(s) is/are property of their respective owner(s).

4AA6-4825ENW, March 2017, Rev. 1