IT Business Analytics

Software Version: 10.10
Linux operating systems

Support Matrix

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Contents

Requirements

This section provides information about the supported hardware and software that you must have to successfully install and run this version of IT Business Analytics.

Hardware

> **Note:** The following requirements apply to both VMWare environments or physical machines.

This version of IT Business Analytics is supported on the following hardware:

Linux

- **Required CPU size and architecture, RAM, and disk space:** For details, see "Performance and Sizing" on page 22.

- **Required Screen resolution:** For the client machine running the web browser: 1600x900, 1280x1024, 1920x1200 and higher.

  The resolutions are applicable on different types of devices such as labtop, PC monitor and larger meeting room monitor.

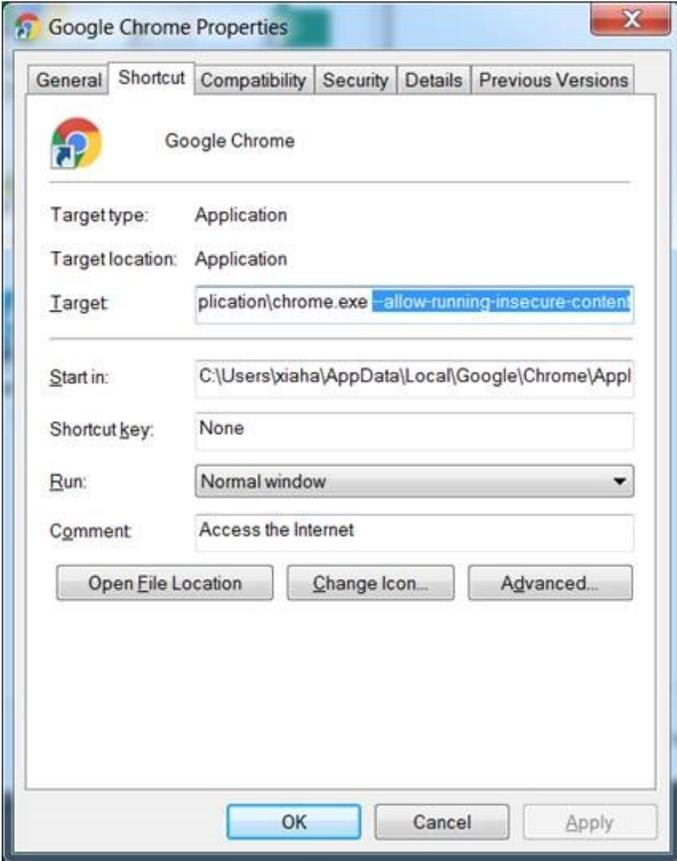- **Required Network identification (FQDN:)** IPv6 or IPv4

Operating System

The following describe the operating system requirements for the IT Business Analytics components:

Server	Installed Applications	Operating System
Business Analytics Server	IT Business Analytics 10.10	- Red Hat-Server - 6.9, 6.7, 6.6, 6.5-x86_64 - CentOS-Server - 6.7, 6.6, 6.5-x86_64 - Ubuntu (14.04.01 LTS)
DB Server	Vertica-7.1.2-4 Vertica-7.1.1-0 ITBA provides one Vertica permanent license. The license does not have a node restriction but has a 1 TB raw data size restriction. To calculate the raw data size, refer to the Vertica Administrator Guide.	- Red Hat-Server - 6.9, 6.7, 6.6, 6.5-x86_64 - CentOS-Server-6.7, 6.6, 6.5-x86_64 - Ubuntu (14.04.01 LTS) - Other (refer to Vertica7.1.x supported platform document https://my.vertica.com/docs/7.1.x/PDF/HP_Vertica_7.1.x_Supported_Platforms.pdf)
Optional: SAP® BusinessObjects Enterprise server	SAP® BusinessObjects BI Platform 4.1SP7 SAP® BusinessObjects BI Platform 4.1 SP3 SAP® BusinessObjects BI Platform 4.1 SP2	- Red Hat-Server - 6.9, 6.6, 6.5-x86_64 - Windows Server 2008 R2 Enterprise Edition Windows Server 2012 R2 Standard
Optional: SAP Business Objects Xcelsius server	Report tool: Xcelsius Reports Viewer component supports the new SAP® Business Objects Dashboards 4.1SP2bit32 (format: xlf)	Windows Server 2008 R2 SP1
Optional: SAP BusinessObjects Client Tool	SAP® BusinessObjects BI Platform Client Tool 4.1 SP3 SAP® BusinessObjects BI Platform Client Tool 4.1 SP2	Windows Server 2008 R2 SP1

Web Browsers and Plug-ins

Make sure that you consult the software vendor documentation for installation requirements and platform/operating system compatibility for server and client installations. The following table describes the software required for users to access the IT Business Analytics application successfully.

Product	Comments
Adobe Flash Player 17.0.0.134	Enables users to view dashboards. Free download available from the Adobe web site: www.adobe.com
Adobe® *Reader®* version 9 and above	Enables users to read the documentation in PDF format.

Browser	• **Internet Explorer:** Only non-compatibility mode is supported for IE11, IE10, and IE9.
	
	If your browser is set to compatibility mode, make sure that:
	
	○ **IE11.** The ITBA URL (or pattern) is not listed in the compatibility view list.
	
	○ **IE10/IE9.** The ITBA URL (or pattern) is not listed in the compatibility view list and:
	
	  i. In IE10/IE9, click **Alt**, select **Tools > Compatibility View settings**.
	
	  ii. Make sure that all the options are unchecked :**Display Intranet sites in Compatibility View**, **Display all websites in Compatibility View**, and **Download updated compatibility lists from Microsoft**.
	
	○ Configure the browser as follows:
	
	  • Click **Tools > Internet Options > Advanced >Security**.
	
	    • Deselect **Do not save encrypted pages to disk**.
	
	    • Select **Use SSL 3.0**.
	
	    • Select **Use TLS 1.2**.
	
	    • Select **Use TLS 1.1**
	
	• **Chrome:**
	
	Chrome 48.0.2564.116: BO reports cannot be displayed due to a Chrome security issue.
	Workaround: On your desktop, right-click the Chrome icon, and select **Properties > Shortcut**, add **--allow-running-insecure-content** to the **Target** field to start Chrome 48.

Product	Comments
	Chrome 46.0.2490.x is supported with the following limitations:
	○ In **EXPLORER > Data Set**, the **Print** , **Snapshot** , and **Display SQL** functions do not work.
	○ In First Level Navigation (FLN), the **Print** and **Snapshot** functions do not work.
	• **Firefox:** Firefox 38.0.5 is supported.
	To enable TLS 1.1 and 1.2, enter **about:config** in the address box and move past the warning, locate**security.tls.version.max** and replace the **1** with **3** in **Value** to enable TLS 1.1 and 1.2.
JRE (Java Runtime Environment)	Java 8 Update 40 (recommended)
	After you log on to the ITBA application, the message Application Blocked by java Security is issued. To prevent this, go to Java Control Panel, click **Security**, select **Enable Java content in the browser**, and **High**, and add the ITBA URL (https://<hostname>:<HttpsPort>) in the **Exception Site List**.

Standalone Tool

Usage Hub

Usage Hub 1.0.0 and 1.2.0 are supported in this ITBA version.

HPE Usage Hub gives you the ability to view license information and usage across all your HPE Software products and solutions that use the automatically installed HPE AutoPass licensing module along with the product. Usage Hub runs on a server and can detect all AutoPass-based HPE Software products and solutions installed in your environment. It collects, maintains and provides a centralized view of software deployments, license assets and more. Usage Hub helps you better track product and license usage, gain operational insight, ease the license renewal process, and optimize your license utilization. This is a free tool and can be downloaded here: Usage Hub.

Compatibility

This section provides information about software and configurations that are not required, but which are compatible with this version of IT Business Analytics.

Languages

The user interface of IT Business Analytics has been extended to support multiple languages. You can switch the language displayed in the application user interface by switching the Internet Browser language settings.

This version of IT Business Analytics:

Languages (in alphabetical order):	Runs on systems with the language:	Is localized in the language:
Brazilian Portuguese	√	√
Dutch	√	√
English (UK and US)	√	√
French	√	√
German	√	√
Italian	√	√
Japanese	√	√
Korean	√	√
Russian	√	√
Simplified Chinese	√	√
Turkish	Only UI and data insertion of Turkish are supported. Operating systems and locale in Turkish are not supported. In order to have Turkish-like locale, you can customize the OS locale to match the Turkish settings. Contact HPE Software Support Online Web site (https://softwaresupport.hpe.com/group/softwaresupport/home) for additional information.	√

Note: Using the English character set is always supported in addition to the character set in the local Operating System. For example, if you install ITBA in a Japanese environment, you can use the English character set as well as the Japanese character set.

Product documentation in Japanese will follow after the release. The following documents will be available in Japanese:

Document	Japanese
in the *Business Analyst Guide*. - PDF	yes

Internationalization Variances

This version of IT Business Analytics runs on all locales described in this document. There are no known variances.

Virtualization Products

This section describes the virtualization products supported by IT Business Analytics.

Transparent Technology and Virtualization Support

HPE supports IT Business Analytics running on operating systems and databases on particular platforms, not specific hardware and software configurations. HPE supports IT Business Analytics customers who run HPE software products on supported operating systems and databases, irrespective of whether they are running transparent or virtualization solutions in their environment. HPE does not support these transparent or virtualization technologies directly. Since the providers of these technologies support a set of certified operating systems and hardware, the customer and the providers of these technologies will be responsible for any interactions or issues that arise at the hardware or operating system layer as a result of their use.

HPE will not require customers to re-create and troubleshoot every issue in a non-transparent environment; however, HPE does reserve the right to request that its customers diagnose certain issues in a native certified operating system environment without the transparent technology. HPE will only make this request when there is reason to believe that the environment is a contributing factor to the reported issue.

While IT Business Analytics is expected to function properly with these transparent technologies in place, there may be performance implications, which can invalidate HPE's typical sizing and recommendations. Analysis must be performed within the context of the specific application to be hosted in a virtual environment to minimize potential resource overload, which can have significant impact on performance and scalability, particularly under peak load.

IT Business Analytics supports working with VMware HA and vMotion

Planned Downtime. Planned Downtime for local system maintenance is the number one cause of downtime in physical environments. IT organizations have to schedule maintenance windows long ahead of time at inconvenient times to minimize the business impact. **VMware vMotion** eliminates the need to schedule application downtime due to planned server maintenance through live migration of

virtual machines across servers with no disruption to users or loss of service.

Unplanned Downtime. Due to the complexity and cost of application-level clustering, only a minority of applications are typically protected with these solutions. In physical environments, that leaves the majority of applications with no protection against unplanned downtime. VMware provides a set of capabilities to provide simple and cost-effective availability for all applications running on vSphere. **VMware vSphere High Availability (HA)** provides cost effective, automated restart within minutes for all applications in the event of hardware or operating system failures.

For example, vMotion allows you to live migrate a VM from Host A to Host B without downtime. VMware HA provides high availability to VMs based on vMotion. For example, there are two hosts A and B in a cluster with HA enabled; If host A crashes, all VMs on that will be down too. In this case, VMware HA helps restart those VMs to Host B, so there is no service downtime.

HPE Vertica and VMWare

HPE Vertica runs in the following virtualization environment:

Host:

- VMware version 5.5

- The number of virtual machines per host did not exceed the number of physical processors

- CPU frequency scaling turned off at the host level and for each virtual machine

- VMware parameters for hugepages set at version. 5.5 defaults

- IO measured by vioperf concurrently on all Vertica nodes: *

- 25 megabytes per second per core of write

- 20+20 megabytes per second per core of rewrite

- 40 megabytes per second per core of read

- 150 seeks per second of latency (SkipRead)

- Thick provisioned disk, or pass-through-storage

Network:

- Dedicated 10G NIC for each Virtual Machine

- No oversubscription at the switch layer, verified with vnetperf

Processor:

- Architecture of Sandy Bridge (HP Gen8)

- 8 virtual cores per virtual machine

- No oversubscription, dedicated full processors

- vcpuperf time of no more than 12 seconds

- 12 seconds ~= 2.2 GHz clock speed

Memory:

- Pre-allocate and reserve memory for the VM

- 4G per virtual core of the virtual machines

- When running vioperf, provide the –duration=2min option and start on all nodes concurrently.

HPE has tested the configuration above. While other virtualization configurations may have been successfully deployed by customers in development environments, performance of these configurations may vary. If you choose to run HPE Vertica on a different virtualization configuration and experience an issue, the HPE VerticaSupport team may ask you to reproduce the issue using the configuration described above, or in a bare-metal environment, to aid in troubleshooting. Depending on the details of the case, the Support team may also ask you to enter a support ticket with your virtualization vendor.

High-Availability Products

This version of IT Business Analytics does not support any high-availability products.

Integrations and Coexistence

Information about HPE software that integrates with this version of IT Business Analytics can be found at the HPE Support web site. See http://support.openview.hp.com/sc/solutions/index.jsp#tab=tab3.

You can find the latest Support Matrix for this product that lists all software and hardware requirements at this location: HP Support matrices or at the HPE Software Support Online web site (https://softwaresupport.hp.com/group/softwaresupport/home).

> **Note:** Most of the support areas require that you register as an HPE Passport user and sign in. Many also require an active support contract. To find more information about support access levels, go to Access levels.

Note that communication with data sources is done via IPv4 TCP/IP.

Supported Integrations with HPE Products

HPE IT Business Analytics is compatible with the following software products.

The following matrix is the final support matrix for ITBA 10.10 Patch 0001 (2016.6.3 GA).

Product	Versions	Supported Databases
Application Lifecycle Management (ALM)	12.5, 12.2, 12.0, 11.5, 11 SP2 (ALM patch 12 and later)	All supported database servers
Asset Manager (AM)	9.6, 9.50, 9.41 **Note:** If you are working with an MSSQL database, change to case insensitive COLLATION as case sensitive COLLATION is not supported.	SQL Server and Oracle are supported
Cloud Service Automation (CSA)	4.7 with patch 4.70.0001 (supported with ITBA 10.10 Patch 0001 + Hotfix_QCIM8B26256) 4.6, 4.50 with patch 4.50.0001, 4.2, 4.1, 4.0, 3.2 and 3.1	All supported database servers
Configuration Management System (CMS)	10.3x, 10.2 and 10.1 with ITBA 10.10 CP0001	CAC and non-CAC support

Product	Versions	Supported Databases
Project and Portfolio Management (PPM)	9.40, 9.30, 9.20, 9.10, 8.00	Oracle database is supported
Server Automation (SA)	10.5, 10.23, 10.22, and 10.21, with ITBA 10.10 + EXSC_00260 10.20 10.1x	Oracle database is supported
Service Manager (SM)	9.50 (with ITBA 10.10 + Patch 0001) 9.41 (with ITBA 10.10 + Patch 0001) (SQL Server and Oracle are supported) 9.40 (SQL Server and Oracle are supported) 9.30 (SQL Server, Oracle and DB2 are supported) 9.2x (SQL Server, Oracle and DB2 are supported) 7.11 (SQL Server, Oracle and DB2 are supported)	Supported databases are provided with each supported version
Cloud Optimizer (CO)	3.0	All supported database servers

Note: The Data Source Management UI does not display all the currently supported data source versions (the complete list is displayed above).

If you want to specify the latest supported version of your data source (according to the Support Matrix), use the highest supported version listed in the <Data Source version> field in the Data Source Wizard page for your specific data source.

Tip: The integration of ITBA with ALM is not supported while:

- ALM is using Common Access Card (CAC).
- ALM is using an external authentication access method.

Supported Integrations with Non-HPE Products

HPE IT Business Analytics is compatible with the following software products:

Product	Versions	Supported Databases
Amazon Web Services (AWS)	Amazon Web Services **Note:** Working with this data source requires a working Internet connection from the Data Warehouse machine. AWS consolidated billing is not supported.	All supported database servers
Amazon Web Service CloudWatch (AWSCW)	Amazon Web Service CloudWatch **Note:** Working with this data source requires a working Internet connection from the Data Warehouse machine.	All supported database servers
Microsoft Azure (AZURE)	**Note:** The Azure resource manager deployment model is not supported. The model is detailed at https://azure.microsoft.com/en-us/documentation/articles/resource-manager-deployment-model/.	All supported database servers

Note: The Data Source Management UI does not display all the currently supported data source versions (the complete list is displayed above).

If you want to specify the latest supported version of your data source (according to the Support Matrix), use the highest supported version listed in the <Data Source version> field in the Data Source Wizard page for your specific data source.

Coexistence

IT Business Analytics and the HPE products that integrate with ITBA must be installed on separate servers.

Server / Client Compatibility

No compatibility information for older versions of IT Business Analytics clients or servers is available.

Performance and Sizing

Third-party components, such as databases and operating systems, are supported at the minor level, unless a different minimum level is specified. Future maintenance and patch releases (including fix packs or service packs) on the same minor release are expected to be supported, unless a conflict specific to that release arises.

ITBA is made up of various components, such as Data Warehouse and BA. SAP BusinessObjects Enterprise is optional.

Before Sizing your ITBA Product

Consider the below factors for sizing your ITBA product:

1. **Number of concurrent users.** The number of users currently logged in the system.

2. **Instances of data source.** The number of instances of data source you are going to activate in the ITBA application.

3. **Source Data Volume.** The source data volume determines the free disk requirement of the Vertica database. It is the size of the data that needs to be analyzed, not the total data volume of the data source. You can roughly estimate the free disk space of each node with the below formula:
   Free disk space = 5 * [data volume of all source data]

   Vertica recommendation is that the minimum free disk space is 1 TB each node. In most cases, 1 TB free disk in Vertica database is large enough for out-of-the-box data sources.

4. **Number of Vertica Nodes.** The ITBA application server does not support high availability, but Vertica does.

   ○ To use the high availability of Vertica database, it is recommended to setup the Vertica cluster with at least 3 nodes and set **Ksafe=1**.

   ○ If the data volume of all data sources is more than 200 GB, it is recommended to setup the Vertica cluster with 3 nodes.

Configurations and Sizing

You can install Business Analytics using one of the configurations explained below. Sizing information is available for each configuration.

- Application Server Sizing

Server	Item	Minimum Requirements (< 3 data source instances <= 50 concurrent users)	Recommended Requirements (>= 3 data source instances 50-300 concurrent users)
Business Analytics Server	RAM	12 GB	16 GB
	Free disk space	80 GB	150 GB
	Processor	4 Cores	8 Cores
	Required Ports	○ ports: 10001 to 10010, 11020, 11021 ○ HTTP default port: 8080. ○ HTPPS default port 8443. You can select non-default HTTP and HTTPS ports during post install	

Note:

○ The number of concurrent users is not limited to 300. If there are more than 300 concurrent users, the response time of some of the UI operations might be slower.

- Vertica Server Sizing

  - Single node Vertica cluster

Server	Item	Recommended (Source Data Volume<200 GB)	Extra (Source Data Volume>=200 GB)
Vertica Database Server	RAM	64 GB	96 GB
	Free disk space	1 TB	1 to 5 TB
	Processor	8 Cores	8 Cores
	Required Ports	Database default port: 5433	

  - Three nodes Vertica cluster

Server	Item	Recommended (Source Data Volume<200GB)	Extra (Source Data Volume>=200GB)
Vertica Database Server (for each node)	RAM	64 GB	96 GB
	Free disk space	1 TB	1 to 5 TB
	Processor	8 Cores	8 Cores
	Required Ports	Database default port: 5433	

- When you evaluate the source data volume, take into consideration the future data growth. For example, if the current source data volume is 20 GB, and the data growth each year is 5 GB, over the next 3 years, the total source data volume will be about 20 + 5*3= 35 GB.

- ITBA provides a Vertica license with 1 TB raw data size restriction. For details about raw data size, see Vertica Administration Guide.

BOE Server Sizing

You need one additional separate BOE server if you need to connect to BOE for reports. In such a case, setup the BOE server with the following settings:

Application Server	Item	Minimum Requirements	Recommended Requirements
SAP® BusinessObjects Enterprise server	RAM	16 GB	16 GB
	Free disk space	80 GB	80 GB
	Processor	4 Cores	4 Cores
	Required Ports	- Port for the Central Management Console (CMC) is 8080 - Port for the Central Management System (CMS) is 6400 and 6410	

Performance Benchmark

The Performance Benchmark document provides a benchmark that characterizes the performance of this version of IT Business Analytics version. It provides contextual data regarding the data environment within which a specific functional workload is applied representing the benchmark workload. Test results for a benchmark run within HPE Performance Labs are provided for reference purposes.

For details, see the *Performance Benchmark Document*.

Obsolescence Plans

As of this release, there are no plans to end support for any currently supported version of IT Business Analytics.

Revision History

Date	Section	Description
March 2016	First publication	
July 2016	Integrations and Coexistence	Change to supported version of Server Automation (SA)
April 2016	10.10 CP0001	Integration with CMS
July 2016	10.10 CP0002	Integration with OPSA and Codar

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